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THE SCULPTURED DECORATION ON ROMAN VOTIVE
ALTARS AND PEDESTALS FROM NORTHERN BRITAIN

JOYCE KEWLEY, B.A. (MANCHESTER)

A thesis presented in candidacy for the degree of Doctor
of Philosophy in the University of Durham, 1970.

Vol. I.

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The Sculptured Decoration on Roman Altars and Pedestals from Northern Britain.

Over 800 examples of Roman altars and pedestals from Northern Britain are known. Of these, many still survive and some, now lost, are illustrated by eighteenth- and nineteenth- century antiquaries. An attempt has been made to examine, at first hand wherever possible, and to record these stones.

The decoration of altars has been interpreted in a wide sense to include both the ornamental motifs and the actual shape of the stones. The forms of focus, bolster, fascia and focus mount have been defined. It has proved possible to demonstrate a stylistic development in the form of altars and to show the influence of legionary workshops on craftsmen in auxiliary units.

A mathematical analysis of the cyma reversa moulding has been made. This shows the use of sets of templets in setting out the moulding.

Conventional ornament has been classified, and the representations of deities and motifs from the animal and vegetable kingdoms have been studied. Types of sacrificial implements and vessels used as ornamental motifs have been identified and linked with surviving utensils in metal, glass and pottery.

An attempt has been made to suggest the colours with which Roman altars were decorated in Britain. Cultural influences evident in the sculpture have been examined.

It has proved possible to trace the activities of different groups of craftsmen in Northern Britain and to attribute many uninscribed stones to military units and to civilian ateliers. A descriptive catalogue and photographic archive have been compiled in which wherever possible the stones are grouped with others coming from the same workshop.

Foreword.

The task of locating and identifying the extant Roman altars and pedestals from Northern Britain has not been an easy one. Not only are the stones widely scattered geographically, but also, even where museums have sizable collections in their charge, inadequate storage space often makes access to them difficult. In only one museum with a large collection of stones was it possible to find all those listed in the catalogue. Inadequate lighting in some instances made photography virtually impossible. Nevertheless, I owe a debt of gratitude to all those in charge of the museums of the region for receiving my repeated visits philosophically and for affording much practical help. I enjoyed much hospitality and kindness both from them and from those private persons with Roman stones in their care who, with one exception, welcomed me to their homes most warmly.

In particular I should like to say how much I owe to the advice of my supervisor, Mr. J.P. Gillam, and to Professor Harrison of the University of Newcastle upon Tyne. The late Sir Ian Richmond, Professor J.M.C. Toynbee and Mr. R.P. Wright gave many valuable suggestions and Professor Birley's encouragement stimulated further endeavour. Dr. D.J. Smith and Mr. C.M. Daniels were always ready with practical assistance. I am grateful to them all.

I must also thank all those who provided photographs: Dr. A.S. Robertson, Mr. R. Stevenson and Mr. K.S. Painter who arranged for the collections in their charge to be photographed, Dr. Raper who photographed the stones in the Museum of Antiquities, Newcastle upon Tyne, and Mr. D. Ridgway who secured a photograph of an altar now in Rome. I am also grateful to Mr. J.S. Wachter for providing pictures of an altar from Catterick, to Mr. R.P. Wright and to the British Museum, the Ashmolean Museum and the Ministry of Public Buildings and Works for permission to use their photographs. Messrs. A. Wiper and C.H. Newton gave valuable assistance with the compilation of the photographic archive.

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1. In RIB order
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Abbreviations used in the Text.

- AA¹⁻⁴ Archaeologia Aeliana (Society of Antiquaries of Newcastle upon Tyne), series 1-4.
- Ant. J. Antiquaries Journal (Society of Antiquaries of London)
- Arch. Archaeologia (Society of Antiquaries of London)
- Arch. J. Archaeological Journal (Royal Archaeological Institute)
- Arch. Scot. Archaeologica Scotica I-IV (1792-1890)
- Bailey Bailey, J.B. and Haverfield, F.C., Catalogue of Roman Inscribed and Sculptured Stones, Coins, Earthenware etc., discovered in and near the Roman Fort at Maryport, and Preserved at Netherhall, CW² XV (1915), 135-72.
- Boesterd den Boesterd, M.H.P., Description of the Collections in the Ryksmuseum G.M. Kam at Nijmegen, V, The Bronze Vessels (Nijmegen, 1936)
- B.M. British Museum.
- B.M. Guide (1908) Guide to the Exhibition Illustrating Greek and Roman Life (London, 1908).
- B.M. Guide (1922) A Guide to the Antiquities of Roman Britain in the Department of British and Mediaeval Antiquities (Oxford, 1922).
- B.M. Guide (1951) Guide to the Antiquities of Roman Britain (London, 1951)
- Bruce, Wall 1-3 Bruce, J.C., The Roman Wall, A Description of the Mural Barrier of the North of England, edit. 1, (Newcastle upon Tyne, 1851), edit. 2 (London, 1853), edit. 3 (Newcastle upon Tyne, 1867).
- Bruce, Handbook Bruce, J.C., Handbook to the Roman Wall, edit. 12 (I.A. Richmond) (Newcastle upon Tyne, 1966).
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- Chesters Cat. Collingwood, R.G., A Guide to the Chesters Museum (Newcastle upon Tyne, 1926).
- Cichorius Cichorius, C., Die Reliefs der Traianssäule (Berlin, 1900).
- CIL Corpus Inscriptionum Latinarum VII, Inscriptiones Britanniae Latinae.
- CW¹⁻² Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society, old and new series.
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- DAJ Journal of the Derbyshire Archaeological and Natural History Society
- DNAAST Transactions of the Architectural and Archaeological Society of Durham and Northumberland
- Ebur. RCHM, Eburacum, Roman York (1962).
- EE Ephemeris Epigraphica
- Esp. Espérandieu, E., Recueil Général des Bas-reliefs, Statues et Bustes de la Gaule Romaine (Paris, 1907-66).
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Cumberland section.
- Horsley, Durh. Do. Durham.
- Horsley, North. Do. Northumberland.
- Horsley, Westm. Do. Westmorland.
- Horsley, Scot. Do. Scotland.
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- ILS ed. Dessau, H., Inscriptiones Latinae Selectae.
- Jones, Cat.
Municipal Collection Jones, H.S., A Catalogue of the Sculptures preserved in the Municipal Collections of Rome: The Sculptures of the Museo Capitolino. (Oxford, 1912).
- JBAA Journal of the British Archaeological Association
- Jones
- JRS Journal of Roman Studies
- LS Bruce, J.C., Lapidarium Septentrionale (London and Newcastle upon Tyne, 1870-1875).
- Lancs. Chesh. Transactions of the Lancashire and Cheshire Historic Society.
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- Mosaïque Gréco-Romaine Centre National de la Recherche Scientifique, Colloques Internationaux du Centre National de la Recherche Scientifique, La Mosaïque Gréco-Romaine (Paris, 1965).
- NCH Northumberland County History.
- ORL Obergermanisch-raetische Limes des Römerreiches
- PCB Ross, A., Pagan Celtic Britain (London and New York, 1967).
- PSAL¹⁻² Proceedings of the Society of Antiquaries of London series 1 and 2.
- PSAN¹⁻⁵ Proceedings of the Society of Antiquaries of Newcastle upon Tyne series 1-5.
- PSAS Proceedings of the Society of Antiquaries of Scotland
- RBRA Birley, E., Roman Britain and the Roman Army (Kendal, 1961)
- RCAMS The Royal Commission on the Ancient and Historical Monuments of Scotland
- RCRM The Royal Commission on Historical Monuments (England)
- RE Pauly-Wissowa, Realencyclopädie der Classischen Altertumswissenschaft
- RIB Collingwood, R.G. and Wright R.P., The Roman Inscriptions of Britain (Oxford, 1965).
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- VCH Victoria County History.
- YAJ Yorkshire Archaeological Journal
- YMH Wellbeloved, C., ed. Raine; Handbook to the Antiquities in the Grounds and Museum of the Yorkshire Philosophical Society, edit. 8 (York, 1891).

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Glossary

- Bolsters:** the lateral rolls on each side of the capital.
- Die:** the part of the altar reserved for the inscription.
- Fascia:** the vertical plane above the graded mouldings of the capital.
- Focus:** the place where offerings were laid or the sacred fire kindled.
- Focus Mount:** the projection which masks the focus.
- Guttus:** the sacrificial jug.
- Patera:** the sacrificial dish.
- Shaft:** the area between the mouldings of capital and base.

Note

1. Figures in parenthesis refer to numbers in the catalogue.
2. Footnotes are placed at the end of each chapter.
3. Unless otherwise stated, the auxiliary units named in the appendices are cohorts.

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Introduction

Votive Altars

Roman religion consisted for the most part in the offering of sacrifices, that is, in "making sacred" something belonging to the worshipper. This offering, which was always accompanied by prayer^{1.} was usually given to the god as a gift for his own use, but might also be offered in expiation of an offence or to avert some evil. The ritual of sacrifice was minutely prescribed^{2.} and, depending on the purpose of the ceremony, the offering might be left whole, or might be consumed by fire, either totally or in part.

The objects offered to the gods, fruit or slain animals, were placed upon a support. This support usually took the form of a pedestal. It was not necessary for these pedestals to be made of stone. There is good evidence to suggest that they were frequently made of turf. Both Horace^{3.} and Tacitus^{4.} refer to turf altars, while, on the Ara Pacis, Aeneas is shown sacrificing at a pedestal apparently built of sods.^{5.} Three altars on a scene on Trajan's Column appear to be made either of turves or stones^{6.} Two panels from the Arch of Constantine show Marcus Aurelius sacrificing on altars of tripod form^{7.} presumably of metal. The vast majority of altars, however, seem to have been of stone. There are examples of circular stone altars^{8.} and a marble relief from Ostia depicts a high priest of Cybele making an offering on a baluster-shaped altar which stands on a small rectangular base with spherical supports.^{9.} Rectangular altars, however, are by far the most common type and, with one exception (189), all the extant examples from Northern Britain have this form. The body of the altar consists of a block of stone with projecting capital and base. The shaft usually bears a carved dedication which sometimes overflows on to capital and/or base. It is likely that at least some of the altars at present without inscriptions may have had their dedications painted rather than carved.^{10.} No trace of such painted lettering now survives. Occasionally,

the inscription appears on the shaft within a moulded panel. The projecting capital and base are usually enriched with mouldings on three or four sides, while decorative motifs are often placed on capital, shaft and base.

The top of the altar accommodates the cavity or focus where the offerings were placed or, in the case of burnt offerings, where the sacred fire was kindled. The focus is generally flanked by lateral rolls, or bolsters. Neither focus nor bolsters are essential features of an altar, as many reliefs make clear ¹¹. and some of the altars from Northern Britain lack one or both of these features.¹² In place of bolsters a few altars display projections at the corners of the upper surface, a scheme which is not uncommon in the Roman world.¹³

Vitruvius states that the height of altars should not be so great as to intercept the worshipper's view of the statues of the gods.¹⁴ Reliefs of sacrificial scenes usually represent altars as being about knee ¹⁵. or thigh height. ¹⁶. The altar on the Bridgeness distance slab ¹⁷. is of this size. Larger stones are not uncommon. In Northern Britain there is a great variety of size. The largest is sixty-four inches in height (106); the smallest is three and three-quarter inches (527). Between these two extremes there is a complete range of sizes. As might be expected the largest and most imposing altars were erected by military units and their commanders, and the bulk of these come from auxiliary regiments.

The absence of altars dedicated to the Capitoline deities by entire legions is noteworthy. There can be little doubt that stone altars were de rigueur for legionary as well as for auxiliary troops, and indeed, examples remain of such altars set up by detachments of legionaries. The failure of legionary altars to survive may be explained by the continuous occupation of York and Chester since Roman times and their development as important mediaeval towns; altars, where available, would be quickly reused in later building, and, if an annual burial of altars took place ¹⁸. although the evidence for this is by no means conclusive, it is very

probable that the pits have long been concealed by dwellings. By contrast, altars set up by auxiliary units in more desolate and isolated regions had a better chance of survival. Moreover, the number of auxiliary altars must always have far exceeded that of legionary stones, auxiliary units being so much more numerous than the legions.

When found, some altars were standing on separate bases (232,434) and others have tenons (158,584) which indicate that they too stood on raised bases. An uninscribed altar from Bowes is carved in one piece with a large, moulded base (579).

The stone used for carving the altars is, almost without exception, the stone of the region, varying from limestone in the districts around York to the sandstones of the Pennines, Cumberland, Northumberland and Scotland. Masons could secure a plentiful supply of stone, for although minerals belonged to the Emperor's estate and were exploited on his behalf, stone in Britain could be quarried freely. Both civilian and military craftsmen in the north were assured therefore of an abundance of their raw material. Yet, although plentiful, the stone of Northern Britain cannot rival in quality the Mediterranean marbles. The soft, friable limestone and the coarse-grained sandstones and gritstones, sometimes embodying nodules of iron (493,228), were not the media which a skilled workman would, by choice, have selected to display his craftsmanship. This British stone is not like that praised by Vitruvius ^{19.} and is quite unsuited to the delicate carving of the palmettes and garlands in which Mediterranean craftsmen delighted. Sandstones and gritstones usually contain a considerable proportion of silica; this makes carving difficult, for it acts as an abrasive and blunts the tools. Indeed it is perhaps remarkable that, in spite of the recalcitrant nature of some of their materials, masons in Northern Britain were able to reach the standards achieved. The fine-grained sandstones, and especially the red sandstone so plentiful in Cumberland, were less intractable media, and some of the best work is to be found on altars fashioned from this stone. The masons working at Maryport, Birrens and Castlesteads all used

red sandstone to produce what are perhaps the finest altars of the whole region.

For the purposes of this study, Northern Britain is defined as the area of Professor Hawkes' Pennine Province ^{20.} together with all Britain north of the Tyne-Solway line. York is included but not Chester, although account has been taken of altars from Chester in so far as they shed light on other stones from the military zone. For the same reason, legionary sculpture from Caerleon has also been studied. Altars from Chester and Caerleon do not, however, appear in the catalogue.

An attempt has been made to see all the altars at present known. Some of these it has proved impossible to find; and permission to see the important collection of Roman stones at Lowther Castle was refused by the Earl of Lonsdale. Apart from these exceptions, almost all the extant altars have been examined at first hand.

In this study, the decoration of altars is interpreted in a wide sense to include not only the ornamental motifs applied to the stones but also the actual shape of the altars. It is clear that their appearance could be changed, first, by varying the shape and relationship to each other of the elements of the capital; secondly, by the use of different mouldings and thirdly by the application of patterns both sculptured and in paint. Accordingly an attempt has been made both to analyse the form of the capital and, for dating purposes, to establish its stylistic development. The possibility that mouldings might be used for dating has been examined and an investigation into the use of templets has been made with a view to seeing whether use of a common templet could establish any connection between legionary masons and auxiliary units. In addition, the sculptured patterns applied to capital and base have been studied, together with the reliefs decorating the shafts of altars. These reliefs fall into two main groups: representations of deities and their attributes and carvings of sacrificial implements and vessels. An attempt to reconstruct the original colouring of the stones has been made.

In advance of the evidence presented below, it seems safe to assert that there was a movement towards the integration of the upper features of the capital, leading to a simplification of this part of the altar. New styles were in vogue by the early third century. The cyma reversa moulding proved capable of mathematical analysis and showed the dissemination of sets of templets from legionary stores to auxiliary units. The influence of legionary styles on the carving of some auxiliary altars was clearly indicated. It seems likely that auxiliary masons were trained either in legionary workshops or by legionaries, and learned their patterns in this way. Study of the stones showed that it was possible to assign to military units some altars with defective inscriptions, or on which no lettering now remains. It also proved possible to establish the existence of definite workshops and to trace the products of groups of masons at work in Northern Britain.

Introduction

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3. Odes, Book III, VIII.
4. Histories IV, 53.
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12. See pp 9, 33, 41.
13. Eg. painted scene of Isis worship, Naples Museum: Grimal, op. cit., illustration 37.
14. De Architectura IV, 9.
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16. Cichorius, Taf. LXVI, LXII, LXIII.
17. RIB 2139; plate XVIII.
18. Wenham, CW² XXXIX, 22.
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Chapter I

Features of the Capital: (1) The Focus.

The place on which offerings were to be laid, or the fire kindled, was usually carved in the form of a bowl or platter. In some cases the shape of the dish is so distinctive as to allow of no other interpretation.

A perfectly preserved two handled dish with double rim and centre boss is to be seen on the altar from Carvoran set up, A.D. 136-138, by a prefect of Cohors 1 Hamiorum Sagittariorum (97). The well executed altar to the Emperor's Discipline from Birrens (136) has on its capital an offering dish, one handle of which now remains; this handle is decorated with twisted flutings. In both these examples the patera is circular and dished, but another type appears on an altar from Birdoswald (620). This is square and flat-bottomed, with a pair of small curved projections on two of its sides. An altar, possibly from Rivingham (228) displays yet another variety of dish. Here the focus is a flattish oval platter with trapezoidal handles similar to that which appears and relief from Pompeii.^{1.} This form is especially interesting, for it appears, complete with offerings, as a decorative motif on the front of a third century altar from Chesterholm (160). A deeper, circular version of the same basic shape is to be found on an elaborately carved altar from Benwell (168) although here deep grooves bisect the ansae. Another interesting focus occurs on an altar from York (596) where a single handle in the form of a conventionalised lotus flower projects from a round dished bowl. This too is clearly based upon actual Roman vessels, for a patera in the Römisch-Germanisches Museum in Mainz has a handle of similar, although slightly more elaborate, design (Plate A).

Three altars have foci whose design seems to be based on fluted metal bowls similar to, although not exactly the same as, those found in the Mildenhall Treasure^{2.} and the Traprain Law hoard.^{3.} A silver dish from Pompeii^{4.} is probably nearer to the type from which the craftsman took his

model. Continental reliefs depict paterae of this kind, the so-called rosette paterae.⁵ One of these altars comes from Housesteads and was set up by soldiers of Legio II Augusta, "agentes in praesidio" (7); the focus has eleven raised flutes and a centre boss. A stone from Carrawburgh (368) has a similar design, but here the eight flutes are sunken and, at the bottom of the cavity, meet a small rectangular panel with raised rim and centre boss. A slightly different type of focus comes from Westerwood (375); it is raised with five flutings and a centre boss. All these foci have the appearance of being carved in the shape of a flower. But this scarcely seems a satisfactory explanation of their form; and it is more likely that, as suggested above, the design is based on that of a fluted bowl.

The altar to Ricagambeda from Birrens (140) requires special mention. It appears to have an inverted, fluted bowl set within the rim of the focus. If this feature is to be interpreted as a dish, it is difficult to elucidate the function of the small boss at the topmost point of its curve. Clearly such a bowl could not stand upright without a support. Yet other explanations pose equal problems. The suggestion that the projection provided a framework on which sticks could be rested so as to facilitate the kindling of a fire, is not very satisfactory, for it leads to the question as to why other altars do not display similar features. If the projection is to be thought of as an exaggerated boss, the difficulty of accommodating offerings other than incense or a few drops of wine, becomes acute, unless the fluted boss is itself to be seen as the offering.⁶

The view that the focus is carved in the form of a metal dish receives support from two examples from Chester.⁷ The first focus, probably of third century date, displays a human head carved in the bowl itself, reminiscent of the patera appearing on the shaft of an altar from Chesterholm (160). This seems to be an attempt to depict bowls such as the bronze vessel from Faversham, Kent,⁸ which has a mask of Medusa decorating its interior boss, or, on a more elaborate scale, the bowls of table services such as

that found at Hildesheim,⁹ where the busts are in high relief, or at Mildenhall,¹⁰ where two flanged bowls have central medallions. On the second altar from Chester,¹¹ the focus is attached to the bolsters by straps but the stone is cut away at each side of the base of the focus to expose the shape of the dish.

The foci so far considered may be thought to reflect the metal utensils used in sacrificial rites and in the home. More humble vessels, however, were taken as models by stone-masons. An altar from Bollihope Common (254) has a focus in the shape of a mortarium, while others with spouts are to be seen on stones from Bowes (106), Newcastle (66) and Wallsend (239).

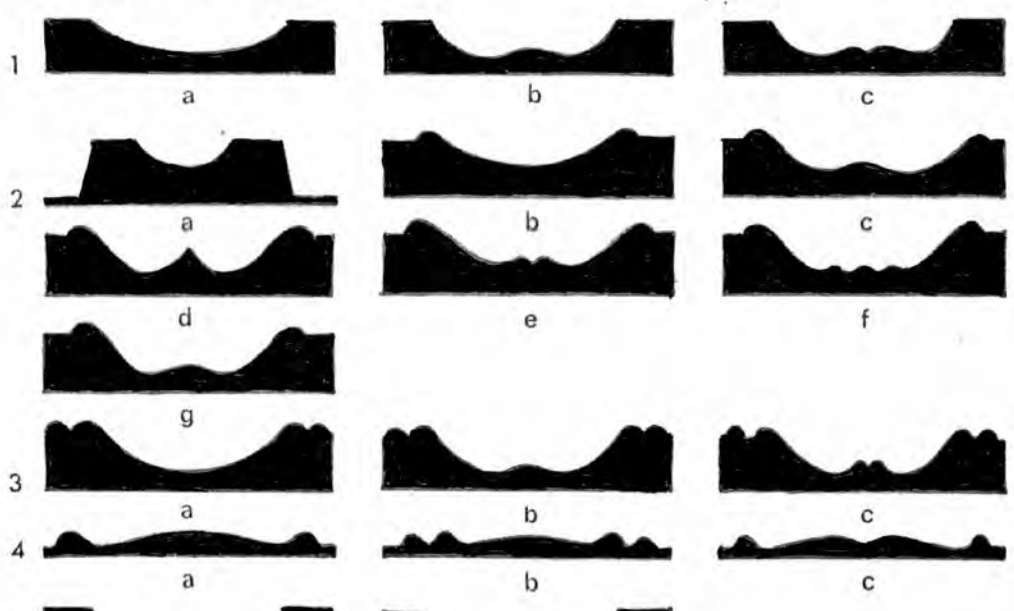
A dish of a different kind occurs on an altar from Great Chesters (248). The whole space from back to front of the capital is occupied by a large, handled platter; on top of this a smaller, round focus is set. This arrangement may perhaps provide a solution to the problem of why altars with flat tops have, in many cases, no foci;¹² the upper surface of the stone might be covered by a large dish of this, or similar, type, and the fire and offerings might be placed upon it.

The simplest form of focus is a deep, basin-like hollow (Fig. I, A1a). This is sometimes sunk into the top of the altar, as for instance on a number of small altars found along the line of the Wall (440, 453), and at Netherby (488) and York (795). The depth of the cavity is in many cases very great in proportion to its diameter. For instance, the ratio of depth to diameter of the focus of an altar from Housesteads (508) is 3 : 4; that of an altar from Chesters (453) is 7 : 8. Alternatively, the basin is sunk, not directly into the top of the capital, but into a round projection rising between the bolsters (Fig. I, A2a). Altars from Birrens (138) and Maryport (84) are good examples of this type. Where bolsters and focus are more closely allied,¹³ a raised rim often marks the edge of the dished cavity (175; Fig I, A2b). Here again the proportion of depth

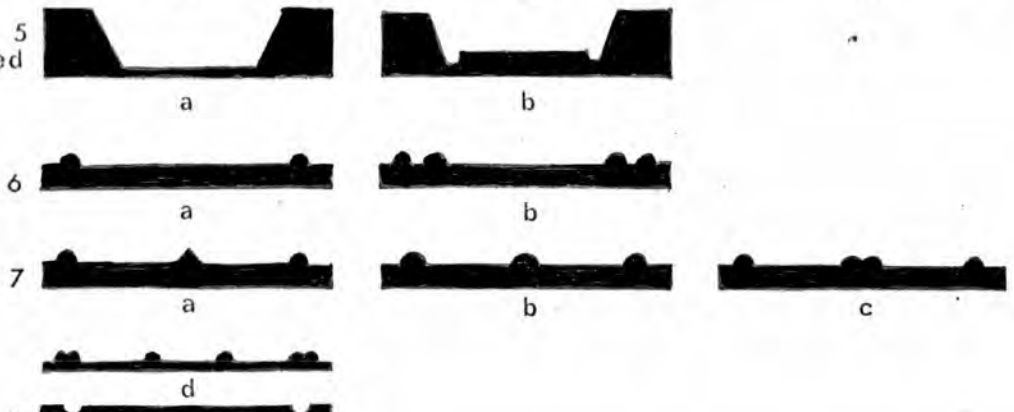
Fig.1

Profiles of Foci.

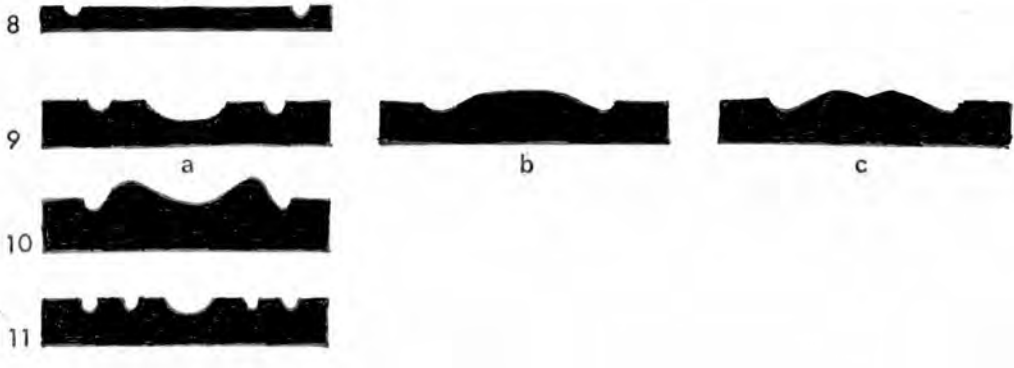
A Dished



B Flat-bottomed



C Grooved



D Raised



to internal diameter may be very great. On the Birrens altar (138) for example, and in the case of a Maryport stone (84), the ratio is 1:3. Shallower hollows however are common. Thus, an altar from Lancaster (387) has a focus sunk into the top of the capital with proportions of approximately 1 : 10. Several of the Maryport altars have a shallow foci of this type; a stone set up under M. Maenius Agrippa (303) has a focus with proportions 1 : 10; two others (300, 302) have proportions 1 : 5.

Many foci of the dish variety have bosses or umbones which give them the appearance of the saucer-like vessels used by both Greeks and Romans for pouring libations (Fig. I, AIB, 2c). The central projection provided a hollow in which the finger could lodge and steady the vessel during the act of pouring.¹⁴ This type of utensil is known from many examples found in Britain and elsewhere; one was found as far north as Helmsdale in Sutherland;¹⁵ another, from South Shields,¹⁶ is to be seen in the Museum of Antiquities in Newcastle upon Tyne. Many figures, both free-standing and in relief, illustrate the use of the vessel. A statuette of a Genius from Carlisle¹⁷ and scenes of sacrifice on Trajan's Column¹⁸ show paterae of this kind in use.

Altars with dished and bossed foci come from all over Northern Britain and are associated with many military units. A few examples will indicate the range. An altar, now lost, from Slack (25), appears to have had a focus of this kind; an elaborately carved altar from Corbridge (709), altars from Lanchester (209), Chesters (461), Carrawburgh (266), Housesteads (213), Carlisle (621), Newstead (172), Mumrills (79) and Castlecary (16), all have this form of focus. In the case of two altars from Maryport (93, 313), the umbo has become pointed in a manner reminiscent of samian forms Dragendorff 18/31 and 31 (Fig. I, Alb variant, A2d). Another variant appears on stones from Risingham (233) and Newstead (190); here the umbo has become very flattened (Fig. I, A2g).

There are several examples of foci in which there is a further development of the simple dish with umbo. An imposing altar from South Shields (401), a dedication from Carrawburgh (264), another from Auchendavy (12) and a fourth from Eastgate in Weardale (207) all display foci with umbones but in each case a depression is to be seen at the apex (Fig. I, Alc, 2e). This tendency to add to the umbo is shown by the Birrens altar to Viradecthis (139) where the umbo has a second smaller boss superimposed (Fig. I, A2f), a feature which may be noted on paterae depicted on Italian reliefs.¹⁹ To the basic shape of dish with umbo, further refinements were made. An inner rim was added to the dished focus of an altar from High Rochester (350, Fig. I, A3a), and to the dished and bossed focus of an uninscribed stone from South Shields (590, Fig. I, A3b). This is perhaps an attempt to carve a patera similar to a bronze vessel now in Amsterdam.²⁰ The dedication to Minerva from Birrens (137) adds this inner rim to a hollowed boss (Fig. I, A3c).

There are examples of foci where there is no umbo as such, but where the bottom gradually slopes upwards to the central point, giving a graceful contour (Fig. I, A4a). One of these comes from Bar Hill (98); it has a central hollow at the apex (Fig. I, A4c). The other is from the Castlesteads Mithraeum (150) and has a double grooved rim (Fig. I, A4b). The gentle upward curve of these foci calls to mind the pottery dish found at Hofheim²¹ and, from nearer home, the building stone of Legio XX on which a similarly-shaped dish with central boar's head in relief is carved.²²

The elaboration of the focus in these ways is accompanied by a decrease in depth. The focus is becoming shallower and approximating to the second main type, the chief characteristic of which is its flat bottom. Foci with flat bottoms are as common as those with concave sides. They too may be sunk into the top of the capital, as for example on two altars, one certainly (219), and one possibly (222) from Housesteads (Fig. I, B5a).

Or they may be edged by a raised rim as at Maryport (312), Lanchester (115), Wallsend (239), Carrawburgh (677), Castlesteads (151), Bar Hill (6), Castlecary (35) and Newstead (205; Fig. I, B6a).

Variations on this basic shape are to be found. An altar from Corbridge (181) has an inner concentric rim (Fig. I B6b). Three stones from Maryport (95, 308, 311) have pointed umbones similar to those noted above on the dished foci of two other altars (Fig. I, B7a). A rounded umbo occurs on an altar from Birrens (146, Fig. I, B7b), while rounded bosses with central depressions appear on altars from High Rochester (122) and Benwell (50, Fig. I, B7c). An altar set up at Bar Hill (100) has a focus with a double-moulded rim and a tiny concentric rim in the centre (Fig. I, B7d), calling to mind the inner rim of a patera carved on an altar in Rome.^{23.} In two cases, the bottom of a flat-bottomed focus is outlined by a groove. These are a small, but well-carved altar from Netherby (374) and a larger stone from Chesterholm (371, Fig. I, B5b).

A small group of altars has foci whose outline is indicated by grooves. Even here there is great variety. Stones from Lancaster (389) and Carvoran (238) rely upon a single groove to establish the position of their foci (Fig. I, C8). Two other altars, one from Lanchester (513) and the other from Carrawburgh (540), have both an outlining groove and a central dished cavity (Fig. I, C9a). Three others (321, 528, 505) have a rim in addition (Fig. I, C10). Another pair, one certainly (511) and the other (535) probably from Lanchester, has an umbo with sunken centre set within the circular incisions (Fig. I, C9b). Finally, two altars from Lanchester (515) and Chester-le-Street (523) respectively, and a third (536) of uncertain provenance have the shape of their foci given by double concentric grooves with a central hollow (Fig. I, C11).

With two exceptions (238, 620) all the foci so far mentioned have been circular in form, in intention, if not in execution. Perfect circles are rare. While this shape is by far the most common, it is by no means the

only one. Elliptical foci are well attested, rectangular examples are fairly widespread and a small handful of horseshoe shapes may be noted.

Elliptical foci may be set so that their long axis is parallel to either the front or the sides of the altar. Examples of the former are to be found chiefly amongst the smaller stones, such as altars from Mumrills (65) and Housesteads vicus (510). Foci placed parallel to the sides of the capital, however, occur on a large altar from Whitley Castle (329) and on the sizable stone set up at Castlecary by Cohors I Vardullorum (114). As is the case with circular foci, elliptical receptacles may be either hollowed into the flat top (65) or may have a moulded rim (8). Foci of the latter type may be either dished (8) or flat-bottomed (186). Elliptical foci also appear with umbones, as on an altar from Benwell (395). Sometimes these umbones have depressed centres, as on an altar from Chesterholm (160). Actual examples of oval platters have survived from the ancient world. Three oval plates with small handles were found in the Hildesheim Treasure ²⁴; and a silver dish with elaborate handles is in Turin.²⁵ Similar to the latter is a bronze dish now in the Regensburg Museum.

Square foci are not uncommon. The sunken type is usually very small, as on a Birrens altar (649), where the recess measures two inches by half an inch deep. Although some square foci with raised rims are also tiny, as altars from Birdoswald (646) and from Carrawburgh (344) show, they are occasionally much larger; the foci on an altar from Housesteads Mithraeum (244) and on that from Milecastle 19 (188) measure respectively five and a half inches by five-eighths of an inch and five inches by half an inch.

Oblong forms are of the usual kind. The most interesting of the sunken rectangles is perhaps that on an altar from Whitley Castle (42) where the sides slope inwards to the bottom. The focus of the lost altar to Contrebis from Burrow in Lonsdale (52) may have been of this type. A communal dedication from Old Carlisle (530) has a sunk rectangular focus very roughly pecked out. Uninscribed stones from Carrawburgh (465, 682)

and a dedication to Coventina (343) from the same fort have rectangular sunken foci, and two lost stones from near Carvoran (617) and from Risingham (236) appear to have had similarly shaped cavities. The two altars from the River Tyne at Newcastle (23, 24) have oblong foci placed with their long sides parallel to the front of the stone and outlined by raised rims which are triangular in section. This is unusual, for other moulded edges are either square or, more commonly, rounded in section. Another oblong focus with a raised rim comes from Longwood, Huddersfield (756), and uninscribed altars from Castlesteads (691) and Carvoran (104) provide further examples. A small altar from Lanchester (381) has a rectangular focus with umbo. The unusual oblong focus of the Birrens altar to Fortuna (319) has a flat bottom, the sides being formed by the bolsters and three tiny gables which frame the secondary capital placed upon the altar top. The outer corners of some oblong foci are rounded to give a playing-card shape (593, 637).

There is one example of a lozenge-shaped focus, on an altar from Carlisle (667). The feature is outlined by a flat raised rim and has a flat bottom.

Horseshoe shaped foci are rare and are of the raised-rim-and-flat-bottomed type. The largest of the altars comes from Maryport (549), here the opening of the horseshoe lies towards the front of the stone. This is true also of a small altar from Chester-le-Street (377) where the focus perhaps more nearly approximates to a heart shape than to a horseshoe and suggests that a dish similar to one from Traprain Law was being imitated.²⁶ The other stone, from Ebchester, has the open end facing the back of the stone (184).

In another group of altars, mostly large ones, the focus takes a different form. Instead of a cavity, these stones are provided with a raised, flat panel (Fig. I, D12). Rectangular projections of this type appear on an altar of Cohors IV Gallorum from Chesterholm (159), on an

uninscribed stone from Carrawburgh (675), official dedications of Cohors I Dacorum from Birdoswald (221, 275) and on a fragment from Bewcastle (322). A lost altar from Castlesteads Mithraeum (153) may be another. From the inscriptions it would seem that these rectangular panels belong to the third century. Similar panels, but circular in shape, are to be seen on two altars from Corbridge (32, 719), on a stone from Hadrian's Wall (361) and on a large uninscribed altar from Watercreek (362). Apart from one Corbridge example, these stones may also date from the third century, and may well represent a variant of the flat topped style of capital discussed below. ^{27.} Birdoswald provides an example of an elliptical raised panel (271) although the presence of two iron rivets in its upper surface seems to suggest that the stone has been mutilated and re-used as a sundial. A smaller altar from Lanchester (755), however, no doubt preserves its original shape. Another panel, of truncated lozenge shape, occurs on an altar from Old Carlisle (771). A small, uninscribed altar from Chester-le-Street (380) provides a link between those stones with flat raised panels and those whose foci take a more usual form. Here a small, deep, basin-like focus is set upon a large, rectangular platform (Fig. I, D13).

In the main, foci are carved in the centre of the upper surface of the altar, the few examples of eccentric placings (e.g. 668, 635) being probably the result of an over-hasty completion of the work. Foci are usually set either slightly below, or on a level with the tops of the bolsters. In a few cases, however, the focus rises beyond the upper limit of the bolsters. A large altar from Castlesteads (142), another from Old Penrith (464) and a third of uncertain provenance (603), but apparently also from a site in Cumberland, all display this characteristic, while farther east, it occurs on a small stone from Chester-le-Street (378). Altars without bolsters may display foci with raised rims; here the edging moulding inevitably projects beyond the flat upper surface. Uninscribed altars preserved in the Museum of Antiquities, Newcastle upon Tyne (822) and at Brougham Castle (612) serve as examples.

On those altars on which the bolsters are cut almost independently of the capital,²⁸ the focus stands alone, carved on its own small pedestal. Excellent illustrations of this type are to be seen on some of the Maryport altars, displaying a variety of internal treatment. One of the altars dedicated by Cohors I Hispanorum (304) has a simple dished focus; another (82) is flat-bottomed with raised rim; one has an umbo (311).

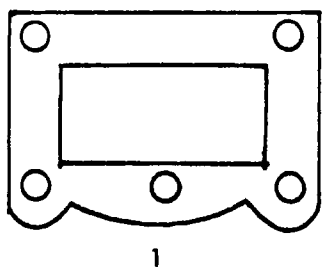
There are several instances of foci set within a rectangular framework. Mention has already been made of the small altar from Chester-le-Street (380) where the focus rises from a square platform. Another, larger stone, found at Scarcroft, Yks. (500), has a dished focus sunk into a raised platform. This gives an impression of a square, ornamental dish such as that found at Mileham, Norfolk.²⁹ Small altars from Maryport (554) and Great Chesters (528) have foci set within an incised rectangle. A larger stone from Castlesteads (150) achieves the same effect by substituting a raised rim for the grooves, while another from Housesteads (487) frames the raised rim-and-umbo-type focus by setting it within a sunken rectangle. On a Chester-le-Street example (379), a rectangle is formed by the front of the capital and three incised lines, giving a comparable, if not exactly similar, effect.

It may be that the grooves encircling dished foci such as appear on small altars from Housesteads (505) Bewcastle (321) and Great Chesters (528) are designed to emphasise the shape of the focus. This effect is more exaggerated on an uninscribed stone from South Shields (590); here a bevelled depression, roughly circular in shape, frames the focus.

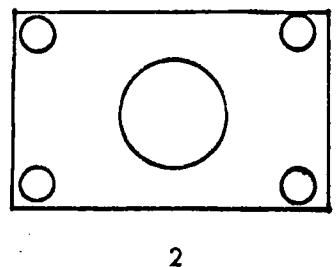
Five extant altars and another, now lost have more than one focus. Of these, one has six foci, two have five and three have three. The six foci occur on a small altar from Maryport (556) where five very small circular depressions are arranged around a sunken rectangle (Fig.II, 1). Altars from Greetland (407) and Huddocheater (391) have a central circular

Fig. II

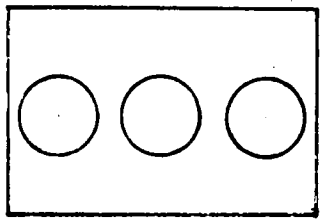
Position of Multiple Foci.



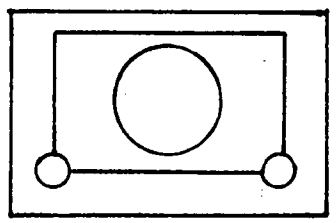
1



2



3



4

focus with a smaller hollow in each of the angles formed by the bolsters and the front and back of the capital (Fig. II, 2). Their form is not identical. The main focus of the Rudchester stone has a flat bottom and raised rim, the small foci being rimmed but dished. By contrast, the Greetland altar has a dished central focus and rimless deep cavities in the angles. An altar from Brougham (611) displays three foci set in line across the top of the stone; all have moulded rims but the middle one is flat bottomed; the flanking pair of foci are dished (Fig. II, 3). One of the stones with three foci is lost (754) and the other comes from Ilkley (360). Here, the largest focus is set within a raised square; two smaller depressions have been hollowed out at the front corners of the platform (Fig. II, 4). In passing, perhaps reference ought to be made to the altar from Risingham (232) which has a second focus provided in the base upon which it stood. The meaning of these multiple foci is by no means clear, and no hint is given either by distribution or dedication.

There is no apparent chronological sequence of focus types. The very simplicity of the sunken form no doubt ensured its popularity with craftsmen throughout the Roman period. Datable examples are few; an altar from Mumrills (65) can probably be assigned to the second century; the Greetland stone with multiple foci is to be dated A.D. 208 (407) while another third century piece comes from the commander of a Lanchester unit in Gordian's reign (207).

Foci of more elaborate shape are, in the same way, distributed throughout the second and first half of the third century. The handled dish form occurs in the second quarter of the second century (97) and appears also in the period following the Severan redeployment of auxiliary units (228). From their contexts, the fluted bowl types would seem to be of second century date. (See Appendix C).

The circular, dished focus standing high between the bolsters is most

common in the second century (Appendix C, A2a), but, as the focus mount ^{30.} becomes larger, its independence of position tends to be lost; its projection from the central mass of stone becomes smaller, although the basic shape remains unchanged. Third century examples from Risingham (226, 232) illustrate this point clearly.

The phiale-like focus with central boss is found in both centuries; altars to Hercules (79) and to Fortune (16) from the Antonine Wall most probably belong to the second century; a dedication from Carrawburgh (266) carries the style into the third century, while a stone set up at Housesteads by Cohors I Tungrorum (213), presumably belongs to the same period. Foci of the same shape, but with additional embellishments of the central boss, are equally at home in either century; altars from Auchendavy (2, 12) and Birrens (139) are probably of second century date, while a South Shields altar is to be dated A.D. 211-212 (401).

Flat bottomed types are found in both centuries. Examples from Maryport (312), the Antonine Wall (35, 80) and Lanchester (115) may all be attributed to the second century. In the following period, the style was popular with Cohors I Tungrorum at Housesteads (215, 217); a Mithraic altar set up by a prefect of Cohors I Batavorum at Carrawburgh (265) has a focus of this type. The bossed variety is also found in both periods as altars from Maryport (308), Birrens (146) and High Rochester (122) attest.

The small group of stones on which the position of the focus is indicated solely by one or more grooves probably comes from the same workshop (511 f.) and dates from the third century, thus reflecting a tendency towards the simplification of the capital by the elimination of bolsters ^{31.} and of any elaborately carved offering-dish. The flat-platform type of focus may be seen as part of the same trend.

Just as the profiles of foci give no evidence of chronological development, so it is equally impossible to associate circular, rectangular

and elliptical forms with any specific period. Nor does shape appear to have had any peculiar significance in religious ritual; altars dedicated to the same god display foci of widely differing types, as an examination of stones to Jupiter, Best and Greatest, will show. On these altars, rectangular (530) and elliptical (271) forms are to be found, as well as circular types, both sunken (219), dished (299) and with flat bottoms (312), both kinds occasionally appearing with umbones (308, 313). A fair sample of dedications with flat tops is also present (161, 241, 285). Had any uniformity of focus type been demanded by ritual, it would surely have been most scrupulously observed in the worship of the chief god of the pantheon. The conclusion must be drawn that no such requirements dictated the shape of the focus. Altars dedicated to other deities show a wide spread of focus types. ³²

The four altars set up by Marcus Cocceius Firmus at Auchendavy (2, 3, 4, 5) provide an interesting group; they must be closely related in point of time. Indeed, it seems very probable that they are the work of one mason. Two (4, 5) closely resemble each other in size and style. A third, (2) of almost similar height, bolsters and focus type, differs from them in mouldings, but is linked with the fourth stone (3) by the decoration of the ends of the bolsters and by the treatment of the capital front. The fourth stone (3) is larger than the rest, perhaps reflecting its dedication to Jupiter. It seems clear that the stones are connected by more than a common dedicator, a view that is reinforced by the spacing of the last three lines of text, which is, in every case, the same. These four altars then afford a glimpse into the repertoire of one craftsman, working in the second century. Of these four stones, three (2, 4, 5) have round dished foci of the same diameter and depth; one of these (5) has an umbo (Fig. I, A2c); the two others (2, 4) have umbones with sunken centres (Fig. I, A2e). The fourth stone (3), to

Jupiter, has a large, flat-bottomed focus with a small umbo (Fig. I, B7b); the focus is joined to the straps of the bolsters. The foci of these altars are all of fairly elaborate form and they illustrate the point that flat-bottomed and dished types are contemporary rather than sequential. As there appears to be no connection between style of focus and ritual requirements,³³ it seems that here, either the mason or Marcus Cocceius Firmus himself decided what would be most suitable, taking into account the economic and social status enjoyed by a centurion of Legio II. This assumes that the altars were specially commissioned by M. Cocceius Firmus and were not carved as stock pieces by a craftsman in the hope of a future sale.

The conclusion to be drawn from an examination of focus types seems to be that these were dependent upon mason's whims or customer's fancy and requirements in view of the nature of his offering, rather than upon the demands of religious rites or on changes of fashion.

The exact rôle of the focus in sacrificial ritual is difficult to define and indeed its function may have varied according to the deity worshipped. Its size varies very considerably both in diameter and depth. At its largest it may measure as much as thirteen and a half inches internally (401) and reach a depth of two and a half inches (84); yet it may be as small as one inch across (508) and a quarter of an inch deep (454). Thus, although many foci are large enough to accommodate a fire of sufficient size to consume a burnt offering, many are far too small to have done so. The foci of official dedications are usually, although not invariably, adequate for this purpose; an altar to Jupiter from Maryport (83) has a raised focus measuring only three and a half inches internally. Moreover, few stones show any perceptible traces of burning. This may, however, result from the use of a fuel which leaves little deposit when consumed, such as the pine-cones found at Carrawburgh.³⁴ Yet such fuel was expensive³⁵ and cannot have been in general use. And even with a type of fuel leaving no deposit, the fire itself might be expected to redden

the surface of the stone, had it been kindled for any length of time, or on more than one occasion. There is a distinct possibility that chafing dishes were sometimes used to contain the fire, thus preventing any damage to the altar itself. The shapes of the foci, based, as has been demonstrated, on those of actual vessels, were well suited to the insertion of metal bowls. The large, flat-bottomed basin from Ribchester ³⁶ may have been similar to those thus used. Flat bottomed foci, at first sight too small to receive a fire of adequate volume, may have been used as bases into which the footrings of bowls such as that found at Luton, Kent ³⁷ might be inserted. The size of the fire could then be greatly increased.

Yet it is clear that many foci are too small to accommodate chafing dishes or to have contained sufficient fire to devour the entrails of even small animals or birds ³⁸ and it seems certain that the usual offerings were such that a modest blaze would suffice. A clue is given by the fresco from Doura ³⁹ depicting the commander of a Palmyrene cohort pouring a libation over an altar in the form of an incense burner. Small quantities of wine, cakes, fruit and incense could all be consumed by the tiny fire which a small focus or incense burner could house. Indeed it is not improbable that incense burners were used upon the altars themselves. Several have been found in Britain, for instance at Carrawburgh, ⁴⁰ Silchester, ⁴¹ and Litlington ⁴² and the bases of these burners could rest very happily either on flat topped altars or within the rims of flat-bottomed foci. If a bowl or incense burner were used to accommodate the fire, no traces of burning would be left upon the surface of the altar. Another way in which this could be avoided was by placing the fire in a brazier such as appears on an altar from Cologne dedicated to the Goddess Vagdavercustis. ⁴³ No gratings of this type seem to have been identified in Britain; but this is not to say that they did not exist, for if they were of iron, recognition might be virtually impossible. It seems clear

then that all foci except the very smallest could have played some part in rituals involving burnt offerings.

The suggestion that deep, basin-like foci were not used for fires but were receptacles for libations and for gifts such as fruit, ^{44.} must be treated with reserve. A focus of this kind is as capable of containing fire as an incense burner. Moreover the idea that the blood of sacrificed animals was poured into these foci can only be feasible if the quantities involved were minute. The assertion in Daremberg-Saglio ^{45.} that foci were provided with a drainage channel to allow liquids to reach ground level, finds no support from Northern Britain, for such a feature appears on not a single altar. Whatever was poured into the basin would therefore remain until evaporated by sun and air.

Offerings which did not require the kindling of a fire were doubtless often made, and, on many Rhenish altars, ^{46.} these gifts actually appear in relief, usually in the form of fruit. The existence of these stones makes possible an explanation of the strange, angular, cone-like object which projects from the top of a small altar in York (34). As there is no focus, this must represent, unless the object is phallic, either the offering made, or else the sacred fire itself, as on a small altar now in the Saalburg Museum (Plate B). The projections on altars depicted on tombstones from Langres may be noted as possible parallels. ^{47.} Two other altars must next be considered. One of them, from South Shields (589), has a common type of focus, round with rim and flat bottom, but within it there is the unusual feature of four raised pellets arranged in a square. The second (358), a small altar of uncertain origin, has the entire surface of its rectangular focus filled by four bosses. In both cases it seems possible to see these raised features as attempts to represent offerings, probably of a vegetable nature, cakes or the like. A further example of a sacrificial dish complete with offerings appears on the front of an altar from Chesterholm (160). It is possible also, as indicated above,

that the object occupying the centre of an altar from Birrens (140), is intended to stand for a sacred gift. Its nature, unless it is an inverted bowl, is difficult to elucidate.

Two examples of portable altars occur in Northern Britain, both from Carrawburgh (267, 671). In each case a fragment of an iron staple or ring remains. The altars are fairly small but by no means light in weight. One of them has a focus; the top of the other is flat. Continental examples may be seen in the Museum in Strasbourg.

Conclusions

The foci of altars are of many shapes and sizes and reflect the bowls, dishes and platters in use in the Roman world. There does not seem to be any chronological sequence of focus types nor do particular shapes seem to be associated with individual cults. A few altars have more than one focus. It is difficult to establish the rôle of very small foci in sacrificial rites but it seems clear that fire could have been accommodated in all but the tiniest, if incense burners or chafing dishes were used. The absence of signs of burning on the vast majority of foci may be accounted for in this way.

A list of focus types of altars still extant is given in Appendix C.

Chapter I.

1. Ryberg, plate LXII fig. 100.
2. Brailsford, J.W., The Mildenhall Treasure, edit. 2 (London, 1955), 12; plate 6.
3. Toynbee, J.M.C., Art in Roman Britain (London, 1962), Cat. 107; plate 120.
4. Brion, M., Pompeii and Herculaneum, The Glory and the Grief (London, 1960), fig. 56 facing 122.
5. Schaewen, Taf. V, 2.
6. See p. 23.
7. RIB 450, RIB 457.
8. B.M. Guide (1951), 38, no. 5; fig. 18 no. 5, 39.
9. Pernice, E. und Winter, F., Der Hildesheimer Silberfund (Berlin, 1901), 26-28; plates IV, V.
10. Brailsford, op. cit., 9, no. 7; 10, no. 8; plate 4.
11. RIB 457.
12. See p. 41.
13. See p. 397.
14. Ward, 189.
15. Curle, PSAS LXVI, 308, fig. 17.
16. Blair, PSAN² III, 173-174; fig., 175.
17. RIB 944; plate XIV.
18. Eg. Cichorius, Taf. X.
19. Schaewen, Taf. II.
20. Ibid., Taf. VI.
21. Ritterling, E., Annalen des Vereins für Nassauische Altertumskunde und Geschichtsforschung Band XIV 1912. Das Frühromische Lager bei Hofheim 1, T. (Wiesbaden 1913), 271-272; plate XXXIII, no. 43.
22. RIB 1645.
23. Arabiel, Taf. V, 1.
24. Pernice and Winter, op. cit. 51-52; plate XXV.
25. Strong, D.E., Greek and Roman Silver Plate (London, 1966), 171; plate 47A.

26. Curle, A.O., The Treasure of Traprain, A Scottish Hoard of Roman Silver Plate (Glasgow, 1923), 72-73, no. 108; plates XXVII, XXXVIII.
27. See p. 417.
28. See p. 32.
29. B.M. Guide (1951), 38, no. 2; plate VI, no. 2.
30. See p. 48.
31. See p. 33.
32. See Appendix C.
33. See p. 19.
34. Richmond and Gillam, AA⁴ XXIX, 7, 86. See also Cichorius, Taf. LXXII, where pine cones are shown on an altar.
35. Richmond and Gillam, AA⁴ XXIX, 6.
36. Watkin, 151, fig. VI.
37. Jessup, JBA³ XXII, 28; plate XI, 1,2.
38. As on a mosaic from Carthage: Gauckler, P., Inventaire des Mosaïques de la Gaule et de l'Afrique romaine: Afrique Proconsulaire (Tunisie) (1910), no. 607. I owe this reference to Dr. D.J. Smith.
39. Rostovtzeff, M., A History of the Ancient World (reprinted Oxford, 1945) Vol. II, plate LXXXII facing 316.
40. RIB 1530; RIB 1531.
41. May, T., The Pottery found at Silchester (Reading 1916), 119; plate L, type 71; plate LXXI, type 165.
42. Fox, C., The Archaeology of the Cambridge Region (Cambridge, 1923), 189; plate XXI, 3, 3a.
43. Fremersdorf, F., Inschriften und Bildwerke aus Römische Zeit (Köln, 1956), plate 21.
44. RE I, 1667.
45. I, 351 b.
46. Eg. Lehner, H., Die Antiken Steindenkmäler des Provinzialmuseums in Bonn (Bonn, 1918), 89, no. 184; 90, no. 185; 144, no. 317. Schoppa, Römische Götterdenkmäler, 49, no. 14; plates 14, 15.
47. Esp. IV, 304, nos. 3293, 3294.

Chapter II

Features of the Capital: Bolsters

The lateral rolls which frequently flank the foci of Roman altars have been variously described as bolsters, 1. pulvini, 2. ansae, 3. volute, 4. and faggots. 5. The first of these terms suggests that these rounded projections were intended to act as cushions to shield the sacred fire from the wind, while their description as ansae or handles seems to imply that they were used for carrying or moving the stones. The word volute suggests that the rolls resemble the spiral scrolls characteristic of Ionic capitals. Altars from Chester 6. and Littleborough, Notts., 7. may be cited as British examples of stones which display a scroll-like decoration on the ends of the lateral rolls, but this could perhaps as readily be attributed to Celtic as to Greek influence. It has also been suggested 8. that the rolls represent, in conventional form, the bundles of faggots needed to kindle and feed the ritual fire, a theory supported by the fact that, in many instances, the projections are encircled by grooves or raised bands, suggestive of the cords or straps with which sticks would be tied together. These straps are sometimes decorated with rope-like mouldings (23, 24). Moreover, the geometrical designs decorating the ends of the rolls may perhaps have developed from stylized versions of the broken or chopped ends of sticks. (See Appendix O). 9. The embellishment of the upper surface of the rolls may provide an additional clue. Some rolls are decorated with leaf motifs, either incised or in relief (Appendix D), and this choice of ornament, while artistically in keeping with the general outline of the projections, may also reflect their vegetable nature; dead leaves must often have remained on the sticks used to light and feed the sacred flames. The possibility that logs rather than faggots are represented must also be considered, for this would accord with the decoration in the form of concentric rings frequently applied to the ends of the rolls (Appendix O),

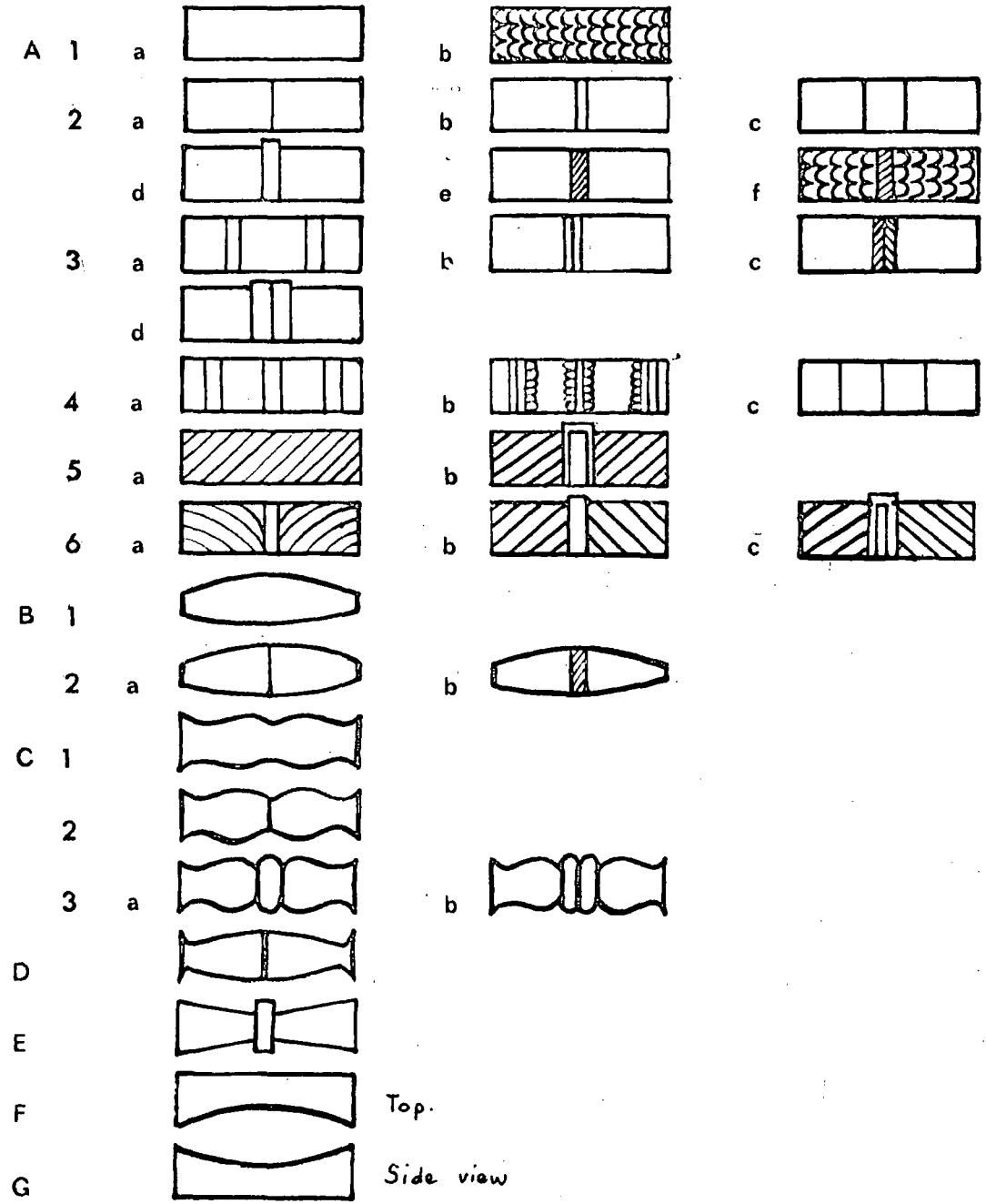
although the presence of "cords" is then less easy to explain. While it is not possible to dogmatize about the meaning of these lateral projections the theory of the faggots seems to be the most feasible. Nevertheless, the term bolster is used throughout this study, as this is the word commonly employed today.

The bolsters are usually so placed that at their outer edges they are flush with the capital (e.g. 407, 771). There are many examples, however, of bolsters which are set back from the sides of the capital (eg. 200, 378), and these are so numerous as to suggest that this variation is intentional rather than the result of faulty workmanship. In three cases (319, 408, 407), the bolsters are so far away from the edges of the capital on all sides that they form a secondary capital similar to those found on altars in the Rhenish provinces of the Empire.¹⁰ The altar from Greetland (407) is dated by its inscription to A.D. 208.¹¹ That from York (408) is the nearest in type to Rhineland examples.

There are seven basic styles of bolster on Northern British altars (Fig. III and Appendix D). The first type takes the form of a simple cylindrical roll (Fig. III, Ala). This is by far the most common style. It occurs on altars set up by soldiers of all three legions (7, 40, 172), and of many auxiliary regiments (eg. 142, 215, 248, 307), as well as by civilians. Datable examples (eg. 288: A.D. 276-282) indicate that it remained in the mason's repertoire as long as bolsters were in vogue. Altars such as that to Jupiter set up by Cohors IV Lingonum at Wallsend (239), where the cylinder is truncated at the lower side, or the altar from Duntocher (182) where the bolsters are wider at the front than at the back, and from Maryport (308) where the reverse is the case, seem to be the result of defective workmanship rather than of deliberate intention. Straps of almost all varieties appear with bolsters of type A. A full list is given in Appendix D.

Fig.III

Types of Bolster



Bolsters of the second type are cigar-shaped, with gracefully tapered ends (Fig. III, B and Appendix D). They are usually plain (84, 139), but may be strapped. Straps are usually single and grooved (Fig. III, B2a), although an uninscribed altar from Birrens (148) has fine cable-moulded cords and a well carved decoration of thunderbolts, a pointer to the dedication of the stone (Fig. III, B2b). Bolsters of this type are fewer in number but more interesting in distribution than those of style A. It seems safe to assert that cigar-shaped bolsters were popular with certain military units in the second century. They occur, for instance, with a central groove, at Croy Hill on an altar dedicated by a vexillation of Legio VI (28), and at Birrens in the period when Cohors II Tungrorum was in garrison there (139). The style was known to the masons of Cohors I Vardullorum during Antistius Adventus' governorship of Britain, probably A.D. 175-178, ^{12.} when this regiment was at Lanchester (115). Three of the altars with this style of bolster come from Maryport (83, 84, 85), and were erected by Cohors I Baetasiorum in the later part of the second century. ^{13.}

It may be that the cigar-shaped bolster originated in Britain with Legio VI. The bolsters of an altar found in Newcastle, dedicated to Jupiter and to the Health and Victory of the Emperor and therefore clearly military in origin (66), are almost identical with those of the legionary stone mentioned above (28) and it is possible that the two altars are the work of one mason. There were doubtless many troop movements during the Antonine advance into Scotland and the same vexillation of Legio VI may have set up both stones. During the early Antonine period, Cohors I Vardullorum was stationed at Castlecary (114) and soldiers there could easily have seen and copied the legionary altar at Croy Hill, only six miles from their own fort. Cohors I Baetasiorum at Bar Hill (80) was even nearer and Cohors II Tungrorum, if it ever manned the Antonine Wall,

may have learned the style there, or from the legion at Birrens,¹⁴. There is also the possibility that the masons of the auxiliary units favouring this style had received their training in stone-carving from legionaries of the Sixth either at York or from peripatetic instructors. Another explanation might be that masons had been transferred from one regiment to another and had taken their styles with them.¹⁵.

Four altars with cigar-shaped bolsters which cannot be attributed with certainty to military craftsmen come from York (74), Benwell (50) and Carrawburgh (345, 346). If, as suggested above, this style of bolster originated with Legio VI, the altar from York slips into place. The Benwell stone, dedicated in a secondary text¹⁶. to the Three Witches, is of elegant shape but has little to connect it with any other altar, while the other altars are small. It may be that here the work of a veteran of Legio VI may be seen.

The third style of bolster, familiar from continental altars, is more elaborate. Here the bolsters are baluster-shaped in horizontal and vertical section, swelling in the middle and at each end (Fig. III, C). The bolsters are waisted and usually encircled by a single¹⁷. or double strap. (See Appendix D). These straps may be grooved but are more frequently in relief. Incised bay-leaf decoration is sometimes found on the upper surface of the bolsters.¹⁸.

Bolsters of the third type are restricted in number and their distribution is interesting. Two altars from Chester, one certainly¹⁹. and the other possibly,²⁰. carved by a mason of Legio XX, display bolsters of this type. The former is securely dated by its inscription to A.D. 154. South Shields provides another example, dedicated by a centurion of Legio VI (46). The elaborate altar from Whitley Castle erected to Apollo by a soldier of Cohors II Nerviorum (329) is another. An altar from Birdoswald (620) also has bolsters of this type.

Slightly different are the bolsters on the altar at Haddon Hall, Derbyshire, dedicated by a prefect of Cohors I Aquitanorum (206). Here the shaping is less pronounced and a groove marks the centre of the roll. Bolsters of similar style, but with a well-defined shape are to be found on an uninscribed altar from Carlisle (622). This altar has the figure of a deity in relief on its face. The Haddon Hall altar probably dates from the second half of the second century when the Aquitanians were stationed at Brough-on-Noe; ²¹ the capital mouldings of the Carlisle stone hint that a similar dating would not be far amiss. A small altar from Chester-le-Street (378), which preserves the basic shape yet omits the straps entirely, is probably of a later date, reflecting a style only dimly remembered by the sculptor.

Legio XX was perhaps the unit which preferred this more elaborate type of bolster and it is possible that the Whitley Castle altar (329) was carved either by a legionary mason or by a member of an auxiliary regiment closely associated with this legion.

The altar from Newstead dedicated to Apollo by Lucius Maximus Gaetulicus (173) displays a type of bolster apparently halfway between the second and third styles (Fig. III, D). The bolsters swell in the middle, then taper and swell again at each end. The effect is of a cigar-shaped bolster the ends of which have been enlarged. A median groove encircles each roll. Found at Newstead in association with Antonine pottery, it probably belongs to the Antonine period.

Shaped bolsters of a more angular type are to be found on a small group of altars, one of which ²² was probably carved by masons of Legio XX. (Fig. III, E, and Appendix D). These bolsters narrow towards the middle and are encircled by straps. Of these stones, one from Newcastle (189) is clearly a virtuoso piece with elaborately decorated capital and unusual rounded shaft; and it seems likely that both it and an altar from Ebchester (184) are products of Legio XX masons.

Another group of altars displays bolsters which curve at their inner edges to frame the focus (Fig. III, F). This style seems to have been military in origin. One of the dedications, from South Shields (401), dates from the early third century, while another from the Antonine Wall (434) seems to fit best into the second half of the second century. The late second and early third century seems the most likely period for this particular style of bolster.

Masons of Cohors I Batavorum carved an imposing altar at Carrawburgh in the early third century (266). Its bolsters are hollowed to form lens-shaped depressions on their upper surface. It has been suggested that this is the result of tool sharpening. The same characteristic, however, may be seen on two small altars from Benwell (450, 452), suggesting that the shape was not the result of the sacriligious re-use of the stones but was intended from the beginning. It is scarcely conceivable that anything larger than a small pocket knife could have been sharpened on the Benwell altars. This type of bolster is accordingly classified as style G (Fig. III, G and Appendix D).

The straps or cords already mentioned may appear singly in the centre as at Chester-le-Street (523), Castlecary (35) and Housesteads (214, Fig. III, A2a, A2b, A2c, A2d, A2e, A2f), or in pairs set either equidistant from the ends as at Barhill (6) and Risingham (224, Fig. III, A3a), or contiguous in the middle of the bolster as at Auchendavy (3) and Chesterholm (160, Fig. III, A3b, A3c). Occasionally three straps occur, spaced out on the bolster as at Barhill (100, Fig. III, A4a), while another variant has, in the centre of the roll, one strap superimposed upon another as at Netherby (374, Fig. III, A6c). As already stated, the straps may be grooved (212) or, if in relief, may be broad (190), narrow (35), flat (35) or rounded (392), and may be decorated with cable moulding (160). An altar from Housesteads (211) has three double straps decorated with incised scales or leaves. The straps may follow the contours of the curving bolster (392) or may form a right-

angle at the outer corners. (See Appendix D).

The bolster itself is sometimes ornamented by twisted flutings (or cable mouldings) as at Carrawburgh (366, Fig. III, A5a, A5b, A6b, A6c), or as indicated above, by a design of leaves or scales as at Benwell (168, Fig. III, A2f). These are invariably placed longitudinally to the bolster and not, as in some Rhenish examples, ²³: parallel to the front of the stone. The outline of this motif, together with the fact that ornament of this type is coloured green or yellow on the grave monuments of Neumagen, ²⁴: points to the conclusion that leaves rather than scales are being depicted. The basis of the motif seems to be the bay leaf, although a cap stone from Melandra (439) has a decoration of what appears to be oak leaves.

There is a small but significant group of altars on which the bolsters begin only towards the front of the capital. It might be supposed that this is an indication of the unfinished state of the carving but this can scarcely be the case, since a well-carved altar from Eastgate, County Durham (207) has bolsters of this type. The style appears to be a transition stage between altars with full bolsters and those with no bolsters at all, a view which is reinforced by an altar from Old Penrith (464), where broad angular straps such as appear on conventional bolsters mask the fact that beyond these straps the capital is a solid mass. This is perhaps the first appearance of the style which seems to have emerged in military workshops, probably in Cumberland, and from there spread to Carrawburgh and Lanchester. (See Appendix D). At Lanchester it may be dated with certainty to the period of Gordian, A.D. 238-244, ²⁵: and it seems safe to attribute the altars displaying half-bolsters to the second quarter of the third century.

Half-bolsters of this type do not project above the upper surface of the capital but this is not the case with bolsters of the three main types. These may project so far as to be almost free-standing; that is to say that only a small fraction of their volume is incorporated into the main mass of the capital. This is true of a sizable group of stones; for

instance, most of the altars found at Maryport, whether with cylindrical or cigar-shaped bolsters have this characteristic (eg. 84, 85, 299, 312). Similarly, bolsters are often carved entirely independently of the focus, as for instance on a legionary stone from Benwell (168) and altars from Chesterholm (696) and Brougham (337). Datable examples of these free-standing bolsters, such as an altar from Carvoran (97: A.D. 136-138), and altars from Maryport (299, 304) which may be placed in the second century, tend to indicate that this was the period when this type of bolster was most common.

There are however many altars on which bolsters and focus are structurally linked ^{26.} by the raising of the focus so that its base is much higher than the lower edge of the bolsters. This means that a solid mass of stone is left intact between the bolsters which thus lose their free-standing quality. They now have the appearance of being embedded in the main mass of the capital. Some masons were able to give such bolsters a kind of relative independence by carving the front of the cylinder as far as possible as a free-standing unit. A good example of this is to be seen on an altar from Housesteads (243). Other craftsmen preferred to give bolsters their usual curvature at the outer side and at the top where they break free from the central mass whilst being content to mark their position on the inner side by mouldings or grooves. Altars from Birrens (136, 137, 138, 139, 140) and Maryport (313) are good illustrations of this. The tendency to consolidate the upper features of the capital was carried further in the third century when bolsters as such in many cases disappeared completely, leaving only vestigial remains in the form of grooves or roundels. This development was already foreshadowed in the second century as an altar from Great Chesters proves (174).

Many dated examples of the new style of capital survive. An altar from Old Carlisle dated A.D. 198-211 (203) preserves the curvature of

bolsters at the sides of the capital but marks their position at the front only by plain roundels. A stone, now lost, from the same site and dated A.D. 242 (200), seems to have been of similar design but with decorated roundels. Roundels on the front of the capitals of altars from Netherby, dated A.D. 222 (315), and Lanchester, dated A.D. 238-244 (251), suggest their presence even though they do not exist. Altars from Old Carlisle dated A.D. 238-244 (530) and from Birdoswald dated A.D. 270-273 (279) and A.D. 276-282 (288) have grooves at the front of the capital to indicate the presence of bolsters. Moreover, there are other stones which do not allow of exact dating but which may with confidence be assigned to the third century on the evidence of inscriptions which show that the dedicators were, in that period, stationed in forts where the altars have been found. (See Appendix B). These reinforce the view that by this century new styles were in vogue. It will be sufficient to cite two examples only: an altar of Cohors IV Gallorum from Chesterholm (161) and one of the stones to Mithras set up at Carrawburgh by a prefect of Cohors I Batavorum (268).

It remains to mention those few altars with more than one set of bolsters. From Maryport comes one of the most elaborate altars of Britain with three bolsters arranged vertically on each side of the capital (438). This is without a parallel in the north. Double sets of bolsters occur on an altar from Carvoran (683), where they are placed side by side. A similar arrangement is suggested by a pair of roundels, carved at the inner side of the bolsters proper, on an altar from Birdoswald (620). A stone from High Rochester (119) also has two additional roundels the same size as the ends of the bolsters.

Occasionally, bolsters appear set at right-angles to the normal disposition. An uninscribed altar from Carrawburgh (678) displays only these transverse bolsters, while a small altar from Benwell (626) has rolls running along all four sides of its upper surface.

Whilst bolsters are usually the sole lateral features of the upper surface of altars, this is not invariably so. On an altar from Chesterholm

(26), for instance, claw-like brackets springing from the outer corners of the capital enclose the bolsters. A similar idea is worked out on an uninscribed altar preserved in Hexham Priory Church (60); the bolsters are flanked by three rounded projections disposed at the corners and in the centre of the sides of the capital. A similar arrangement, although without bolsters and accompanied by a raised panel in place of a hollowed focus, occurs on a third century altar from Chesterholm (159).

A capital from Risingham (237), all that survives of an ornate altar, displays these features only at the front of the stone; another example of this arrangement comes from Carrawburgh (465). It is more common for the projections to be carved at all four angles, as on a small altar from Carvoran (477), and an uninscribed altar from Carrawburgh (467) where the protrusions flank rounded, fluted features reminiscent of shells. A much larger altar from Watercrock (362) has a round, flat focus enclosed by four projections, now broken, but which probably once stood higher than the central platform. A finer example, of similar but slightly different type, comes from Halton Chesters (497). This altar has a large, raised focus which occupies the full area of the capital top and is gripped by four damaged acroterion-like projections. Examples of this treatment of the capital are so few that it is difficult to draw any general conclusions as to date. One stone clearly comes from the third century (159), another almost certainly so (477), while the Watercrock (362) and Risingham (237) altars could fit into this period in virtue of their raised, flat foci.²⁷ The two Carrawburgh stones (465, 467) are of crude workmanship and might well be of the same period, although they may simply represent inferior craftsmanship of an earlier age. It thus seems possible that, although acroterion-like projections on the tops of altars were well known in the Roman world, appearing on representations of altars on coins,²⁸ they became more common in Northern Britain during the third century, a develop-

ment parallel perhaps to the tendency for bolsters to disappear completely.

Conclusions.

There are seven types of bolster carved on the altars of Northern Britain. Cigar-shaped bolsters may have originated in the workshops of Legio VI. Baluster-shaped bolsters and those which narrow towards the centre seem to have been popular with Legio XX. In the early period, bolsters were free-standing but the third century saw a movement towards their absorption into the mass of the capital. In the third century, bolsters in some cases were cut only at the front of the stone; in others, they were cut only at the outer sides and for a small part of their volume at the top of the stone. Eventually, they disappeared altogether as independent features, only surviving in the form of ornamental roundels.

Bolsters were sometimes doubled or tripled and irregular arrangements are known.

Brackets projecting from the upper corners of the capital were favoured by some masons. It is difficult to draw any firm conclusions as to the date of this style, although it may belong to the third century.

Chapter II

1. Collingwood, R.G. and Richmond, I.A., The Archaeology of Roman Britain (Revised edition, London, 1969), 195.
2. Ward, 123.
3. RE I, 1674.
4. Daremberg-Saglio I, 351(b); Macdonald, J., PSAS XXX, 130.
5. Richmond, NCH XV, 133, no. 13.
6. RIB 460
7. RIB 277
8. Ward, loc. cit.
9. Cf. Ward, ibid.
10. Fremersdorf, F., Die Denkmäler des Römischen Köln, Band II, Urkunden zur Kölner Stadtgeschichte aus Römischer Zeit (Köln, 1963), 63, plate 119; 64, plate 124; 65, plate 132.
11. Richmond, Lancs. Chesh., CV, 23.
12. Birley, The Roman Governors of Britain in Askew, G., The Coinage of Roman Britain (London, 1951), 81.
13. Wenham, CW² XXXIX, 29.
14. RIB 2112, 2113.
15. See p.p.179f.
16. Spain and Bosanquet, NCH XIII, 555, no. 9; plate, 10.
17. RIB 452.
18. RIB 445.
19. RIB 452.
20. RIB 445.
21. RIB 283.
22. RIB 446.
23. Schoppa, Römische Götterdenkmäler, 60, no. 62; plate 58; 61, no. 68; plate 64.
24. See p.160

25. RIB 1091, 1092.
26. See p. 39
27. See p. 15
28. Eg. Mattingly H., Coins of the Roman Empire in the British Museum,
Vol. IV (London, 1940), plate 72, 4.

Chapter III

The Devolution of the Upper Features of the Capital

In origin, bolsters and focus were features set upon the flat top of the altar-pedestal independently of each other. The examination of the altars of Northern Britain reveals that there was a movement towards the merging of these features which reached its climax in the third century when, in some cases, they altogether ceased to exist. The integration of bolsters and focus into the mass of the capital was accomplished through the gradual enlargement of the stone left uncut between the bolsters. When bolsters and focus were separate from each other, this stone was all cut away. When the base of the focus was raised above the level of the top of the pedestal, however, it was carved on a platform occupying the whole area between the bolsters. At the same time, the focus mount, the central projection at the front of the capital, which many altars display and which had once been free standing, came to be attached to this platform. The gradual upward extension of this stone platform continued until it finally reached the top of the bolsters and in some cases even went beyond this level. When this stage was reached, the capital had become a solid, rectangular mass of stone.

The devolution of the capital may best be shown by examining the relationship of bolsters to focus, by tracing the development of the fascia and the focus mount, and by studying the central profile of the capital and its relationship to the focus mount and to the fascia.

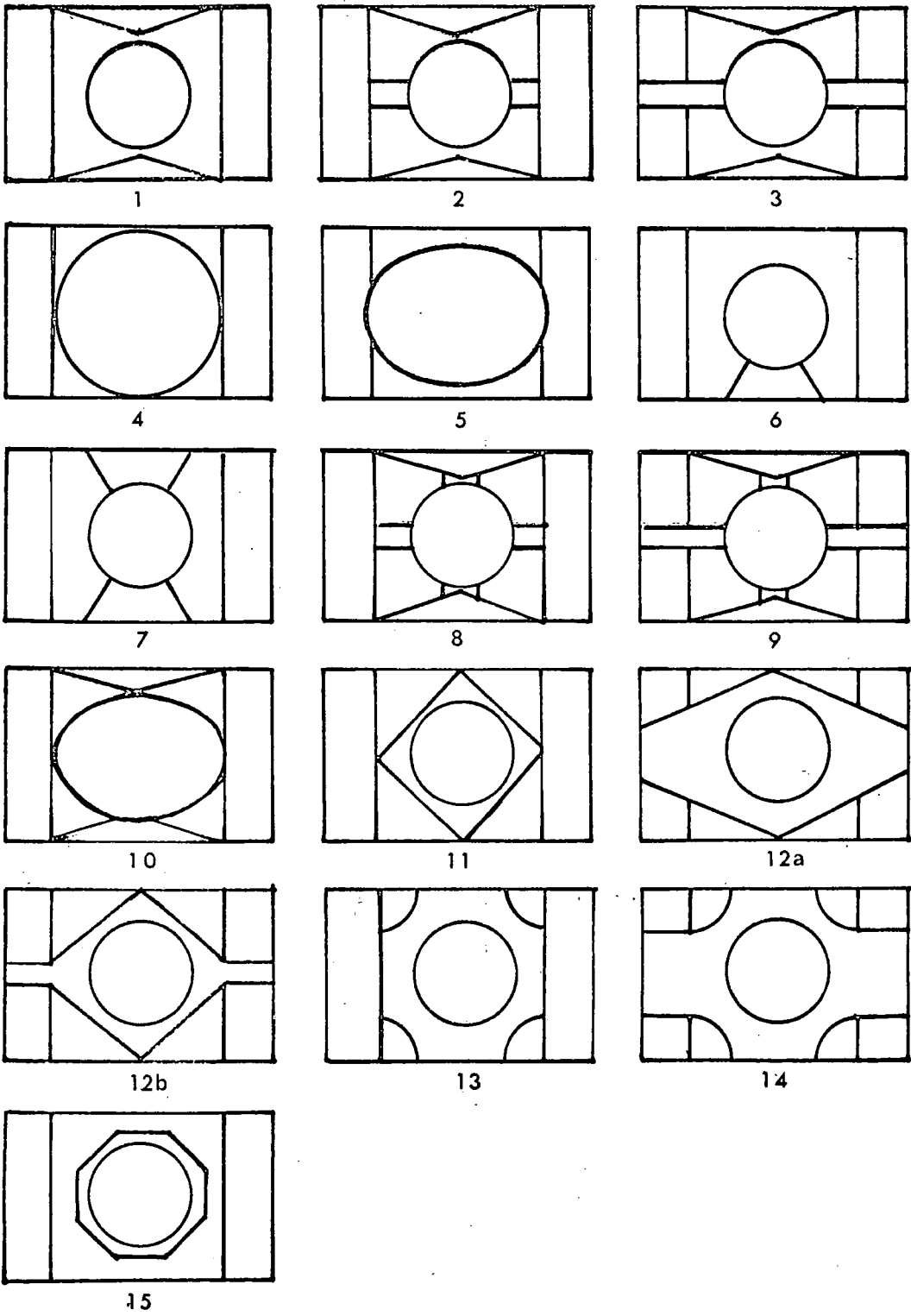
(a) The Relationship between Bolsters and

Focus

As already stated, bolsters and focus may be carved independently of each other, although frequently their association is closer. When the greater part of the mass of stone between the bolsters is left intact, the focus sometimes touches them directly (790, Fig. IV, 4),

Fig. IV

The Upper Surface of the Capital



or, if it does not, is attached to them by unremoved ridges of stone (Fig. IV, 2). These ridges sometimes give the appearance of handles. An altar from Carrawburgh (343) is an example of this feature. If the bolsters are encircled by one or more straps, the inner ends of these usually spring from the focus (Fig. IV, 3). This is true whether the straps are rounded (175) or angular (365) and applies equally to dished (175), flat-bottomed (392), or bossed foci (365). Free-standing bolsters with straps cannot be attached to the focus in this way, for a link between them would remove the isolation which is the distinctive characteristic of bolsters of this type. Even on altars where there is no rib connecting bolsters and focus, the focus is often joined by uncut stone to the front of the capital (205, Fig. IV, 6), or to both back and front (114, Fig. IV, 7). In some cases the focus is attached to the bolsters as well as to the back and front of the capital (215, 175, 264, Fig. IV, 8, 9, 10).

While the focus is usually placed so that both it and the bolsters keep to their respective spheres, there are examples of altars where the focus oversails the bolsters, as on a stone from Carrawburgh (264, Fig. IV, 5). Faulty workmanship may be the explanation of this peculiarity,

A small but interesting group of altars reflects the way in which enterprising masons seized the opportunity offered by the closer integration of the features of the capital to give a greater decorative effect to the upper surface of the stone. They did this by preparing a lozenge-shaped platform, linked with the bolsters and the front and back of the capital; into this they sunk a simple hollow, sometimes adding a raised rim (Fig. IV, 11). Foci in lozenge-shaped projections of this kind come from Housesteads (247), Risingham (226), Chesters (462) and York (399). In the case of the two latter altars the lozenge is projected over the bolsters to form central straps (Fig. IV, 12). On the altars from Chesters (462) and one of the York stones (594), the focus is elliptical; the rest have circular foci. With this group should perhaps be linked a damaged altar

from Carlisle (667) with diamond-shaped focus, and uninscribed stones from South Shields (69), where the sides of the lozenge-shaped platform are concave (Fig. IV, 13), and from York (73), where the platform is one with the straps of the bolsters (Fig. IV, 14). A further elaboration is to be seen on an altar from Chesters (485), where the platform has become octagonal and a large centre boss has been added (Fig. IV, 15).

In The Roman Era in Britain, Ward asserts¹ that a disposition of the upper-features of altars which entirely separates bolsters and focus gives an impression of structural weakness, and suggests that foci were raised and enlarged, thus increasing the central mass, to overcome this weakness. While this may be true, it would seem at least as likely that this style of capital was adopted simply because it required less carving, since bolsters no longer needed to be isolated completely.

The gradual filling in of the whole area between the bolsters is part of the movement noted above² towards the abandonment of conventional bolsters. This movement was accompanied by a further modification of the capital; the upper surface lost its focus and became quite flat. It is important here to distinguish between stones such as that dedicated to the Discipline of the Emperors at Corbridge (10) and to the Deity of the Emperor and the God Mercury at Birrens (145), which were probably pedestals to support the statues of deities, and those stones which had a greater ritual significance. The tops of pedestals are usually carefully dressed, while, in almost every case, those of the altars are left in a rough condition. Altars from Lanchester (251) and High Rochester (121) are examples of this. The unfinished state of flat-topped altars had led scholars such as Richmond to suggest that these stones have been trimmed down for re-use in later building. But this explanation, while it might apply to some, cannot be true of all, for two such altars were found in situ at Carrawburgh

(268, 269). The theory that an additional cap-stone may once have crowned what now remains is attractive, but not without difficulties. It finds support in the existence of a well-carved stone preserved in Buxton Museum (439) which, although lacking a focus, would be admirably suited to be the ^{most} top member of an altar. Against this view, it might be argued that an additional stone, set on top of the altars as they now survive, would destroy the proportions of the whole and make the altars top-heavy. This argument, resting upon a preconceived idea of what an altar ought to look like, cannot be conclusive. It is however difficult to see how such cap-stones could be permanently attached to the lower section of the altars. The use of mortar might make a clumsy joint, although paint might be used to mask it. Considering the weight of the cap-stones, it might be supposed that a mortice and tenon joint would give greater security. There is no sign, either on the Buxton stone or on any of the flat tops, of any such simple means of attaching heavy stones to each other. Moreover, taking into account what has already been said about the bolsters, it would seem that to add another stone would mean the duplication of the bolsters. This may of course have been the intention of the mason, as on the altar with multiple bolsters from Maryport (438). The suggestion that some third-century altars may have had flat tops is not in itself unlikely, for they appear to have been relatively common in the Roman world: a mosaic from the Piazza Armerina villa has such an altar complete with ritual fire.³ The real stumbling block is the apparently unfinished nature of the upper surface. Two explanations may be offered. First, it is possible that the rough top of the stone was made smooth by a thick layer of gesso added at the time when the altar was painted. This would be quicker than having to dress the stone carefully and would provide an adequate surface if a chafing dish were used to contain the fire. That no remnant of such a coating survives need occasion no surprise, for although all decorated stones were probably covered with gesso in the Roman period,⁴ in Britain few traces are ever

discerned when carved stones are excavated. Alternatively, there is the possibility that a cover, perhaps of bronze, and possibly in the form of a large platter, was placed on the stone to accommodate the offerings and the sacred fire. On balance, it seems that there is nothing inherently improbable in the view, expressed above, that altars with flat tops became fairly common in Northern Britain in the third century.

Conclusions.

The focus may be free standing or it may be linked with the bolsters and/or with the front and back of the capital either by direct contact or by ridges of stone. There seems to have been a tendency towards the closer integration of the bolsters and focus. This led eventually to the filling in of the area between the bolsters so that bolsters no longer existed and the tops of altars were flat. This seems to have been a third century development. Burnt offerings could be made on flat-topped altars if chafing dishes were used to contain the ritual fire.

(b) The Development of the Fascia.

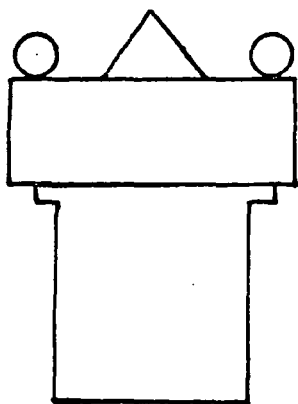
The fascia is the vertical plane which usually separates the bolsters and focus from the graded mouldings of the capital. Any study of its development must be based upon the two hundred and nineteen altars, mostly the products of military workshops, which are datable either by their inscriptions or, more approximately, by their find-spots and dedicating units.⁵ Of these stones, one hundred and seventy-four have capitals sufficiently well preserved to make possible an examination of their fascia.⁶

Although there are some altars where bolsters and focus are set immediately above the mouldings, it is much more common to find them resting upon the upper edge of a rectangular fascia (Fig. V, 1). This fascia may be no more than a broad fillet (146, 311, 401) but it is frequently much deeper (212, 312). An analysis of rectangular fasciae into narrow (width: depth = 6 or more : 1), medium (width: depth = more than 3 : 1) and deep categories (width: depth = 3 : 1), shows that narrow fasciae are more common in the second century than in the third, but that fasciae of medium depth occur in roughly the same numbers in both periods. (See Table I, Histogram A).

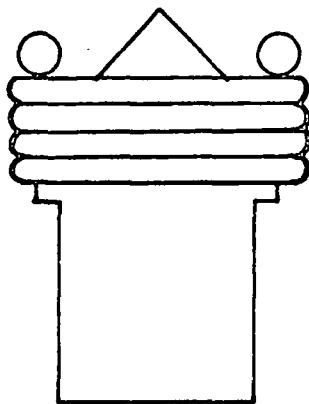
The fascia is often carried round three (146) or even four (271) sides of the capital. Sometimes however, only the front is carved as a vertical plane; at the sides of the capital, one (150) or more (149) mouldings take the place of the fascia. A similar modification of the fascia may be noted on the front of some capitals; instead of a vertical plane, a series of ungraded mouldings form the fascia (Fig. V, 2). These mouldings in one instance include an inverted cyma reversa (140) but tori (7, 308) are more common, and a combination of tori and fillets is still more frequent (6, 97, 299). In this study fasciae are described as "moulded" if a rectangular fascia is absent and the number of elements in the capital mouldings exceeds that of the base. The number of third century altars displaying moulded fasciae is small in contrast to that of the second

Fig.V

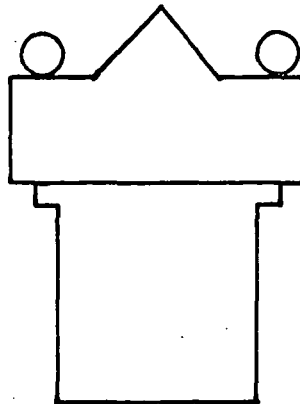
Types of Fascia



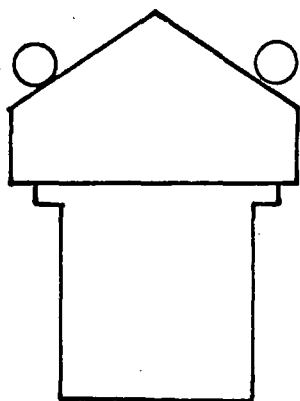
1



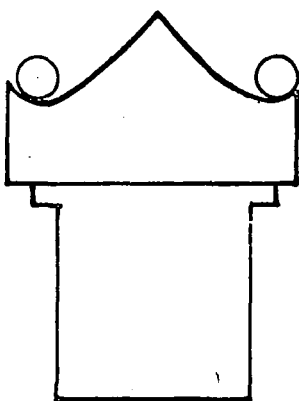
2



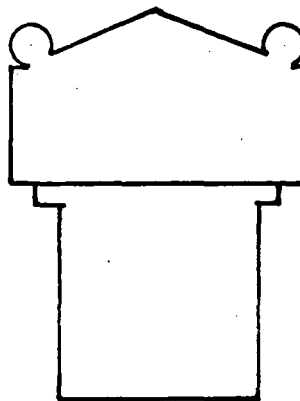
3



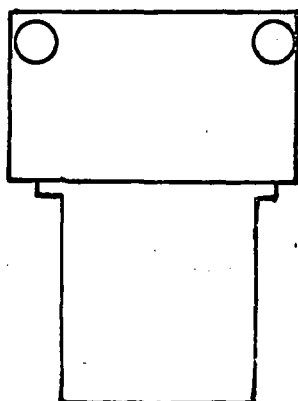
4



5



6



7

century and the style may be seen as one predominantly popular in the earlier period. (See Table 1; Histogram A).

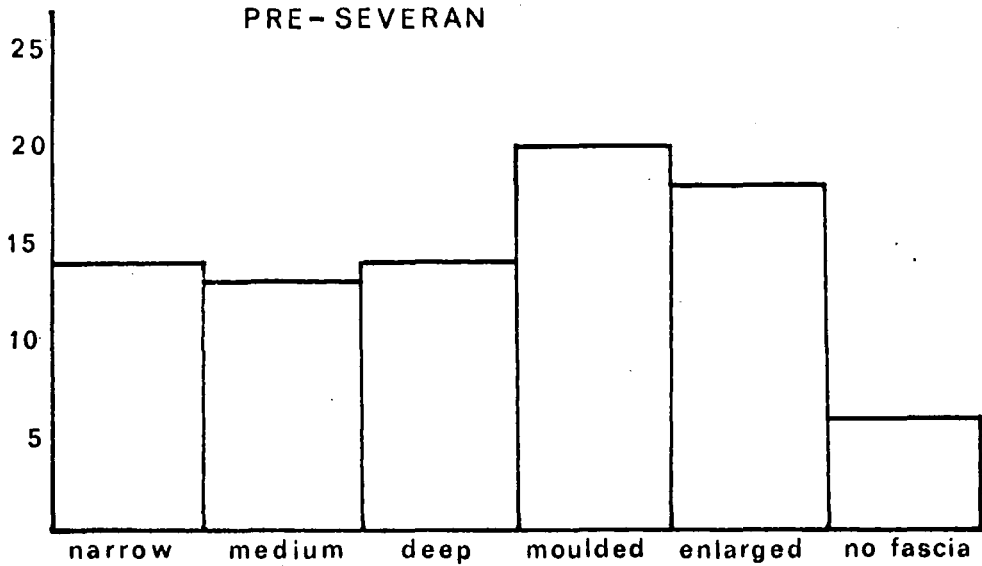
In altars with both rectangular and "moulded" fasciae the bolsters rest upon a horizontal. In the mid-second century however there was a movement towards the evolution of a new style; the fascia was "enlarged" so that, in the centre, it reached the top of the capital. In consequence, it ceased to be rectangular (Fig. V, 3). The altar to Discipulina from Birrens (136) illustrates this development; the horizontal support for the bolsters is provided by a richly decorated fascia but this is broken to allow the whole area of the central section of the capital from the mouldings to the upper surface to be treated as one. An altar from Maryport (305) with a simpler design provides a further illustration.

The next stage in the evolution of the new style sees the final abandonment of the idea that the bolsters need a horizontal support. Sometimes they rest upon a pediment sloping from the edge of the stone (Fig. V, 4), as at Newcastle (189). Sometimes the fascia encroaches on the area at each side of the bolsters so that they are no longer free-standing but are partly incorporated into the mass of the capital. Their support is now a groove closely following their curve, as for instance at Housesteads (214, Fig. V, 5). With this style, the fascia may cling to the inner edge of the bolsters for part of their depth before breaking away to form the central profile of the capital, as at Risingham (226).

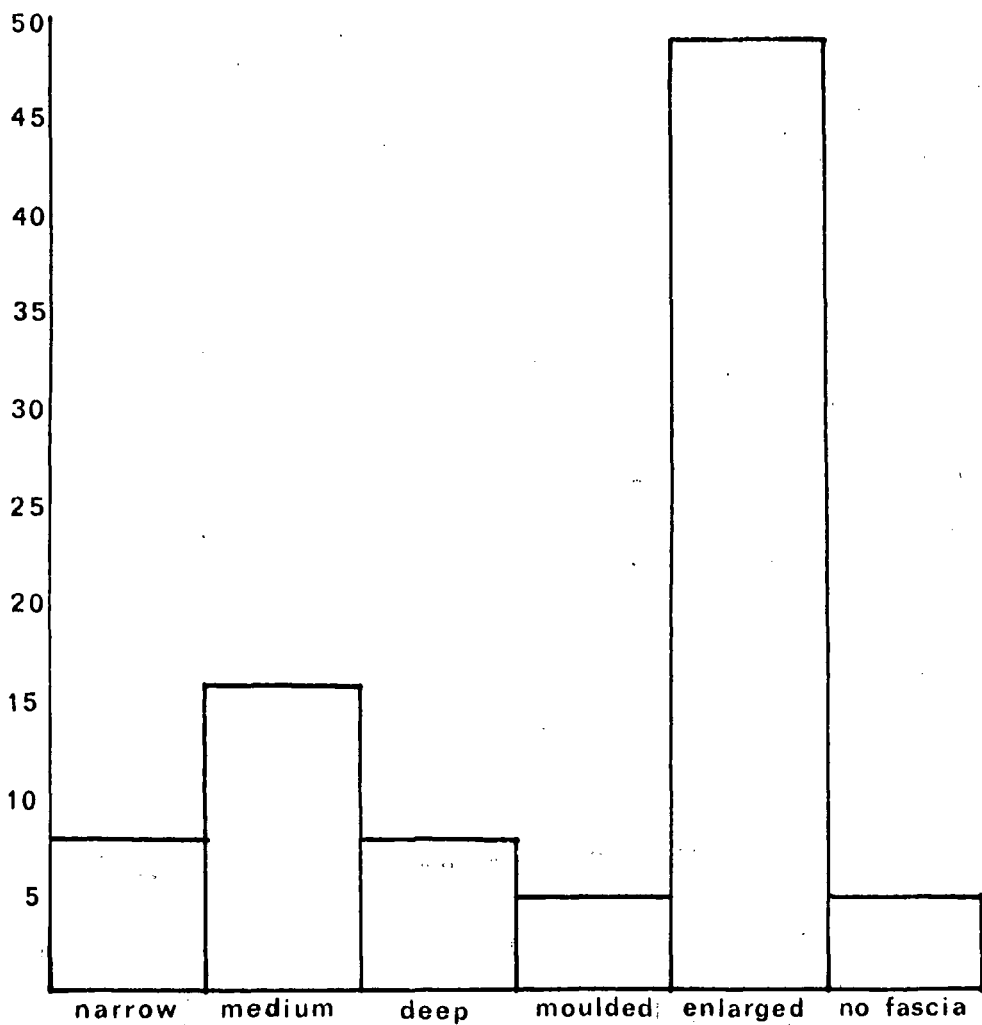
The tendency towards the closer integration of bolsters and fascia is further illustrated by a series of altars on which there is no clear differentiation between these features. The fronts of the bolsters are carved in one plane with the fascia and thus appear to be unsupported (Fig. V, 6). Altars from the Antonine Wall serve to illustrate this point (80, 205).

These developments begin in the mid-second century and continue into the third when there is a further strong move towards an even greater enlargement of the fascia. (See Table 1, Histogram A). It becomes so

HISTOGRAM A
TYPES OF FASCIA ON DATABLE ALTARS
PRE-SEVERAN



SEVERAN OR LATER



deep that it occupies the whole area of the capital's front, which now sometimes has the appearance of a rectangular block of stone (241, 251). The bolsters become conventionalized to the extent that they are nothing more than ornamental roundels (125, 251, Fig. V, 7). Eventually they disappear completely (121; 228, Appendix G). The rectangular fascia has re-asserted its position as a dominant factor in capital design. (See Histogram B).

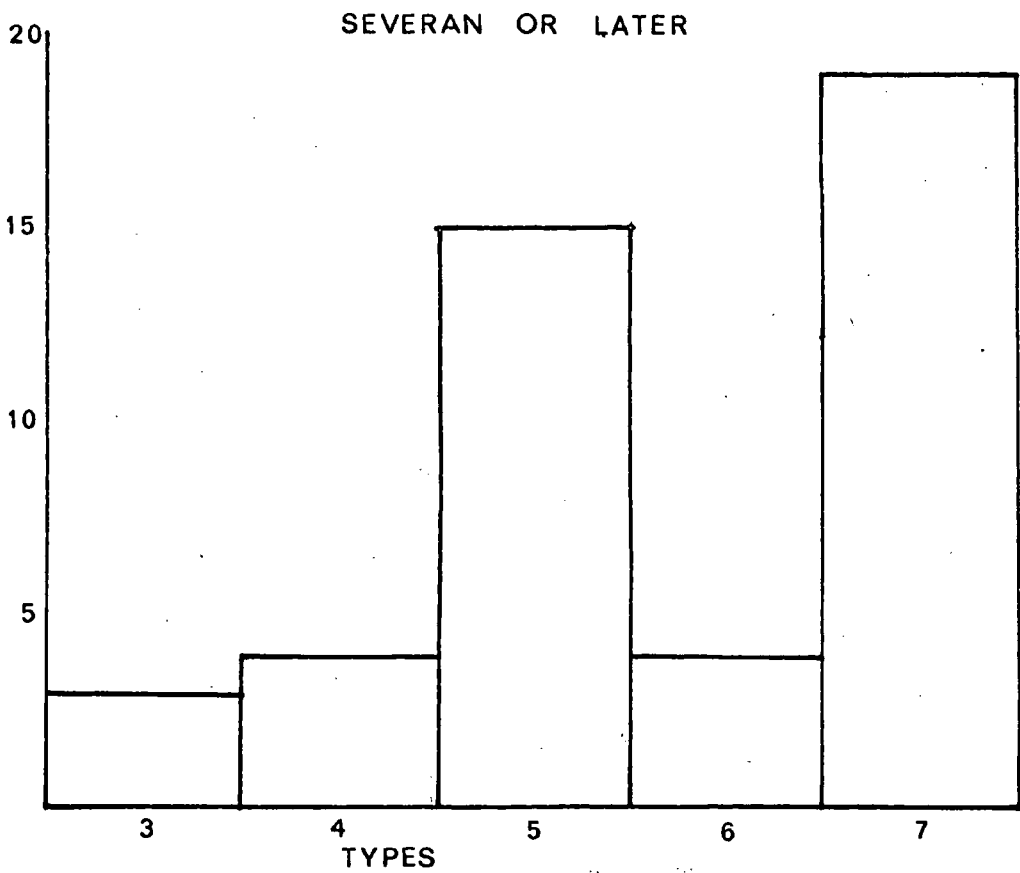
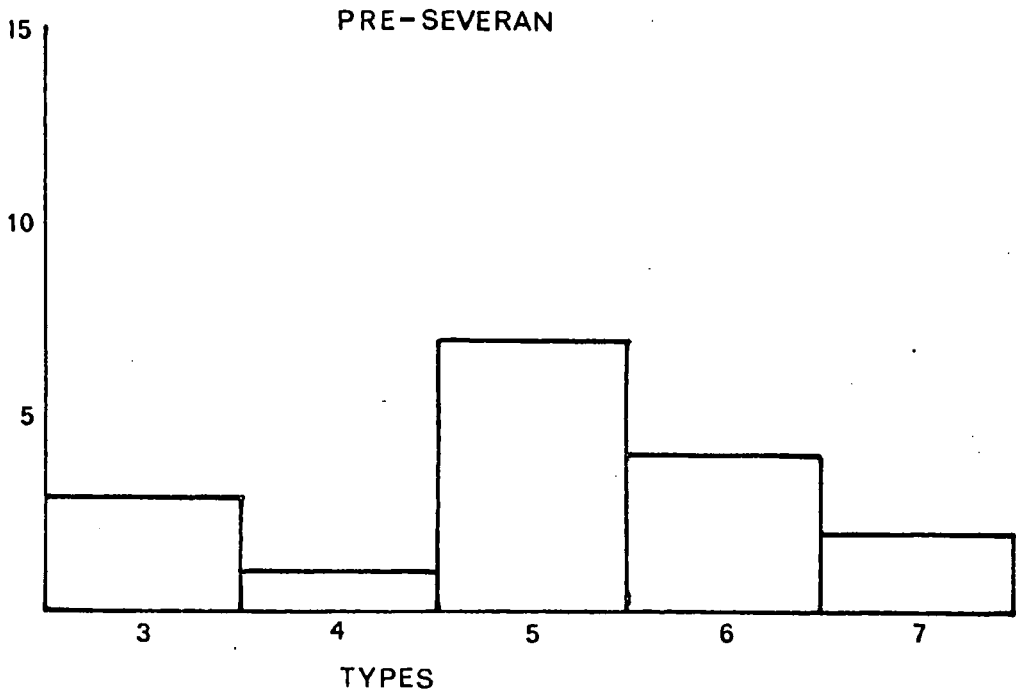
The increased depth of the fascia provides a more extensive zone for decoration and makes an impressive field upon which the first and most important line of the dedication may be inscribed. Fifty-two altars with inscribed capitals have been found in Northern Britain. Of these, fifteen may with confidence be assigned to Severan or post-Severan times; six others almost certainly belong to the same period. By contrast, only six may be securely dated to the pre-Severan age. (See Appendix I). It seems likely therefore that the practice of inscribing the capital became more common in the third century.

Conclusions.

Narrow rectangular fasciae were more common in the second century than in the third, and moulded fasciae enjoyed their greatest popularity in the earlier period. The mid-second century saw a movement towards the enlargement of the fascia; in the centre it now extended as far as the top of the capital. At first the horizontal form of the fascia was preserved at each side so that the bolsters might have a base on which to rest, but this was sometimes abandoned. The bolsters now either rested precariously on a sloping pediment or were incorporated into the mass of the capital to a greater or lesser degree. Eventually the bolsters lost all independent existence.

The practice of carving the first line of an inscription on the fascia of an altar was more frequent in the third century than in the second.

HISTOGRAM B TYPES OF ENLARGED FASCIA ON DATABLE ALTARS



(c) The Focus Mount.

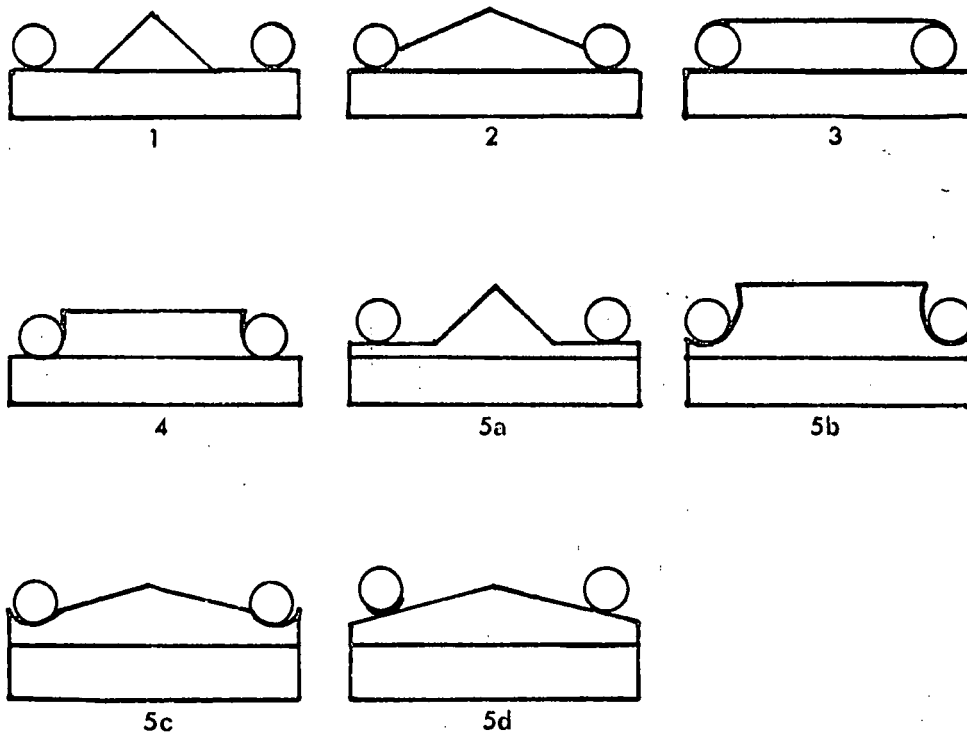
Rectangular and moulded fasciae are used in conjunction with a variety of focus mounts (Fig. VI). This term is used to mean the feature which, either partially or completely, masks the focus. The focus mount rests on the fascia or, where no fascia exists, on the mouldings of the capital. Typologically it seems to have begun as a free-standing feature which later became fully integrated into the mass of the capital.

The simplest form of focus mount springs from the fascia and lies within the bolsters (Fig. VI, 1). In this study, focus mounts of this type are described as being "between the bolsters". They may touch the bolsters at their base or may be entirely separate from them. Focus mounts "between the bolsters" were favoured by military craftsmen in the second and third centuries, more especially in the earlier period. (See Table 2, Histogram C, Appendix K).

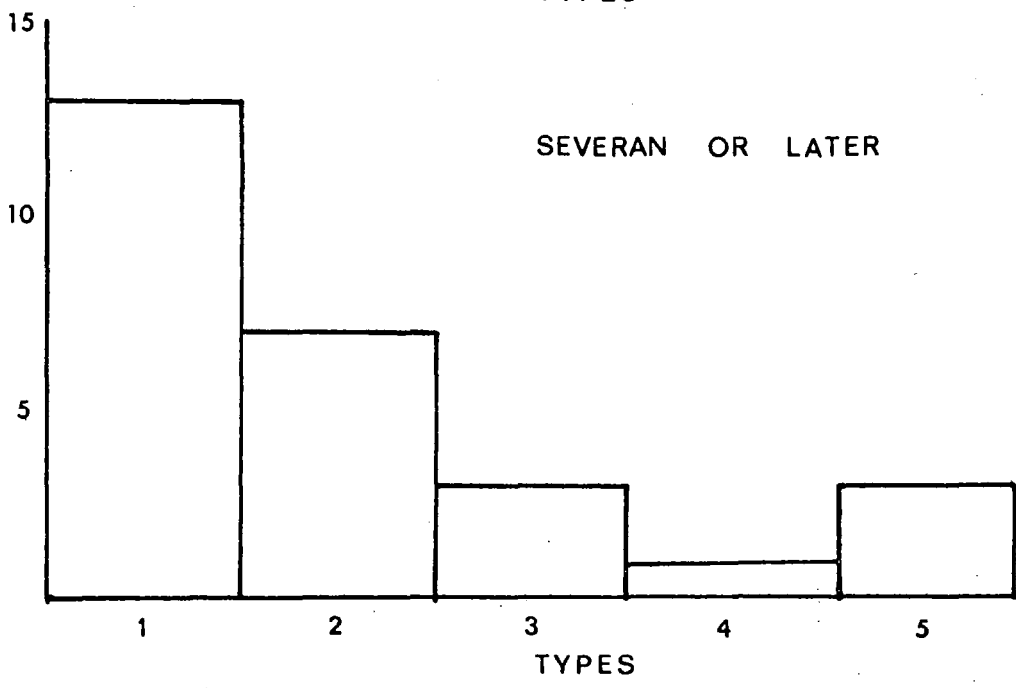
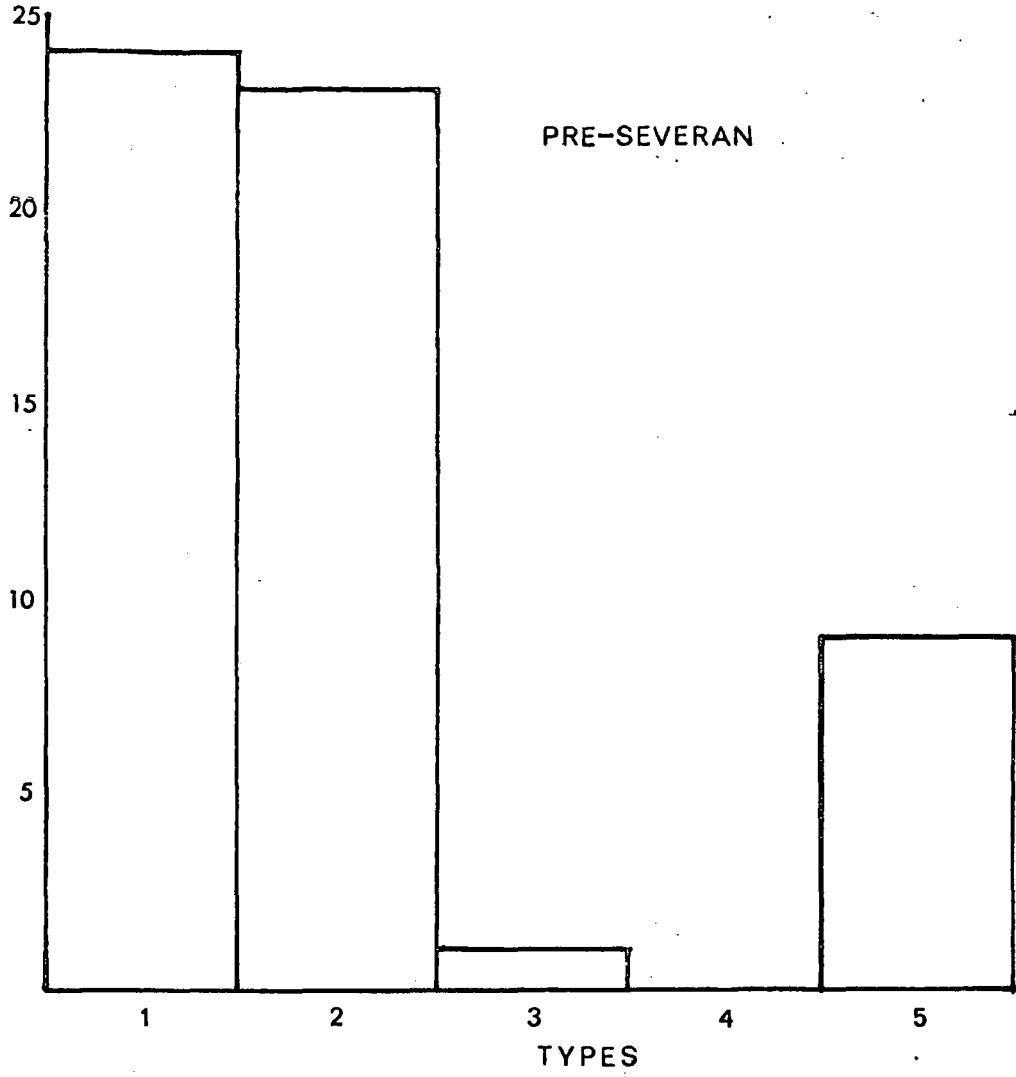
The second type of focus mount springs, not from the fascia, but from the inner edge of the bolsters and is here described as "from the bolsters" (Fig. VI, 2). This style was extremely popular with auxiliary and legionary masons in the second century. Twenty-three out of a total of thirty datable altars with this type of focus mount may be attributed to that period. Twenty-three out of fifty-seven altars datable to the second century have focus mounts of this type. (See Table 2, Histogram C, Appendix K). Before leaving this group of altars mention must be made of two stones from Housesteads (218, 219) whose focus mounts spring from the bolsters but make an upward curve before sweeping into the concave arc leading to the centre of the capital front. These stones are so unusual that they must be the work of one mason. The addition of curved "horns" inside the bolsters must be seen as part of the movement towards that elimination of any free-standing features at the capital front which has already been mentioned in connection with the enlargement of the fascia.

Fig.VI

Types of Focus Mount.



HISTOGRAM C
TYPES OF FOCUS MOUNT ON DATABLE ALTARS.



The third variety of mount (Fig. VI, 3) springs from the top of the bolsters and occupies the whole space between them. Focus mounts of this type are described as "filled-in". The group is small, but significant in that three out of the four dated examples come from the third century. (See Table 2, Histogram C, Appendix K). This too must be seen as part of the third-century movement, already noted, towards the creation of capitals in one solid mass.

An upward extension of the "filled-in" focus mount typifies the next category (Fig. VI, 4). This occurs only once on a dated stone; it comes from the third century (160).

In type 5 (Fig. VI, 5), the focus mount is "extended" under the bolsters to reach the edge of the capital. This is done by raising the level of the bolsters so that they no longer rest on the fascia. As in the case of "enlarged" fasciae, this style opens the way for variations in the relationship of focus mount and bolsters. The latter may rest on a short horizontal (Fig. VI, 5a), or the focus mount may curve to follow their line more or less closely (Fig. VI, 5c and 5b). Or again, the bolsters may rest on a sloping pediment (Fig. VI, 5d). "Extended" focus mounts are found in both the second and third centuries. (See Table 2, Histogram C, Appendix K).

It is important to note the similarity in relationship to the bolsters of focus mounts and "enlarged" fasciae. "Enlarged" fasciae may touch the bolsters only at their lower edge (175) or, as in focus mount types 2 and 3, may enclose their inner edge either entirely (285) or in part (118). "Extended" focus mounts of type 5 are no different from "enlarged" fasciae, except that they are placed above a rectangular fascia.

The relationship of the focus to the focus mount varies with the type of focus mount. Type 1, "between the bolsters," is often carved independently of the focus, as at Maryport (84). By contrast, all other types of focus mount are associated with the focus at least in so far as they provide a

platform upon which it may rest. Even though the focus may be set in the centre of this platform without any attachment to the front or back of the capital, as at Newcastle (23) and Newstead (173), the focus and focus mount are one at their base. Although this unity is often masked by the focus mount, its presence is well illustrated by two altars from Birrens (138) and Castlecary (114) respectively; here the concave arcs of the focus mount curve to expose the platform on which the focus rests.

It will be noted that the total number of focus mounts attributable to the third century is almost half of that from the previous century, (See Table 2). This inequality in distribution must be seen against the emergence in the late second and third centuries of new-style capitals whose "enlarged" fasciae eliminated the focus mount⁷. (Fig. V, 3, 4, 5, 6, 7), and in many instances transformed the central profile of the front of the capital.

(d) The Central Profile of the Capital

The central profile, whether of focus mount or "enlarged" fascia, is of paramount importance in giving an altar its distinctive character. (See Appendix L).

In both the second and third centuries, if flat-topped capitals are excluded, by far the most common design was that carved to represent a pediment (Fig. VII, 1; Table 3, Histogram D). This style is found with "enlarged" fasciae of type 3 (455), 4 (217) and 5 (220), and with focus mounts (300, 709). The shape of this pediment varies. If it forms a focus mount of type 2 as at Auchendavy (4, 5), it is of classical shape, being low in proportion to its width. If it forms a focus mount of type 1 as at Carrawburgh (365), its slope may be so steep that it approximates more nearly to Gothic than to Mediterranean styles and might, with greater accuracy, be termed a gable. Pediments may be left plain as at Housesteads (214) or may be outlined by one or more

moulded rims, as at Carrawburgh (265) and York (399) respectively, or they may be sunken as at Maryport (305). There is one instance of a stepped pediment, reminiscent of Nabataean crow-stepped gables (497). Pediments sometimes enclose sculptured ornament such as roundels (189), rosettes (303), leaf motifs (196), jugs (397) and more elaborate schemes of decoration with human or divine figures (329) or with architectural designs (232, 233).

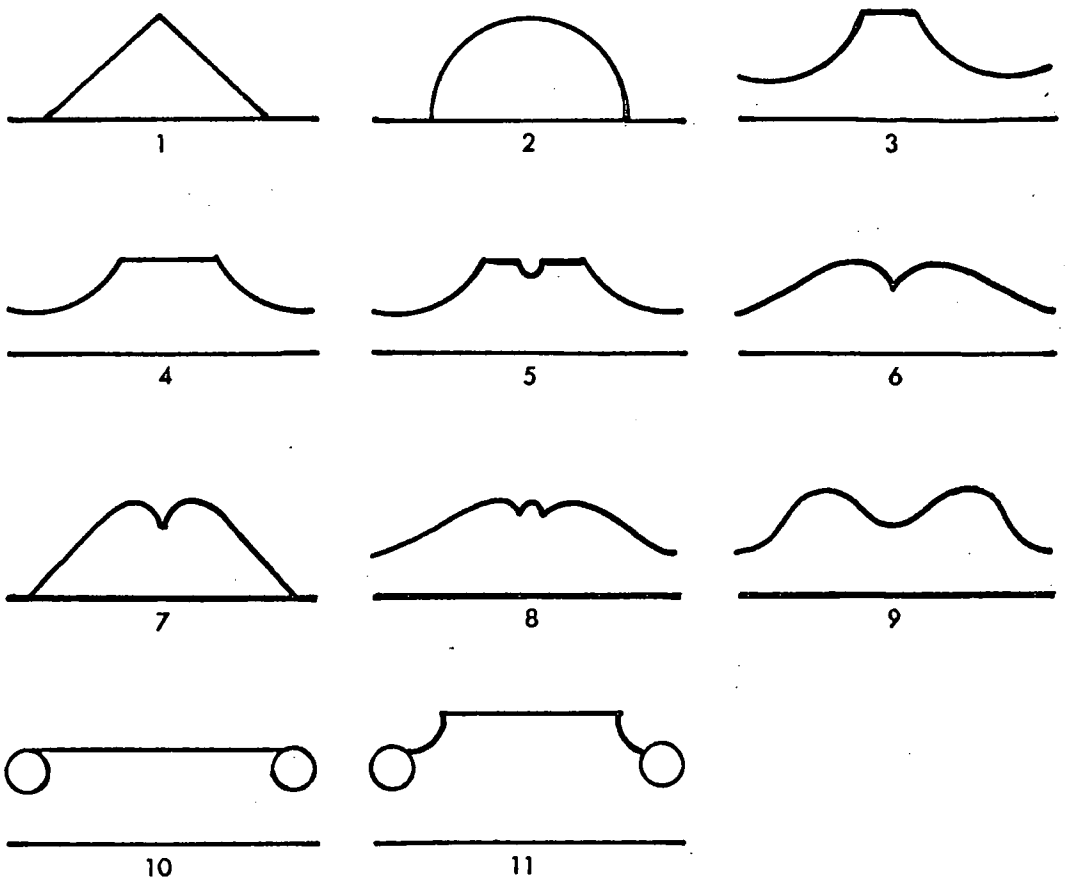
On four altars from Northern Britain (277, 295, 296, 298) the pediment of the focus mount is carried across the top of the capital. A similar feature may be seen on an altar from Bath,⁸ a stone whose dedication to the Goddess Sulis for the welfare and safety of a centurion of Legio VI by one of his freedman, may be a pointer to the origin of this strange style. No normal focus is of course possible on these altars. An altar in Bonn Museum has a capital of this type.⁹

Variations of the pediment are to be found. At Maryport (299), for instance, the apex of one focus mount has been carved to form one large and two smaller gables. Pediments occur in threes on altars from Chesters (485) and Netherby (488). In each case the pediments run across the capital until they reach the focus. This is true also of an altar from Chesters (486) where two gables lying within the bolsters flank a central roundel.

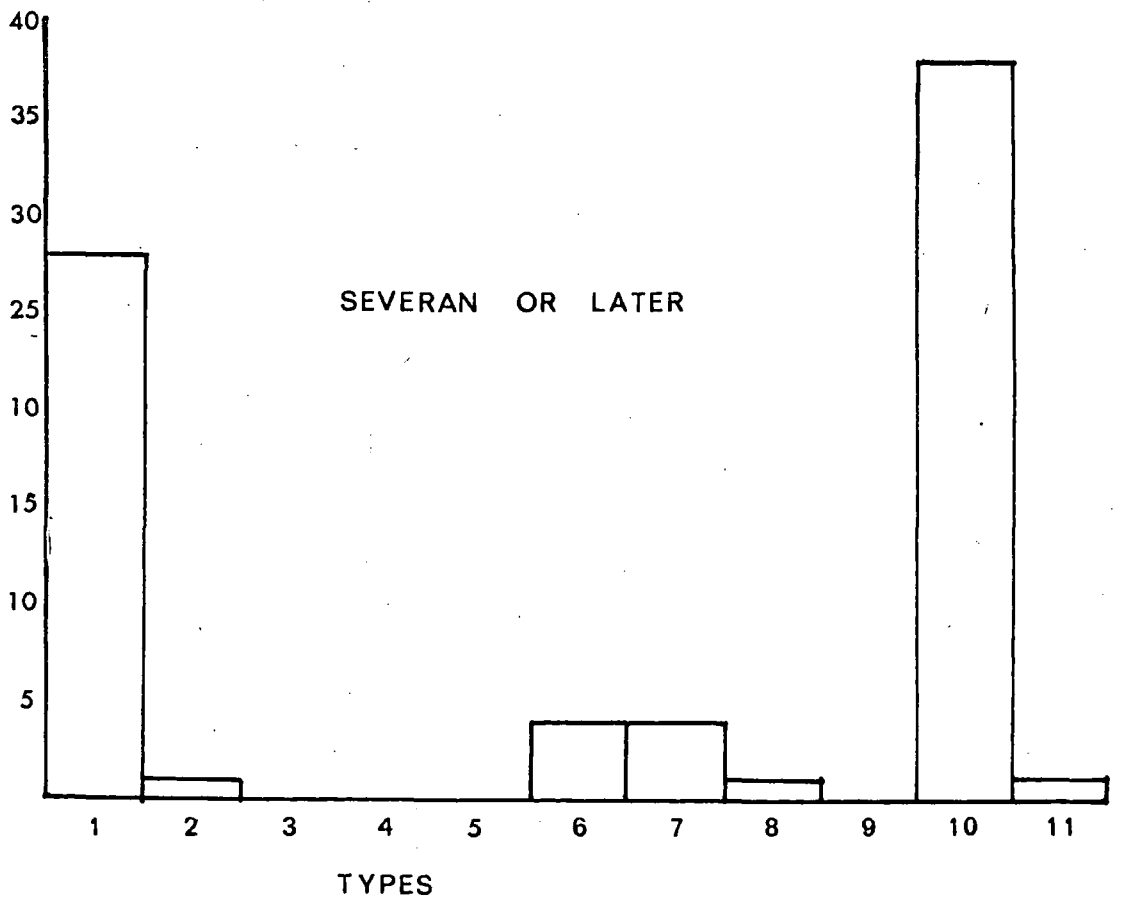
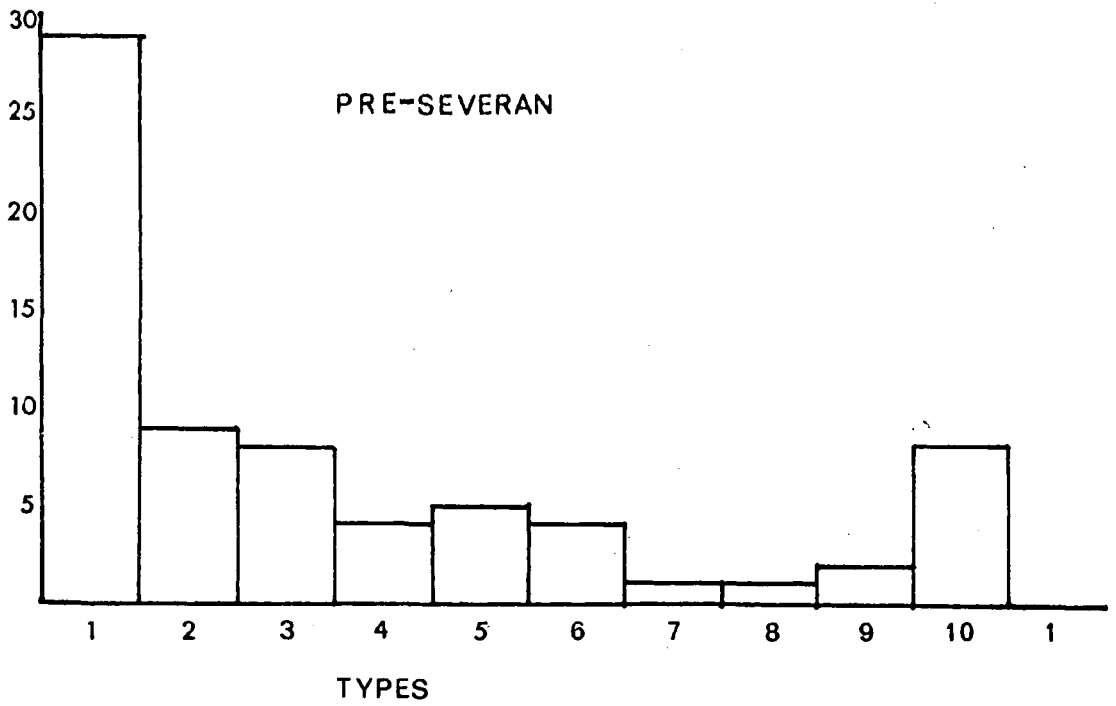
The upper profile of a central roundel is semi-circular. Profiles of this shape (Fig. VII, 2), are found in association with focus mounts of type 1 at Maryport in the second century (84). Convex arcs occur as the central profile of capitals from Auchendavy (2) in the second century, and from Chesterholm (162) in the third with focus mounts of type 2. Another altar from Auchendavy (3) has a similar profile with focus mount of type 5c. The altars from Auchendavy, like that from Chesters, are decorated with a central roundel, a style that also occurs

Fig.VII

The Central Profile of the Capital



HISTOGRAM D
TYPES OF CENTRAL PROFILE.



at Carrawburgh (364) and at Chester.¹⁰ It seems likely that these last date from the same period as those from the Antonine Wall. Roundels of a slightly different type come from Maryport (308) and Castlecary (17). At Maryport (308) a roundel carved with a man's face is attached to the focus but associated only with a low focus mount of type 2. At Castlecary (17) a plain roundel isolated both from bolsters and focus seems to have existed.

The third type of central profile is only found with "enlarged" fasciae and focus mounts of type 2 and 5c, and seems to have been confined to the second century. Concave arcs sweep down from the bolsters, sometimes almost from their tops (136, 140, 146) and then move upwards towards the centre of the capital, giving an impression of movement and life (Fig. VII, 3, 4). The twin arcs do not meet nor intersect but are linked by a horizontal at the level of the bolsters' top. The effect is that of a curving, truncated gable. This "gable" usually encloses a decorative motif such as a pellet (146), rosette (95) or crescent (140) and is attached to the focus. The horizontal between the concave arcs may be narrow (146, Fig. VII, 3), or broad (139, Fig. VII, 4). The greater the width of the horizontal, the greater is the zone available for decoration. It is on an altar with this style of capital that, at Birrens (136), an elaborate architectural design was carried out. Another from the same site has a well-carved cantharus (148).

A variation of the carved, truncated gable also appears, again in association with focus mounts of type 2 (Fig. VI). Here the horizontal linking the two concave arcs is cut away in a crescent shape (Fig. VII, 5). The altars displaying this type of central feature are all of exceptional workmanship and their schemes of decoration are amongst the most ambitious in Northern Britain. Of these stones, four come from Maryport from the workshops of Cohors I

Hispanorum (310, 311, 312, 313), one was set up by Cohors II Tungrorum at Birrens (138), while another is probably the work of a mason of Legio VI (66). In this last instance the semi-circular depression leads from the focus to the front of the capital to give the focus the shape of a spouted bowl.

All the altars with central profiles of types 3, 4 and 5 come from the second century and it is interesting to note that the altar on the Bridgeness distance slab¹¹ has a central profile of type 3.

Probably in the same period, masons of Legio VI were carving altars whose capitals, while similar to the above, differ from them in that, instead of dual arcs linked by a horizontal, the arcs are carried forward in reverse curves and meet in the middle of the capital front (23, 24, Fig. VII, 6). In these instances all angularity has disappeared from the upper profile. An altar from Housesteads (211) is evidence of the continuation of this style into the third century. In all these instances the focus mount is of type 2. A similar central feature but springing directly from the fascia, that is, with focus mount of type 1, comes from the Mithraeum at Rudchester (392).

Variations of the profile with double convex arcs appear. An altar from Maryport (306), probably of second century date, displays a focus mount of type 1 whose shape is that of a trapezium bisected on the shorter of its parallel sides, with all upper angles rounded. The effect is that of two contiguous, truncated gables. An altar from Wallsend (239) has a similar feature. More flowing in outline is the profile of an altar from Housesteads (219), probably of third century date. In this group may be placed an altar dedicated at Newstead by a centurion of Legio XX (173) with focus mount of type 1 (Fig. VII, 7).

Another variation occurs at Newstead (172). Here the dual convex arcs are more widely spaced and linked by a reverse curve (Fig. VII, 9). Convex arcs linked by a third or similar shape appear at Castlecary (54) in the second century with focus mount of type 2, and at South Shields (401) in the third, with focus mount of type 1 (Fig. VII, 8). Curved profiles on "enlarged" fasciae occur on Hadrian's Wall near Milecastle 19 (118, type 6), and at Chesterholm (161, type 6). It seems clear that central profiles based on the double-curved arc were popular with masons in both the second and third centuries.

The upper profile of the capital is often flat (Fig. VII, 10). This is the case with focus mount of type 3 (207), 4 (160) and sometimes 5c (144), and with many "enlarged" fasciae, especially those of the third century. (See Appendix G).

Many altars whose tops are flat or nearly so retain features which in earlier styles would have been fully carved. The pediment, for example, maintains its importance in the craftsman's repertoire of designs throughout. Sometimes it is carved in relief as at Netherby (320) and Birdoswald (279); sometimes it is outlined by one or two mouldings as at York (70) and Risingham (779) respectively; sometimes it is incised upon the capital as at Carrawburgh (343); sometimes it is truncated as at Birdoswald (645).

In the same way, semicircular shapes continued to be used by masons even when flat-topped capitals were in vogue. They are to be found in relief on altars with focus mounts of type 3 from Greta Bridge (502) and Great Chesters (503). Double arcs also appear on flat-topped altars, as at Binchester (385) and Lancaster (389). The curving profile of type 3 may also have continued in a devolved form; altars from Benwell (411) and Cardewlees (202) seem to preserve its shape, although in both cases the arcs spring from the edge of the

capital below the bolsters. All these decorations of the capital front may be seen as devolved versions of features which, before the development of the capital in one solid mass, had once been free-standing.

Chapter III

1. P. 126.
2. See p. 33 and Appendix E.
3. Gentili, G.V., La Villa Erculia di Piazza Armerina, I, Mosaici Figurati (Rome, 1964), plate XVII.
4. See p. 156.
5. See Appendix A and Appendix B.
6. See Appendix F for a list of types of fasciae.
7. See p. 45f,
8. RIB 143.
9. Lehner, op. cit., 103, no. 219.
10. JRS LVII, 203, no. 5; plate XVII, 1.
11. RIB 2139.

Chapter IV

The Mouldings decorating Capital
and Base.

(a)

With a few exceptions, the mouldings used on Romano-British altars are the fillet, the half-round, the quarter-round and the double-curved moulding which developed from the quarter-round and is known as the *cyma reversa*. The moulding with an upper hollow and lower convex curve, the *cyma recta*, occurs only rarely and then usually in a distorted form.

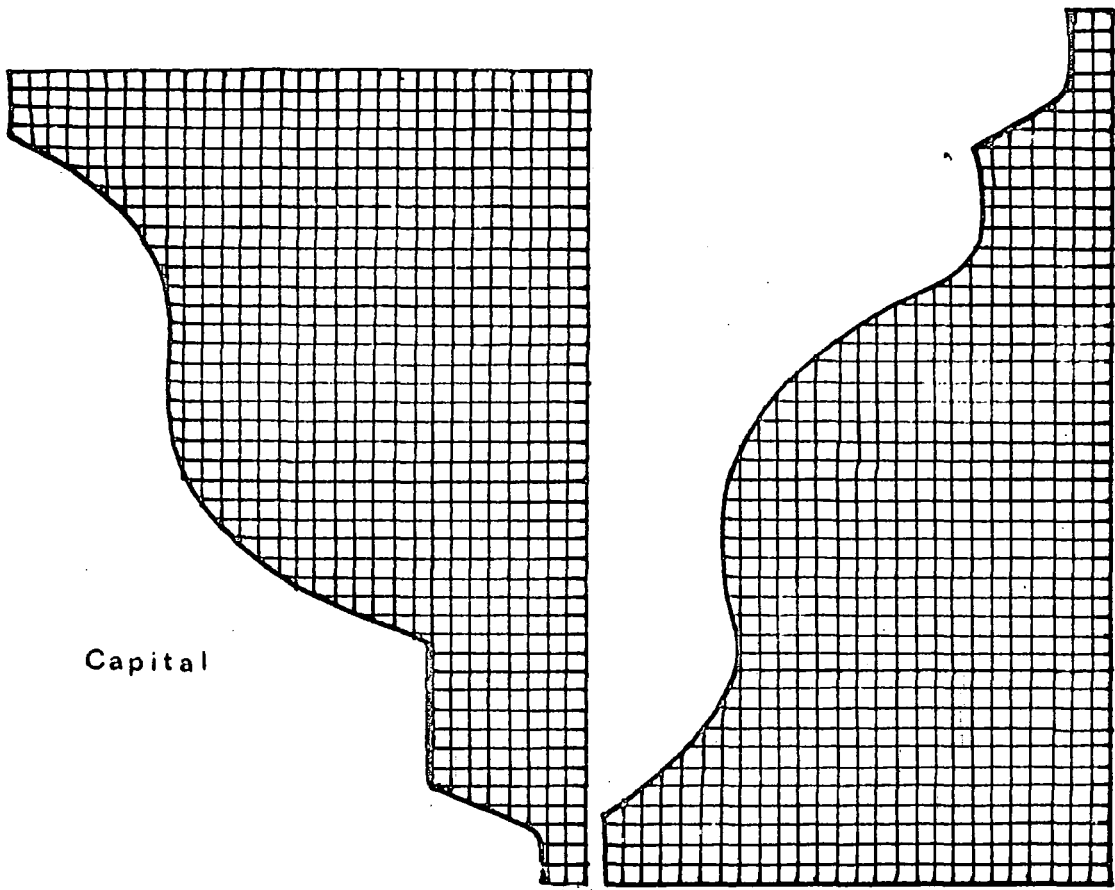
Mouldings were set out after the block of stone had been roughly trimmed into shape; that is to say, after the proportions of capital, base and shaft had been fixed, and the projection of the upper and lower features decided upon. When the stone had been roughed out to these dimensions, an outline of the shape required was drawn or chipped out at each side of the capital or base. Guide lines were set out along the front of the stone and carving proceeded along these lines, working inwards from the pattern at each end. When the moulding on the face of the stone had been completed, a similar procedure was adopted for carving the mouldings at the sides, and then at the back of the altar.

There is much evidence to prove that templets were used in the setting out of mouldings. These were probably of wood or metal, but may also have been made of stout leather. No templet appears to have survived, or, if it has, has not been recognised. Reverse templets were no doubt used to try the face of the work when it was near completion. An examination of the profiles of mouldings, drawn with the aid of an Emco Template Former, shows that many altars have mouldings corresponding exactly in shape and size at both capital and base, although at the base it is usual for the templet to be inverted (eg. 23, 207, 239; Fig. XIII). This is true, not only of curved mouldings, but also of less classical outlines, such as those which ornament one of the Mithraic altars from Carrawburgh (265).

Fig. XIII

No. 239

An Example of a Templet Inverted at the base.



Capital

Base

Templets used for the capital of an altar might be modified when applied to the base; an altar from Bewcastle (13) has a capital moulding of six elements; of these only the lowest and then the three topmost, inverted, are used for the base (Fig. VIII).

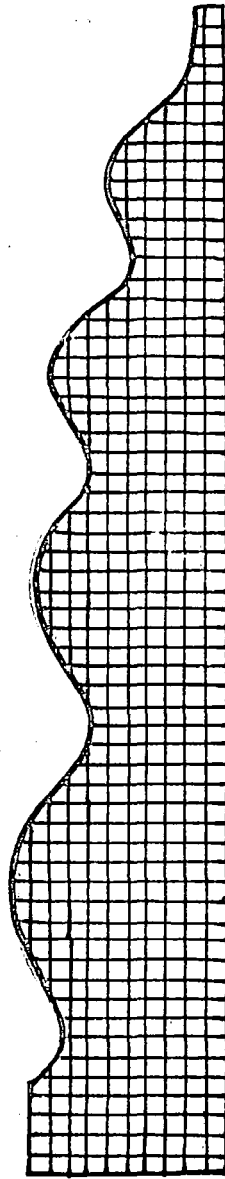
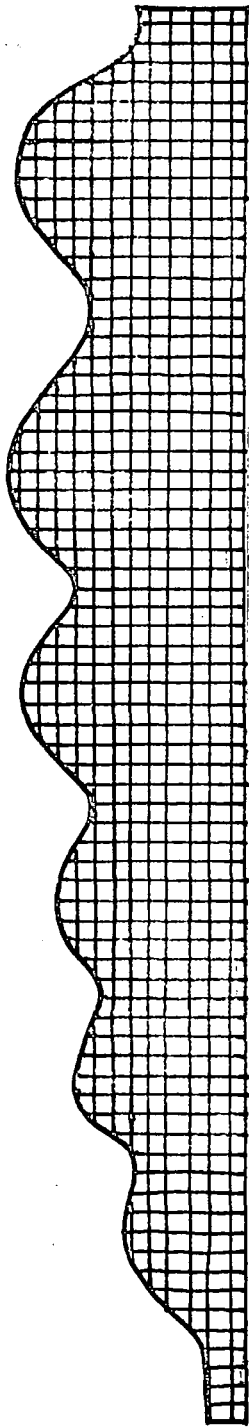
The fillet, a narrow, flat band, is used in classical sculpture to separate curving elements. In Northern Britain, although there are some examples of fillets used in this way (eg. 10, 83) they commonly appear, either singly or in pairs, as the terminal members of a decorative scheme. Double fillets, offset or stepped, for instance, complete the mouldings of an altar set up on Scargill Moor near Bowes (106); single stepped fillets occur on altars from Castlecary (16) and Housesteads (214). The use of fillets in this way was widespread and persisted into the third century (eg. 214, 274). Military masons occasionally gave the fillet a more important role. There is a number of altars on which it appears as the only moulding; groups of three (303), four (311), five (312, capital) and even six (312, base) stepped fillets are used to separate the shaft from capital and base. Units using the fillet in this way are Legio VI (46), Cohors I Hispanorum (304) Cohors I Delmatarum (90) and Cohors II Lingonum (324).

This moulding is the easiest of all to carve; it requires careful measurement in the setting out, and accurate checks upon the dimensions as the work proceeds. The use of a templet is not essential. Attention must however be paid to the maintenance of the horizontal and vertical planes, but a pleasing result can be secured by a careful workman with a modicum of skill. The fillet is perhaps the best type of moulding for a beginner to attempt. Indeed, one of the altars from Maryport set up when Marcus Maenius Agrippa was commanding Cohors I Hispanorum (301), seems to be the work of a novice, for the fillets of the capital are far from horizontal. Yet other altars set up by the same unit at Maryport are by no means undistinguished in their execution. The tiny fillets on altars

Fig.VIII

No. 13 Capital.

Base.



dedicated when Lucius Cammius Maximus (311) and Marcus Censorius Cornelianus (312) were prefects, are beautifully carved and are accompanied by successful and interesting designs upon the fasciae. The selection of fillets was here, at any rate, clearly dictated by choice rather than necessity. The same is probably true of altars from Ilkley (324) and South Shields (46).

The fillets so far mentioned have all been stepped-in at the capital and stepped-out at the base. Two altars coming from widely differing contexts, one from Binchester (258) and the other from the Carrawburgh Mithraeum (265), display fillets used more adventurously to give an unusual outline. Stepped fillets are used, first to extend the width of the capital, and then to reduce it to the dimension of the shaft. Such use of fillets is far removed from the conventions of classical sculpture and the general effect is somewhat bizarre. The Carrawburgh stone (265) is securely dated to the years between A.D. 212 and 222 and it seems likely that the other altar (258) too belongs to the first part of the third century, for Ala Vettonum is known to have been stationed at Binchester in that period. It would seem that the idea of using fillets in this way must have been picked up by a mason on the lookout for new designs and transferred to his own stock of patterns. This use of fillets is so exceptional that it could surely never have been learned in a regimental school or from a pattern book of other than provincial origin.

Although fillets are usually carved in the vertical and horizontal planes, there are a few instances in which the face is inclined either inwards or outwards. The irregularly carved altar from Maryport (301) referred to above, has fillets of this type, but it seems likely that there they may be explained as accidental rather than intentional, the result of defective craftsmanship rather than of deliberate design. A fragment of an altar base from Balmuildy (640), however, has a steeply inclined fillet below a fillet of the usual type, and the altar from Carrawburgh

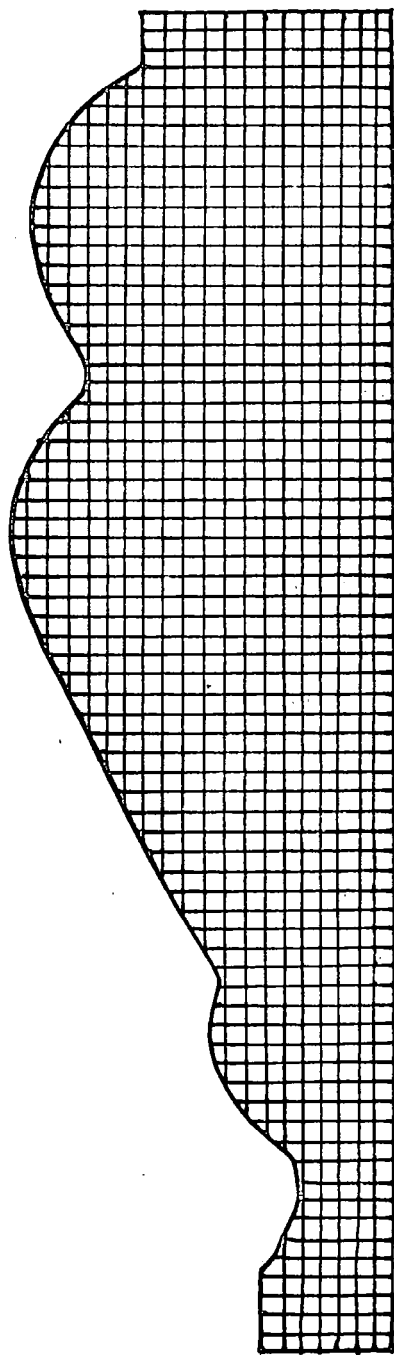
Mithraeum mentioned above (265), has in addition to its strange arrangement of fillets on the capital, another inclined outwards. The base displays a similar feature. The large, inclined planes of mouldings on the altar from Bollihope Common (254) will be discussed below.¹

The fillet, in a weathered condition, is difficult to distinguish from the quarter-round convex moulding or ovolo. Its shape makes it a moulding well fitted to support other elements of a decorative scheme and it therefore occurs as the lowest member of the mouldings of capitals, as for instance on the altar to Cocidius from Bankshead milecastle (1). In one instance (238) the ovolo appears as the only moulding of both capital and base. The shape of the capital moulding of this last altar approximates more to the Greek ovolo, based upon the cone rather than the circle;² this applies also to a larger decorated ovolo on an altar from Whitley Castle (329, Fig. XIV), and to a pillar from Housesteads.³ It is surprising to find this classical shape appearing so far from the Mediterranean. Perhaps the sculptors were natives of Mediterranean lands. This may indeed be true of the smaller, simpler altar from near Carvoran (238), for its dedicator was a standard bearer of Cohors II Delmatarum, a unit which may have numbered recruits from the Eastern Adriatic in its ranks.

The half-round or torus moulding is a common feature of altars in Northern Britain, sometimes, when very large, appearing as the sole moulding. Examples of this, from Greetland (407), Lancaster (336), Birdoswald (278, 279) and Bewcastle (322) suggest that the use of a single torus without other members, was fashionable in the third century. More frequently however, and especially on the smaller altars, the half-round moulding is used in pairs (315, 321), in triplets (118) or even four- (160) and five- fold (59) without separating elements. Usually the tori are flush with the edge of the capital as in the examples already

Fig.XIV

No.329 Capital : Dexter Side. Ovolo decorated with arcade.

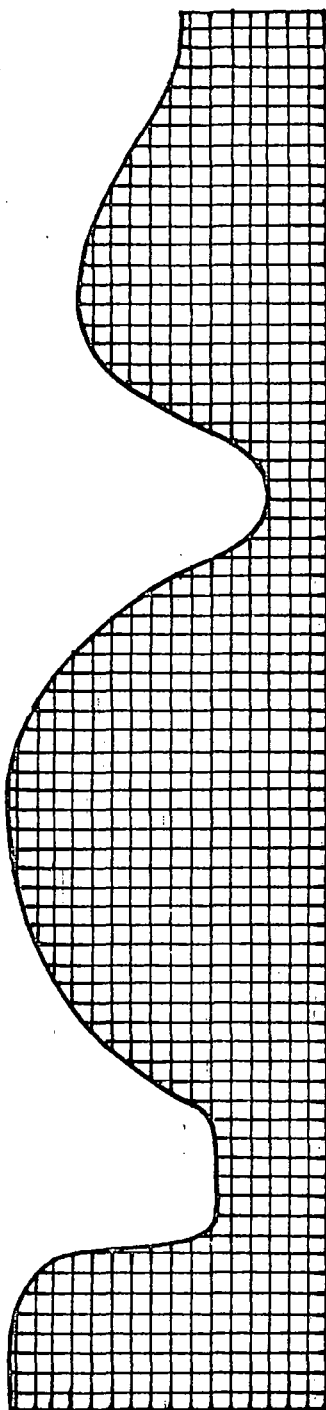


given, but occasionally, they too are stepped-in the manner of fillets (107).

The half-round moulding rarely appears in its pure form; an altar from Corbridge (57; Fig. XV) is a notable example. Usually its outline is not that of a true semi-circle; in some cases it becomes so angular that it almost approximates to two fillets inclined in divergent directions (320). The mouldings on the altar from Bollihope Common (254) are probably best seen as debased tori. Sometimes there is a significant variation in shape on the same stone, as if more than one hand had been at work. Thus, the mouldings on the capital front of an altar from Netherby (315) are tolerably regular, but on the dexter side they are sharply angled. Even the Corbridge stone referred to above (57), has a debased torus associated with its rounder partner. By far the greater number of torus mouldings in Northern Britain make no pretence of representing a complete semi-circle; the vast majority are merely attempts at arcs of circles. This often gives a flattened effect, especially when combined with fillets (eg. 83, 794). Some half-round mouldings, although retaining a semi-circular section at top or bottom, are chamfered to the die (151, 321). These stones seem to fit best into the third century; one (321) is considered by Professor Birley to be no later than the first half of the third century,⁴ while that from Castlesteads (151) would, from its capital decoration, appear to belong to the later, rather than to the earlier, Roman period.

By far the most graceful moulding used in Northern Britain is the double-curved moulding, originally formed by adding a reverse curve to the non-projecting end of a quarter-round moulding.⁵ This *cyma reversa*, was also used to give a decorative border to the panels of building inscriptions. On altars it is usually combined with other members to give a rich and elegant contour. As the *cyma reversa* is a complex moulding its setting out requires the use of a templet, but a variety of appearance can be given by altering the angle at which the

No.57 Debased and Regular Tori .



templet is laid on the stone, and by using greater or smaller portions of the upper and lower curves. The templet can also be reversed. Figure IX illustrates this point. All the outlines have been made with the same templet, but in some cases the reverse curve terminates when the point of maximum recession is reached, while in others it is extended so that it begins to move outwards. The extension of the lower curve in this way is known in the classical world ⁶ but is not very common. In Northern Britain it is a characteristic and popular moulding.

There are two types of cyma reversa moulding. In one, the arcs of the circles forming the curves meet at a tangent; in the other, the arcs intersect. Since the question of dating is one of the concerns of this study, it seemed worthwhile to make a thorough mathematical examination of the cyma reversa moulding, as this moulding alone appeared capable of providing a dating criterion. At the same time the relative frequency of the two distinct types mentioned above was noted. In spite of the difficulties posed by weathering, damage and those irregularities which stem from the handcraft nature of stone carving, it proved possible to secure profiles of the mouldings of many altars. From these mouldings all those which could be securely dated were selected, together with those which could be attributed to the second or third centuries because of their find-spots and the units which dedicated them. (See Appendix M). On these altars the cyma reversa appears fifty-eight times in the second century as against forty-one times in the third (Table 4a). The evidence suggests that the type of cyma reversa formed by intersecting arcs was slightly more in vogue in the second than in the third centuries; out of fifty-eight mouldings assignable to the earlier period, more than half, thirty-two, are of this variety, as against eighteen out of forty-one in the third century.

The mathematical relationships studied may best be illustrated by the accompanying diagrams (Figure X); they were $a:b$, $a : b + g$,

Fig. IX

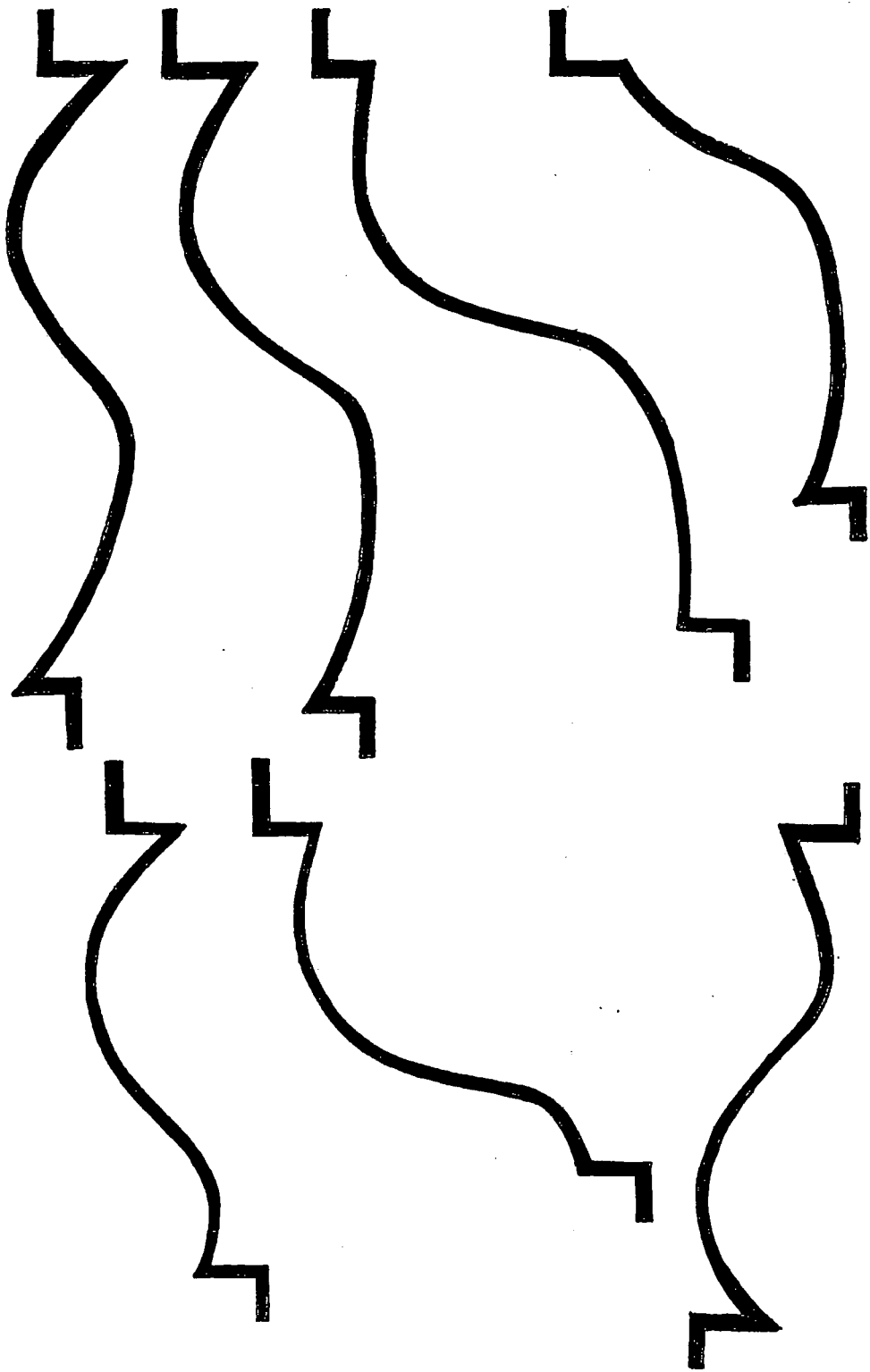


Fig.X

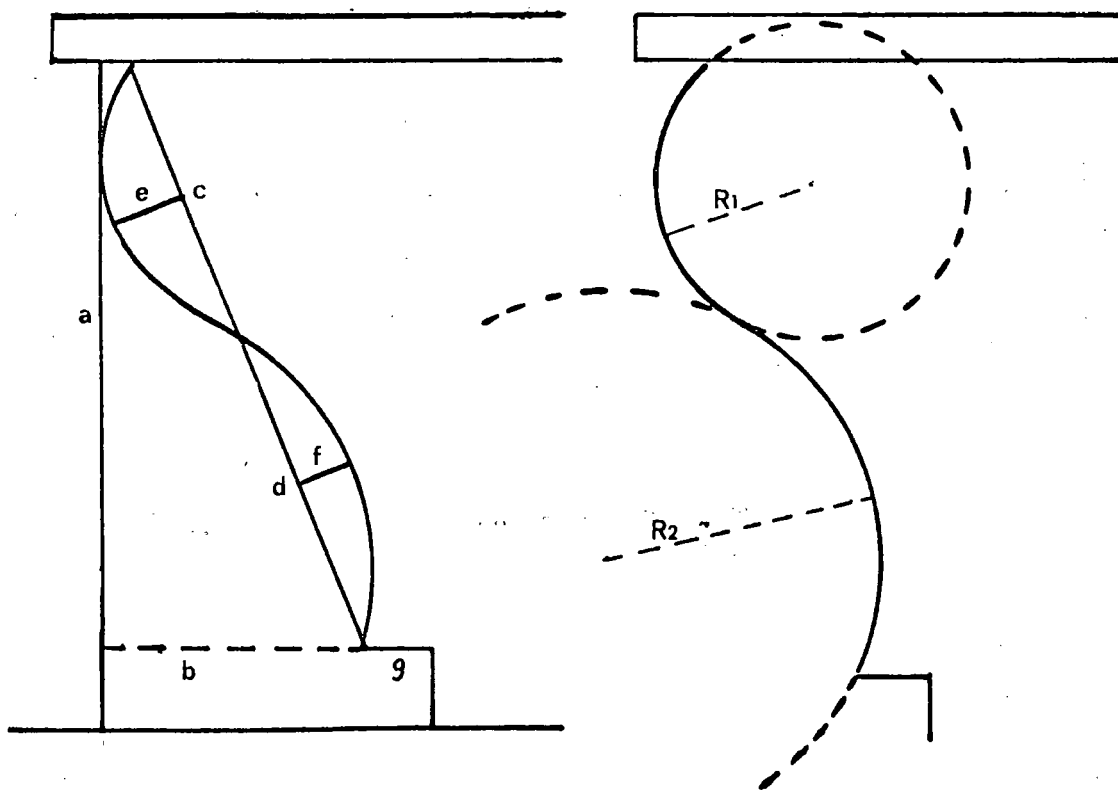
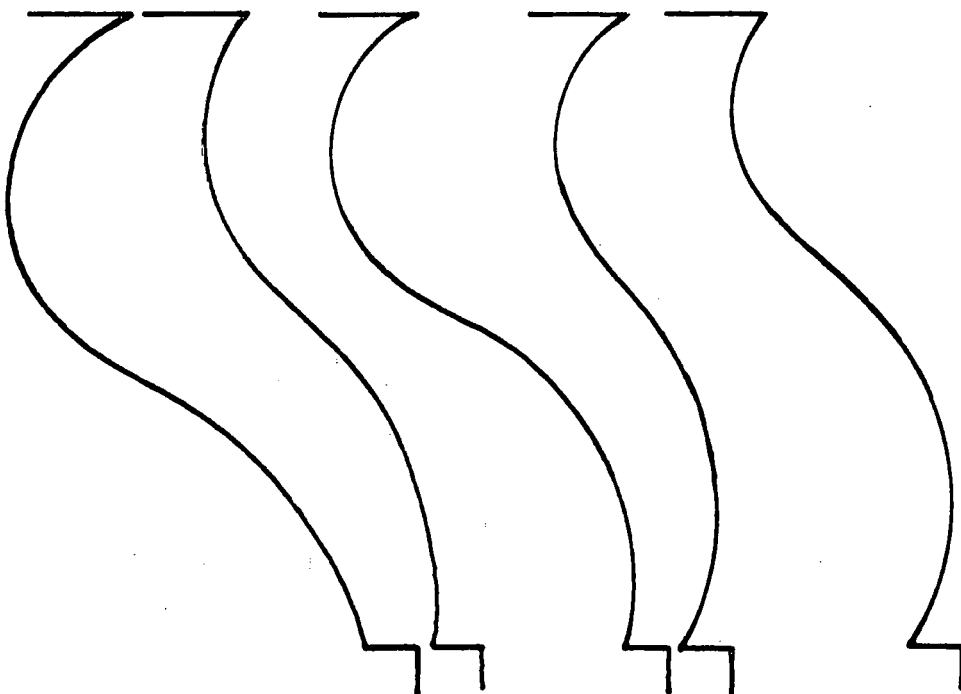


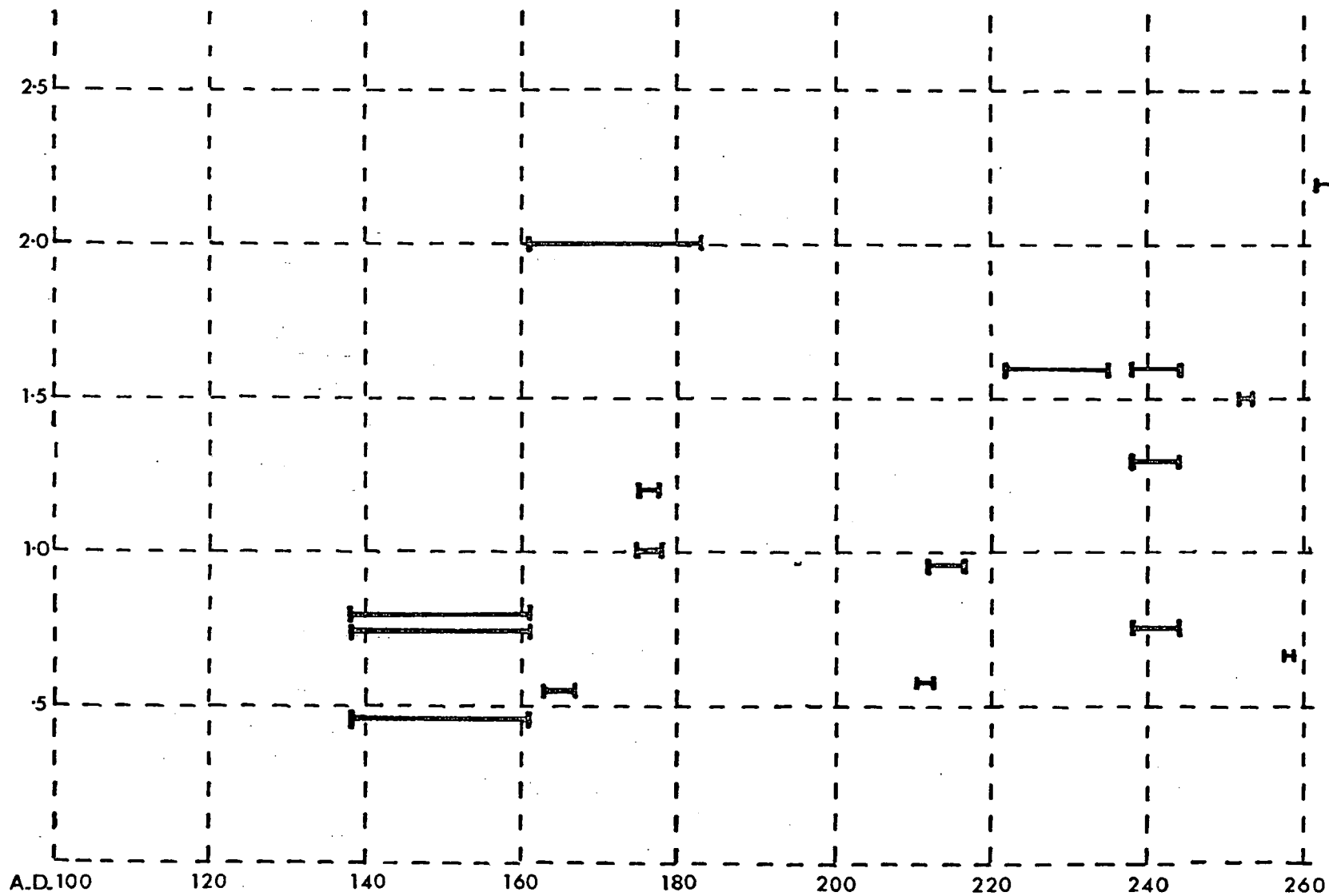
Fig.XI



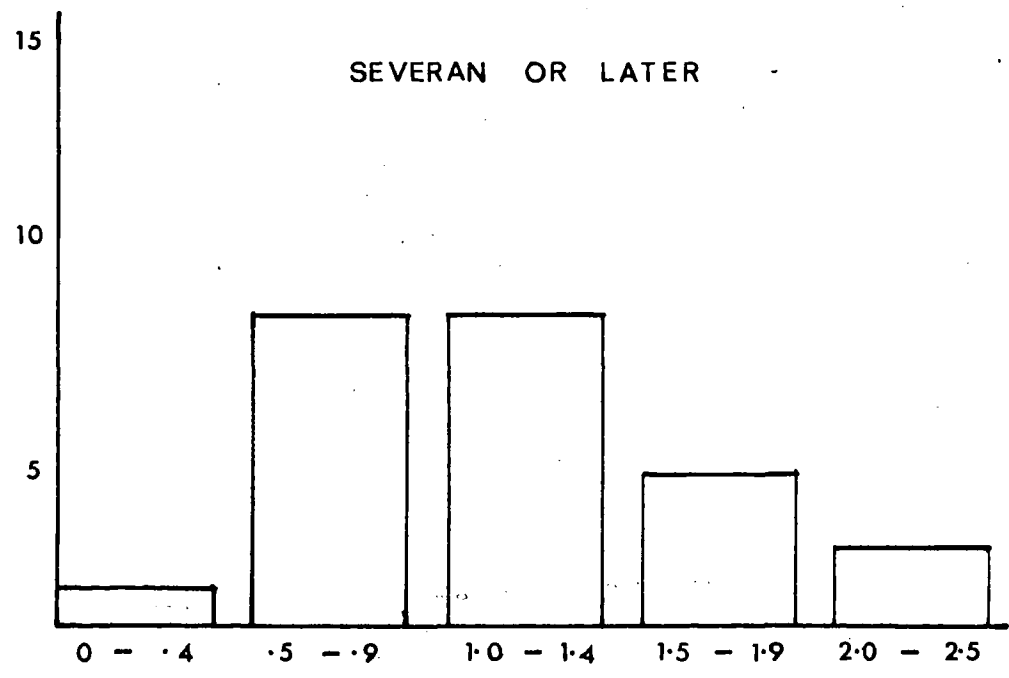
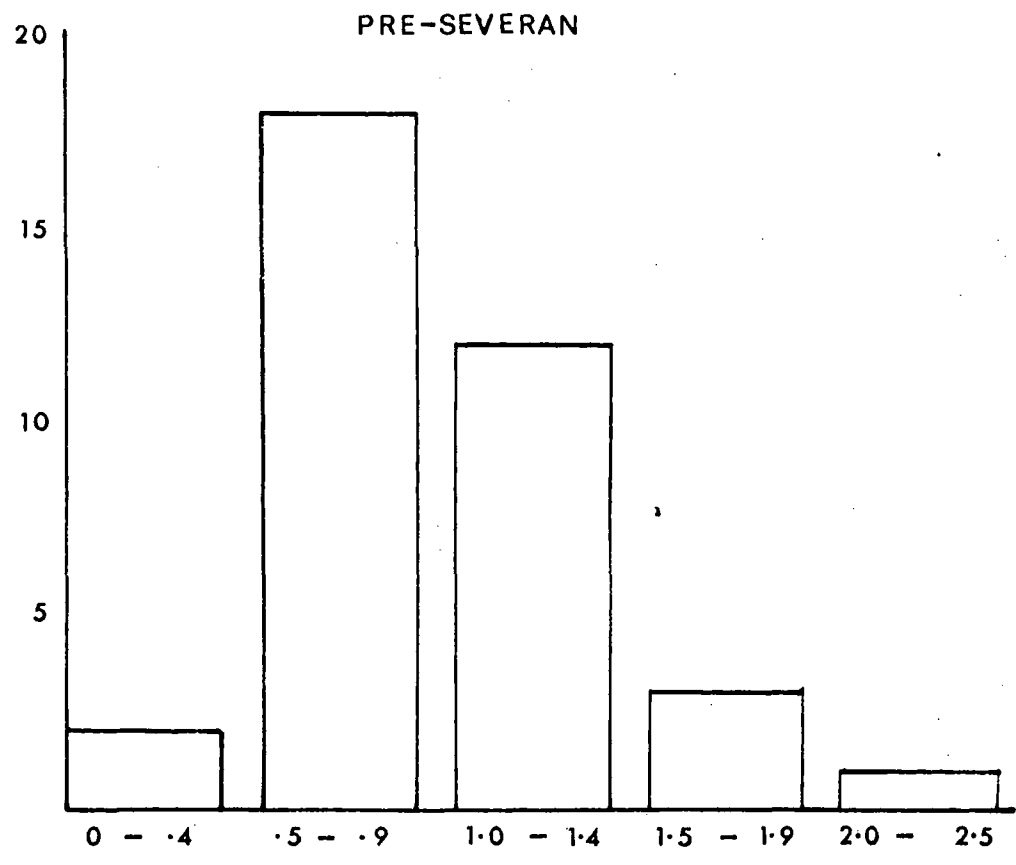
c : d, e : c, f : d, e : f, RI : R2. Tables of results are given in Appendix M. Of these relationships c : d and RI : R2 proved to be the most illuminating. Graph A, illustrating the ratio c : d on stones which can be securely dated shows that in the third century there was a distinct tendency for the lower chord to become shorter. Histogram E which takes one cyma reversa moulding from datable stones into account, confirms this. (See Table 5). At the same time, the ratio of the radii of the circles makes clear that the third century saw a development in importance of the upper curve at the expense of the lower; whereas in this period in twenty-one out of forty-one mouldings the ratio is greater than .9 : 1, this is true in the second century of only ten out of fifty-eight mouldings. Histogram F illustrates this point. (See Table 4). It seems justifiable to argue therefore that the relationships c : d and RI : R2 may be taken as pointers towards the dating of this moulding.

The examination of the ratio RI : R2 confirmed what the eye had already detected, namely, that the templets used for setting out the moulding were available in different sizes. Indeed it seems that sets of templets were in use. Altars of Cohors I Baetasiorum, for instance (80, 81), have cyma reversa mouldings identical with each other in all but size. This would not be remarkable were the cymas of the tangential type, for templets for these mouldings are easy to make; any craftsman adept with compasses and knife can produce wooden templets in graded sizes in which the proportion of upper : lower curve is the same. The tangential point is unimportant; the templet can be angled to produce whatever effect is desired, as Figure XI makes clear. By contrast, cymas formed by intersecting arcs are not necessarily the same because the ratio of the radii of the circles is the same. The exact point of intersection is important, for this varies with the distance between the centres of the circles. Thus, to produce two templets of exactly the same shape, not only must the radii of both the

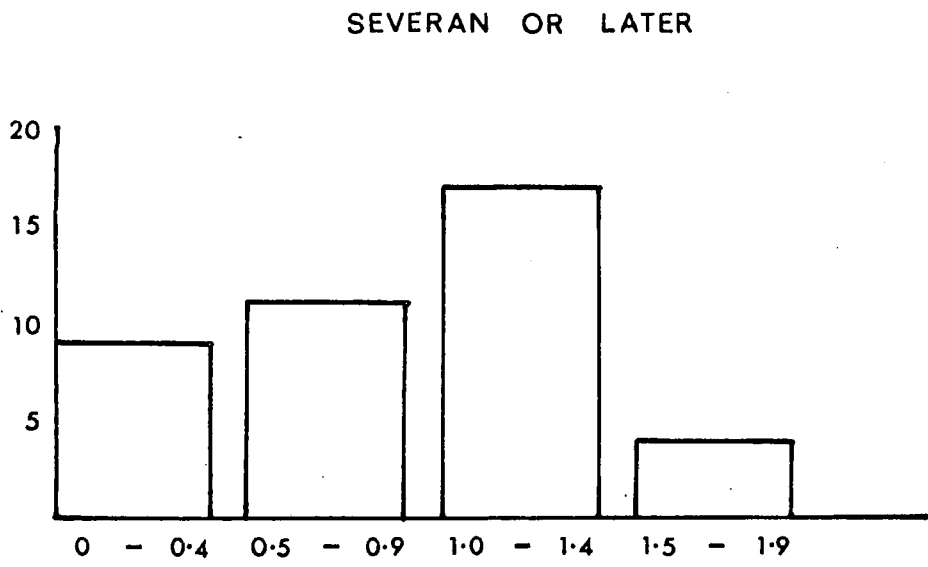
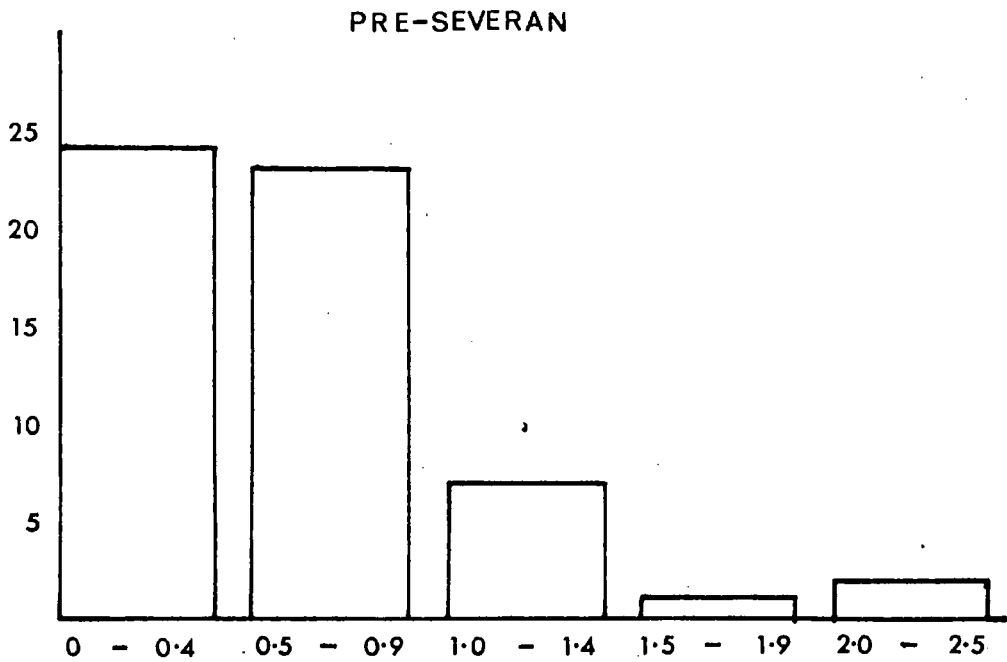
GRAPH A : RATIO $c:d$ OF CYMA REVERSA MOULDINGS ON STONES DATED BY THEIR INSCRIPTIONS.



HISTOGRAM E
CYMA REVERSA MOULDINGS : RATIO OF CHORDS C:D
ON DATABLE ALTARS.



HISTOGRAM F
CYMA REVERSA MOULDINGS :
Ratio of Radius of Convex : Concave Arcs.

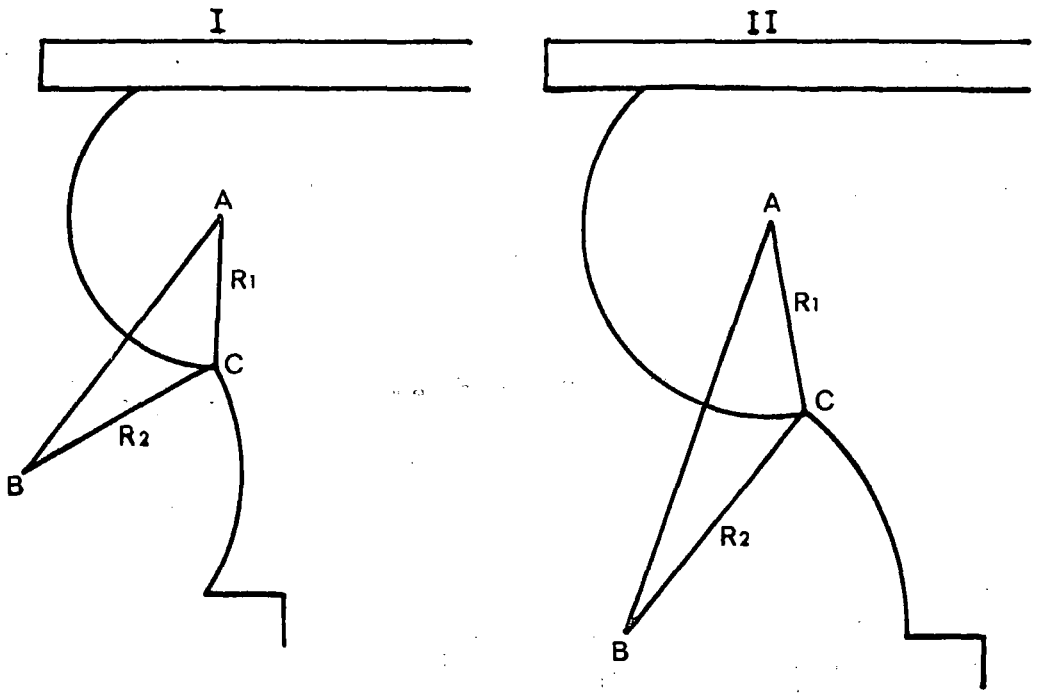


upper and lower curve of one cyma be related respectively in the same proportion to the radii of the upper and lower curves of the other, but there must be an identical ratio between the distance separating the centres of the two circles which combine to produce each pattern. That is to say that the triangles produced when the centres of the circles are joined to each other and to the point of intersection, must be similar. In Figure XII, the ratio $R_1 : R_1$, $R_2 : R_2$ and $AB : AB$ are the same, and the curves of Cyma I and Cyma II are therefore identical in shape, although of different sizes.

To produce templets of identical shape and size requires care, but to make a set of different sizes by means of mathematics is relatively tricky. If a prototype is available however, enlarging can be effected by using a device such as the pantograph, or more simply by outlining the shadow cast by the templet. To reduce the size is more difficult, but even this is possible if the original is set at a distance and its outline is traced in some tacky substance on to a piece of glass. When a piece of wood is pressed to the glass the profile will transfer to the more durable material and the shape can then be carved by hand. On the whole, however, it seems likely that, if a mechanical method were adopted, the Romans would enlarge rather than reduce mouldings in order to produce sets.

In view of the difficulties of making sets of templets based on intersecting arcs, the distribution of mouldings of identical shape is particularly interesting. While two mouldings of the same size and shape may be the result of chance, it is scarcely credible that coincidence can explain the existence of four or more mouldings of identical shape and proportions, although of different size. It seems much more likely that all such mouldings were derived from a common templet, copies of which had been distributed to the masons of military units. The two sizes of mouldings used by Cohors I Baetasiorum at Bar Hill (80) and Maryport (81) have already been mentioned. It is scarcely a possibility that the

Fig.XII



regimental mason set out to make a larger version of the smaller templet when the unit was moved to Maryport; human nature being what it is, if a larger templet had not been to hand, he would no doubt have fashioned his moulding with the help of the templet already in his possession. Another altar from Maryport (95), but with a defaced inscription, displays a much smaller moulding from the same set of templets and this stone may well have come from the same military workshop.

The regiments using cymas made by intersecting arcs are limited in number and fall into two groups, those using the same templets as the masons of Legio VI and those using templets similar to those of the masons of Legio XX. (See Appendix N (a)). In the first group, Cohors II Tungrorum and Cohors I Baetasiorum appear most frequently; this is interesting in view of the popularity of cigar-shaped bolsters with these three units⁷ and seems to point to a close relationship between them. It suggests that the masons of these auxiliary troops had been trained by legionaries of Legio VI and had taken both their templets and their styles from them. Cohors IV Gallorum also belongs to this group as does Cohors I Hamiorum Sagittariorum which seems to have been associated with the Baetasii. Cohors I Vardullorum, the other unit to carve cigar-shaped bolsters, may have drawn its templets from Legio VI's stores and takes with it Cohors I Thracum, whose masons use the same sets of templets as those of the Vardulli. Most of the mouldings in this group date from the second century but it is clear that the masons of Cohors I Vardullorum retained an affection for cymas of this type for they continued to use them at High Rochester (121) well into the third century. The altars set up by the Thracians are usually dated to the early part of this period. It seems probable that the templets used to carve the altar erected by detachments of Legio VI and Legio II at Castlecary (16) were those of the Sixth, for there is not a single example of masons of Legio II using intersecting arcs as the basis of their cyma reversa mouldings.

An altar from Newstead erected by a centurion of Legio XX (173) displays cymas based on intersecting arcs but different in shape from those of Legio VI. Very similar to, but not identical with, these mouldings are those on two altars from Housesteads, one set up by Cuneus Frisiorum (243) and the other by a centurion whose unit is unspecified (244). Another altar has similar mouldings (214) and it is just possible that these mouldings all come from one set of templets and that differences in proportion are due to the workmanship. Some tolerance must be allowed for this. In any case, the mouldings from Housesteads are of a type without parallel on altars carved by masons of Legio VI and its associated units.

Cymas based upon tangential arcs are less interesting in distribution. In view of the evidence of the existence of sets of templets for setting out cymas with intersecting arcs, it seems probable that similar sets of templets were in use for tangential mouldings. For the reason already stated, ^{8.} however, these are less easy to trace. All three legions used cymas of tangential type; three altars of Legio VI (26, 32, 39), five of Legio XX (168, 171, 172, 175, 176) and four altars and one pedestal of Legio II (3, 4, 5, 10, 177) testify to this. One altar, dedicated by a man who describes himself as a centurion of Legiones VI, XX, and II (426), might have come from the workshop of any of these legions.

The templets used by the masons of Legio II are all those in which the ratio of convex : concave curve is .9 : 1 or less, and this seems to indicate that the stones were carved in the second century. The pedestal to Disciplina Augustorum (10) with its tiny convex arcs, cannot be earlier than A.D. 161-69, and may date from Severan times although its mouldings have second century proportions. Although measurement revealed slight variations in these, it seems likely that the templets used for the mouldings come from the same set; inequalities in carving may well account for the slight differences in ratio. In the same way, the templets used for the cymas of two of the Marcus Cocceius Firmus altars from

Auchendavy (4, 5) seem to belong together, while the moulding on a third altar (3) seems to have been carved from a different set of templets.

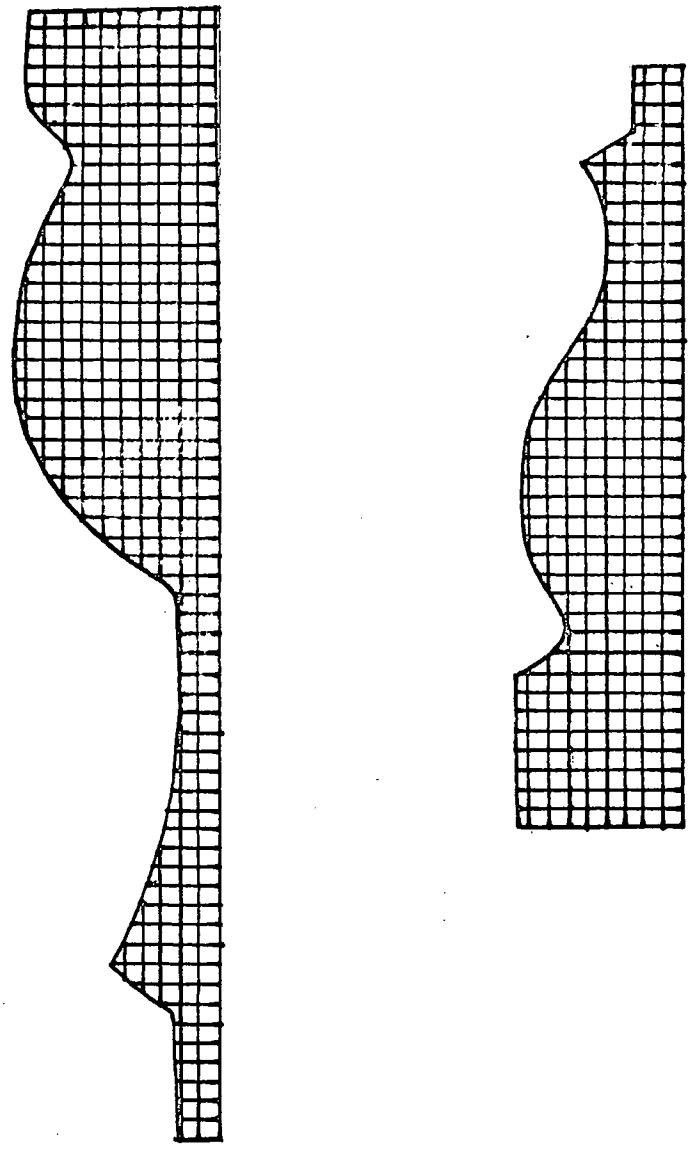
The masons of Legio VI were using tangential as well as intersecting cymas in the second century. An altar set up by the praefectus castrorum of the legion at Corbridge (32) has mouldings probably out from the same templet as that used to carve an altar from Chesterholm (26). If, as appears likely, the Corbridge stone is to be placed in the second century on the grounds that after this date the title praefectus castrorum fell out of use and that the form of the inscription fits best into this period, the Chesterholm altar may well belong to the same century. The free-standing form of bolsters and focus supports this view. An altar found near Castlesteads (39) is difficult to place, although it too may well belong to the second century.

Of the stones mentioning Legio XX, two, an altar base from Ribchester (176) and the joint dedication from Carvoran mentioning all three legions (426), have mouldings identical in size and proportion. Both may be ascribed tentatively to the second century in view of their radial ratios. The cymas on two second century stones from Newstead (171, 172) seem to have been carved from different sets of templets, although the mouldings of the base dedicated to Silvanus (171) are from the same set as those of two altars of Cohors I Batavorum (263, 266).

Of the auxiliary units, it is certain that cymas of both types were popular with the masons of Cohors II Tungrorum and it is clear from an altar from Birrens (140) that both types were used contemporaneously (Fig. XVI). On the capital of this stone there is a fairly small tangential cyma and a larger one based on intersecting arcs. The unit's connection with Legio VI seems certain, as does the continuing use of cyma reversa mouldings into the third century. Two sets of templets are indicated by the mouldings of four altars carved at Birrens (136, 137, 138, 139). When the unit was stationed at Castlesteads, there seems to have been a close relationship between the mouldings carved by its masons

Fig. XVI

No.140 Intersecting and Tangential Cyma Reversa used on the Capital of the same Altar.



and those cut by soldiers of Cohors I Tungrorum at Housesteads and by the Dacians at Birdoswald. (See Appendix N (b)). This may be explained by assuming that all three regiments had secured their templets from a common source; or the link might have arisen if two of the units concerned had lost their templets, either by fire or carelessness, and had cut new sets from those in use in other forts.

Sets of templets used by Cohors I Tungrorum are indicated by the mouldings on altars from Housesteads. (See Appendix N (b)).

Tangential cymas occur on a number of altars which are either uninscribed or have defective inscriptions; and in the light of the templets used in their carving, it seems possible to make a few observations about them. Three stones from South Shields (401, 402, 404), for example, clearly come from the same workshop. The mouldings on a large altar from Ebchester (61) are carved from templets similar to those used by Cohors II Tungrorum (140), a unit shown to be associated with Legio VI. This is not surprising, in view of the discovery at Ebchester of an altar dedicated by a centurion of Legio VI (45) and of tiles stamped with this legion's mark. ^{9.} The unit responsible for carving the altar cannot, however, be determined on the basis of mouldings alone. Two altars from Corbridge (493, 494) apparently come from a civilian workshop but fall within the pattern of Legio VI type templets, as do the mouldings on an uninscribed altar at present in Lanercost Priory (815). Veterans, after discharge, may have occasionally set up as sculptors. Corbridge would provide an excellent centre for this kind of enterprise.

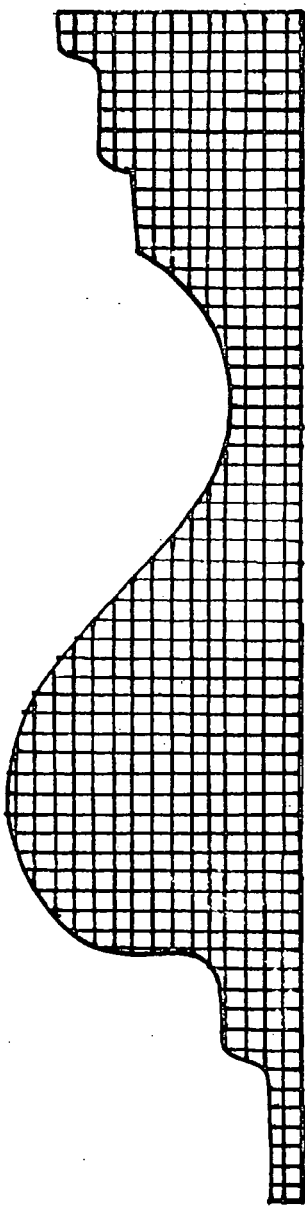
It remains to comment on one other moulding. This is the inverted tangential cyma reversa on an altar to Neptune erected at Castlecary by Cohors I Vardullorum (114). This moulding is quite different from any others used by this unit and cannot be paralleled in the second century, the period to which the altar must be attributed. It is perhaps intended as a cyma recta moulding, the other double-curved

moulding of the classical world.

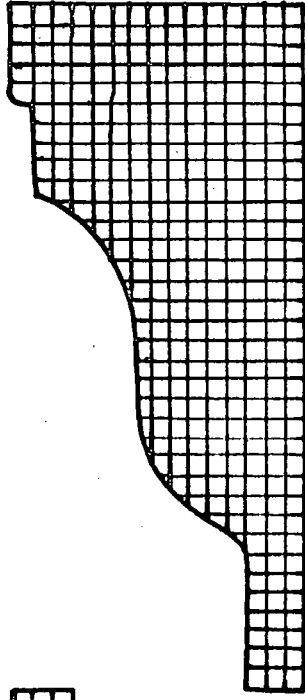
This moulding, developed from the addition of a convex curve to an upper, inward curving quarter-round hollow,¹⁰ is relatively rare in Northern Britain. This is strange, for it is the moulding best suited to act as the topmost member of a combination of mouldings and, in classical sculpture, usually occupies this position. Although there are few instances of the pure form of the moulding, an uninscribed altar top in the Museum of Antiquities, Newcastle upon Tyne (825) serves as an example (Fig. XVII). Several altars display distortions of the moulding: sometimes the lower curve is exaggerated to such an extent that it projects beyond the face of the capital. This gives a grotesque outline; the moulding no longer supports the capital but drags it downwards. That templets were used for these barbarous shapes seems certain, for mouldings on altars from Chesterholm (161) and Housesteads (221) and identical in size and outline and must surely be the work of one craftsman (Fig. XVII). It is very likely that these sagging mouldings were sometimes set out on the stones by using orthodox templets upside down. This seems to be the case with altars from Birrens (319) and Ebchester (61) where templets of *cyma reversa* type have been inverted. An example from Castlecary has already been noted (114). Here, at least, it seems that the distorted cymas have their origin in masons' unfamiliarity with the true nature of classical mouldings and the conventions dictating their use. They have the templets, but have no feeling for architectural form; nor have they assimilated what they have been taught about the way mouldings were to be applied to altars. This need occasion no surprise, for in spite of all Rome's efforts, the romanization of her troops must in many cases have been very superficial; it was not based on any extensive knowledge of the Roman world, but had been picked up from those who were themselves strangers to it. The grotesque mouldings, therefore, are not an unexpected feature of sculpture in Northern Britain; what is remarkable is that they are relatively so few in number. They occur on

Fig.XVII

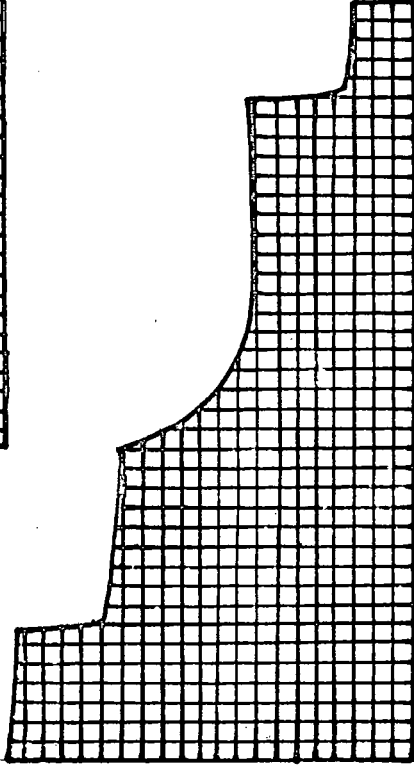
No.221 "Sagging" Cyma Recta



No.825 Cyma Recta



No.242 Cavetto



altars in both the second (49) and the third century (213) but the most distorted forms seem to belong to the later period (eg. 161).

The quarter-round hollow moulding, the cavetto, does not appear very frequently in Northern Britain (Fig. XVII). Cavettos of the same shape and size come from Chester ¹¹ and Rough Castle (242) both the work of masons of Legio XX in the mid-second century, and from Birrens (148) and Old Carlisle (201). The altars from Bath, dedicated for the welfare of a centurion of Legio VI, ¹² perhaps indicate the familiarity of soldiers of this legion with the moulding. A shallower, more elongated form is found on an altar of Cohors I Thraeum from Bowes (105). Three third-century stones from Birdoswald (271, 276, 291) also display versions of the cavetto but here it flares outwards at the lower edge, and in two cases (276, 291) is separated by a groove from a torus moulding. There is here a distinct possibility that on these capitals a cyma reversa moulding has been modified to give a slightly different effect and analyses of the mouldings are given in Appendix M. Another flaring cavetto comes from near Port Carlisle (96).

The other concave classical moulding, equivalent to the convex half-round, the scotia, appears occasionally in conjunction with other mouldings, as for instance on an altar from Westerwood (375) and on a stone from Carvoran (479), but the workmanship in both cases is so crude as to suggest that the carving of a scotia was accidental. The mason may simply have gouged out a hollow with little preconceived notion as to a definite shape.

The mouldings so far discussed are all based on classical types and, in the main, occur in both the second and third centuries. In the third century, however, a new development takes place. Several large and well-carved altars now feature, instead of fillets or curved mouldings, a simple chamfer (233, 241, 251). Some stones retain the more traditional mouldings at the capital, but replace those at the base by a chamfer (320). No templet is needed to set out a chamfer; all that must be done is to

measure on the vertical plane of the capital front a distance equal to the projection of the capital from the shaft, and join this point to that at which capital and shaft meet. This gives a chamfer at an angle of 45° , a popular type of bevel (233, 251). A more obtuse angle is secured by increasing the length of the measurement on the vertical plane; at Birrens (338), for instance, the angle is increased to 60° . It may well be that loss or damage of templets forced some masons to abandon their traditional curved mouldings. By the third century the mechanics for securing renewed supplies of templets had perhaps altered. Certainly the change is not due to any decline in craftsmanship, as altars from Lanchester (251) and Risingham (233) indicate. It seems likely that the reason for the popularity of chamfers is simply to be seen as a change of fashion. An altar from Great Chesters (174) is of special interest, for its dedicator, a centurion of Legio XX is known from an altar found at Newstead (173), which seems to be of Antonine date. Yet the chamfers of the Great Chesters stone, the flat top and unusual decoration of rosettes with curving rays, reminiscent of the Lanchester altar to Garmangabis which is securely dated to Gordian's reign (251), place this altar most happily in the third century. Gaetulicus' altar may perhaps represent the beginning of a new vogue.

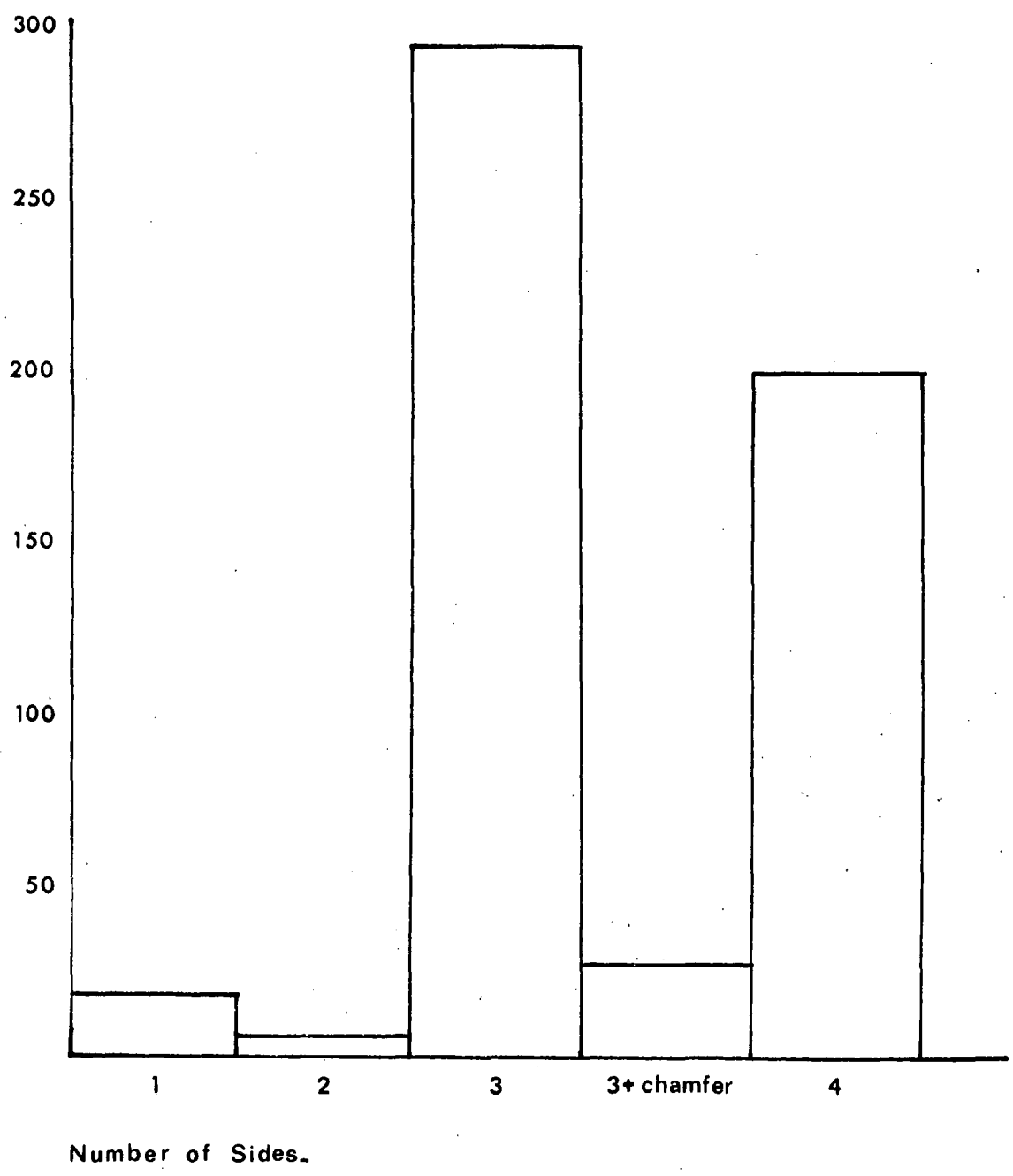
The third century saw a further tendency to simplification in the design of altars. Some stones dispense with mouldings of any kind and separate the capital from the shaft by a single step (288). Even when curved mouldings are retained, the transition to the smaller dimension of the shaft is effected more abruptly than hitherto; the rectangularity of the capital is emphasised and the mouldings, whether fillets or quarter-round, are subordinated to it (41, 159).

In four instances the mouldings of the capital are supported by small underlying projections, or dentils, which enrich the decorative scheme

(119, 136, 362, 497). One of these, from High Rochester (119), has stepped dentils. Another, from Halton Chesters (497), departs from classical usage by adding a second row, which has no purpose other than that of decorating the upper part of the capital. An even stranger application of what must be intended for dentils occurs on an uninscribed altar from Watercrock (362) where the lowest element of the capital mouldings, a chamfered torus, has five tassel-like projections depending from it carved as bunches of grapes.

Free-standing altars, such as that dedicated to the Nymphs at Carrawburgh (266), were provided with mouldings on all four sides. The great majority of altars however are carved on three sides only. This must mean that they were intended to stand against a wall. In some cases the back was left in a rough, unchiselled state (391), but in others, it was smoothed down and given a tidy appearance by the fashioning of chamfers in place of more elaborate mouldings (175). Some altars display mouldings only at the sides of the stone (421) and a few have only the front (683) fully carved. The comparative numbers of altars moulded on one, two, three and four sides is shown in Histogram G. Damaged and lost stones, where the number of moulded sides is in doubt, are excluded.

HISTOGRAM G
NUMBER OF SIDES ON WHICH ALTARS ARE MOULDED.



(b) The Decoration of Mouldings.

In classical sculpture, each moulding had its appropriate enrichment; for the ovolo, egg and tongue; for the cymas reversa and recta respectively, the acanthus leaf and palmette motif; for the torus, the bay-leaf garland and guilloche. Tiny tori, or bead mouldings, were decorated with a bead and reel motif; fillets might be ornamented by continuous designs of various kinds. In Northern Britain it is only rarely that these traditional enrichments appear, and when they do occur, they are often used without regard for classical conventions.

The most common decoration is applied to half-round mouldings, which are frequently grooved so that they resemble a rope. This is known as cable moulding and was an enrichment popular in both the second (2, 97, 308) and third (159, 284) centuries. In its simple form, all the grooves run in one direction (376, 377) but a greater decorative effect is achieved by using cable mouldings in pairs with the grooving running in contrary directions (106, 529). A variant of this occurs on an altar from near Cawfields Milecastle (440) where a large angular torus at the base of the shaft has divergent grooving on each inclined plane. Another variation is achieved by using a single moulding and changing the direction of the grooving halfway along its length. This device appears on an altar from Burrow Walls (665) and was used in the third century by a mason or masons working at Castlesteads (144), Lanchester (251), Risingham (253) and High Rochester (119). The similarities between the Lanchester and Risingham stones strongly suggest that one man is responsible for both, while the craftsman at High Rochester, who has also carved a tombstone there¹³, may have picked up the design from the other altars. In conclusion it might be said that cable moulding is a simple, and, with the grooves picked out in colour, an effective, way to decorate a stone.

Two altars from Bar Hill (6, 100) have, instead of a cable moulding, a band of pellets decorating a half-round moulding.

A solitary stone from Castlesteads (157) displays an egg and tongue decoration upon the uppermost of three small tori.

Occasionally, fillets are embellished. An altar from Maryport (302) has a fillet with an incised chevron pattern running along it, while another stone, from Carrawburgh (367), has the same decoration but in relief. A lost altar from Brougham (658) had a band similarly patterned, if Gough's drawing, reproduced in RIB is an accurate representation of the stone, although it is impossible to tell whether a raised or grooved design is intended. Herringbone ornament in relief appears on one of the Bar Hill altars (100) while an uninscribed altar from Carrawburgh (345) has an incised design of flattened semi-circles on one of two fillets at the base of the shaft. The altar from Maryport (302) already mentioned displays a decoration of incised semi-circles with a small depression in each arc.

Semi-circles, but sunken and outlined by a bead moulding, occur as decorative features on the ovolo of Greek type on the altar to Apollo from Whitley Castle (329), but this is an unusual treatment. More common, but by no means frequent, is the application of palmettes, a motif based on the anthemion or honey-suckle, to a cyma reversa moulding. In the classical world this ornament is principally used to enrich the cyma recta form of the double-curved moulding. Yet building inscriptions from Corbridge ¹⁴. and the Antonine Wall ¹⁵. show that the masons of Legio II used the palmette to decorate the cyma reversa form. It is thus not surprising to find it appearing, although debased, on the altar from Haddon Hall (206), and to see it used on a richly decorated altar from Benwell (168). What is more unusual is its use on an inverted cavetto moulding on the base of another altar from Benwell (169). Here the decoration continues around all four sides of the stone, but there is no uniformity in the carving of the design. An altar from Old Carlisle (204) shows a different treatment of the cyma reversa moulding; the convex curve is decorated with a band of twenty-four tiny triangles in relief, which, by reason of their bevelled

edges, give the effect of small semi-circles. Another stone, from Carlisle (621), has a large cyma reversa moulding, the upper curve of which has been converted into a stepped-in fillet; a heart-shaped ornament, which Haverfield took to be a defaced human head,¹⁶ occupies the centre of the reverse curve.

This altar illustrates the way in which an enterprising mason might modify a basic moulding to give a new and interesting line to his stone. The same is true of an altar from Housesteads (243) where a bead moulding has been carved to mark the point at which one cyma moulding ends and another of the same size and shape begins.

The chamfer at the capital of an altar from Doncaster (725) is embellished by a large, incised ovolo.

1. See p. 60.
2. Ed. Wyatt Papworth, Gwilt's Encyclopaedia of Architecture, ninth impression (London, 1903), 106. .
3. RIB 1593.
4. CW² XXXIX, 223.
5. Shoe, L.T., Profiles of Greek Mouldings (Cambridge, Mass. 1936), 6.
6. Eg. at Thasos and Didyma; ibid., plate XXXV, 1,5.
7. See p. 28f.
8. See p. 62.
9. JRS LVII, 208, no. 30 a, b.
10. Shoe, op. cit., 5-6.
11. RIB 452.
12. RIB 143; RIB 144.
13. RIB 1290.
14. RIB 1147; RIB 1148.
15. RIB 2203.
16. TH. Cat. 5, no. 11.

Chapter V

Designs set out with Ruler and Compass.

The capital of an altar provides an excellent field upon which a mason can display his mastery of stone carving. The ends of the bolsters, the fascia, and the focus-mount provide surfaces suitable for enrichment with ornamental motifs. Even those altars which now appear to be completely unadorned may once have made a greater visual impact through decoration painted upon them.

The most common types of carved ornament are those which can readily be set out by using the mason's standard equipment of ruler, square and compass. An altar from Great Chesters (174) provides an example of how this setting out was done, for guide lines for a saltire border were marked on the stone but the carving was never finished. Similarly, the roughly incised double lozenges on the capital of a fragment from Gloster Hill (185) may represent the preliminary stage in the creation of a bar lozenge motif.

The use of ruler and compass produces a variety of geometrical patterns whose appearance may be altered by employing different techniques of carving.

The simplest of these patterns is the straight line, incised either singly (756) or in pairs (8) or triplets (614) on the fascia of capital or base, or used vertically (62) as the basis for flutings.

Another set of patterns is derived from the chevron, a motif capable of varied treatment, as Romilley Allen shows.¹ On northern altars a simple chevron may be incised (302), or the upper (97) or lower (605) indentation may be raised to give a row of triangles in relief. A bar chevron is produced by moving apart two identical zig-zags so as to leave an equal interspace; the background is then cut away, leaving the central bar upstanding as a band of chevron ornament. Sometimes the background is flat (159); sometimes it is chopped out (251) in the chip-carving technique.

Chevron patterns of all types are usually applied in strips to fillets (160) or are used to separate bands of other ornament (313). In one case, chip-carved chevron, arranged not only in strips but to form stars and other patterns, occupies the main area of the capital front, surrounding two crescentic swags (251).

Two altars (251, 253), apparently linked stylistically, are decorated with a pattern based on a double strip of chevron with the points of the triangles meeting.² In each case these triangles are raised, the enclosed pair forming a sunken lozenge divided at its widest point by a transverse bar.

The lozenge pattern proper is formed by placing together the open ends of two chevrons whose points face in opposite directions.³ Borders of this pattern decorate northern altars; the diamond shape is either outlined in relief in a bar lozenge design (192, 233) or the lozenge is raised (132).

A variant of the lozenge border is the saltire border; this is formed by placing two chevrons with points facing in opposite directions so that these points meet.⁴ A vertical line sometimes separates each pair of Xs (327). The saltire may be incised (327) or, outlined in relief (423), may form a bar saltire. As with bar chevron, the background of bar saltire may be flat (423) or chopped out (174). There is one example of a bar lattice-work pattern, produced by placing rows of lozenges above each other.⁵ This decorates the capital of an altar from Castlesteads (164). An incised lattice occurs on an altar now at Staward Manor (162).

The saltire appears as an individual motif on an altar of Legio XX (175). On each side of the capital, a large cross carved in relief is bisected by a vertical line; this line is incised on the sinister side but raised on the dexter side of the altar. A solar disk occupies each of the lateral triangles. The motif recalls a similar decoration on

tombstones from Castlesteads ^{6.} and Brough-under-Stainmore, ^{7.} although these have an added horizontal line to complete a Union Jack pattern.

Three other patterns based on the chevron remain to be mentioned. These are the herringbone, where the Vs are placed with points facing the same direction, the palm-leaf, where a horizontal line runs through the points of each chevron, and the star, where the chevrons are arranged with points in different directions but with the open ends facing each other. All these patterns were used by masons in Northern Britain (392, 125, 528), sometimes incised (528), sometimes in relief (100).

Of isolated motifs, the swastika is based on straight lines and appears occasionally in Northern Britain, usually in a third century (122, 119, 289) or later (131) context. It occurs with arms bent both in clockwise (131) and anti-clockwise (119) directions.

Motifs involving the use of compasses are frequently used on all parts of the capital front. The simplest form is the incised circle. Bolster ends are often outlined by one or two grooves. (See Appendix O). Similar roundels, often with their centres indicated, appear as the decoration of fillets (304), torus mouldings (301) and the focus mount (302). This type of decoration was popular with Cohors I Hispanorum at Maryport. Sunken roundels are fairly frequent, especially on the ends of bolsters. (See Appendix O). Bosses also appear on the sides of the bolsters of a stone from Birrens (140). Ten altars have bolster ends which are dished with a centre boss. (See Appendix O). Roundels with one (67), two (329) or three (122) raised rims are to be found on the ends of the bolsters and on other parts of the capital; single-(168), double-(228) and triple-(168) rimmed circles occur on the fascia, and single-(367) and double-rimmed (119) roundels on the focus-mount. The centre of these motifs is not invariably flat; occasionally it is sunken (122) and frequently it is carved as a boss (184). This is especially the case when this decoration is applied to the ends of

bolsters, and here occasionally, as with the focus, the boss has a sunken centre (2).

Another motif based upon the circle is the so-called solar disk, a roundel enclosing an equal-armed cross; the solar disk is a type of swastika. This motif is usually carved in relief (143) although it is sometimes incised (439). It is generally used as strip decoration (143, 153), although it also decorates the ends of bolsters (439) and occurs elsewhere (211: on the focus mount). The solar disk appears on three building inscriptions ⁸: of which two ⁹: may be dated to the period A.D. 136 - 138. On altars its popularity seems to have been greatest in the third century (119, 143, 153); this is perhaps a result of the spread of Mithraism.

Elaborations of the solar disk motif may be seen on two altars, one of uncertain provenance (603) and the other from Risingham (253). On the first of these stones, four contiguous raised arcs, curving in a direction opposite from that of the encircling rim, form a petal-like frame within which the equal-armed cross is set somewhat irregularly. The decoration on the second altar is similar but more angular; here the outer rim is not a complete circle and a vertical rib separates each four-petalled motif so that the overall impression is of rectangularity rather than of roundels.

A third variety of swastika was known to a mason working at Rudchester (391). Here two identical S curves, intersecting at right angles to each other, decorate the ends of the bolsters. The interspaces are adorned with incised arcs.

Intersecting circles form the basis of a lens-shaped decoration, of which only one example survives (142). It dates from A.D. 241 and is in relief. The same pattern occurs on an altar now in the Bonn Museum. ¹⁰. An altar from Old Carlisle (203), now lost, seems to have had a similar treatment, although from the drawing in the Gentleman's Magazine, reproduced in RIB, it appears to have been incised rather than in relief. It is interesting to note that two lenses enclosed within a roundel occur on an

elaborately carved tombstone from the same site.¹¹ Bruce described this motif as "the Vesica Piscis...of the middle ages",¹² but the lens-shape was, of course, known in the Celtic world for it figures on the handle of a bronze tankard from Trawsfynydd.¹³

Geometrical designs of a different type occur on the ends of bolsters, possibly developing from the conventional representation of bundles of faggots.¹⁴ Similar figures are also found on the fascia (188). The simplest design is an arrangement of grooves in the shape of an asterisk (399), the tips of which are sometimes linked by an incised line or arc (303), thus emphasising the essentially circular nature of the motif. In one instance the divergent rays are in relief and are set within a raised rim, giving a wheel-like effect (313).

More commonly the design is based upon a series of intersecting arcs, so arranged as to give the impression of a conventionalised rosette. This effect is sometimes heightened by the carving of a boss in the centre of the motif, as if to represent the ovary of a flower (160); occasionally the centre of this boss is sunken (304). The number of the curved radiating spokes varies, although six, the number easily drawn by using arcs of the same radius as the circle, is usual (146). Four (125), five (303), seven (140), eight (324) and nine (310) are not unknown however. These spokes or petals may be recessed into the stone (214) and are sometimes set within an incised circle (126). Sometimes, instead of being sunken, the petals are in relief (213). Where this is so, the motif may be within a sunken roundel (95: bolster) or may be given a raised rim (23). Equally popular is the device of accentuating the shape of the petals by outlining them with a moulding or, to put it differently, by carving a lens-shaped hollow in the centre of each raised spoke (24). Rosettes of this type, too, may be circumscribed by an incised line (603) or, may be set within a sunken roundel (125) or raised rim (232). They may also have the tips of their petals linked by incised arcs (126: central rosette). A number

of well-carved stones has rosettes bounded by a border of intersecting arcs similar to those of the petals themselves (138, 243, 392). Here, within the space provided by the roundel, the use of compasses is carried to its maximum and recalls the fascia of an altar from Chester¹⁵. where three adjacent rosettes of this type occupy almost the entire front of the fascia.

An effect of a different kind is created on the bolsters of an altar from Bollihope Common (254). Here a ring of five sunken ellipses separated by ribs encloses a sunken roundel with centre boss; the ribs form a five-pointed star-shape springing from the central roundel.

Exceptionally, the space between the petals has added embellishments; an altar from High Rochester (126), for instance, has pellets carved between the petals of the dexter rosette.

Another circular motif which is set out with compasses is the rosette with curvilinear rays. This is, like the swastika, an ancient motif. It occurs on the Aylesford bucket.¹⁶ In the Roman period it was a favourite motif on tombstones in Asturia¹⁷. and it may be found on stones from Gotland.¹⁸ In modified form it appears on a first century mosaic from Orange.¹⁹ In Northern Britain it is rare, appearing only on altars from Great Chesters (174), Lanchester (251) and Risingham (253) and on a tombstone from High Rochester.²⁰ In all these British instances except the first, where it is incised, the motif is in relief.

Compasses must have been used to sketch in another circular motif, the globe with solstitial lines, which appears on the base of an altar from Housesteads (213). This figure is rare on altars, although the Victories decorating building slabs usually rest their feet on globes, sometimes with the solstitial lines indicated.²¹

In the main it is impossible to date these varied circular patterns, since they are conventional and standard designs and were probably used by workers in wood as well as in stone.²² Their numbers are not

sufficiently large to make any valid statistical deductions possible. What is apparent, however, is the popularity of the rosette and asterisk motifs with military masons; out of a total of forty extant altars on which the bolster ends are decorated with these motifs, at least twenty-six may be ascribed to army workshops. (See Appendix O).

The semi-circle is the basis of another set of patterns the simplest of which are the arch and arcade. A single arch appears on altars from Old Penrith (576) and Chester-le-Street (378), while a stone from Birdoswald (413) has, on the base, an arch with a flat border which is reminiscent of a group of three separate arches on the fascia of an impressive stone from Birrens (138). On the Birdoswald altar the design is inverted, suggesting that the present inscription is secondary, having been cut on an altar inverted in re-use. No trace of the primary lettering survives however, but this may have been in paint and thus will have disappeared completely. A single flat-rimmed arch on another altar (603) is bifurcated at each side in much the same way as the arch on a stone from Balmuildy (601). The arch on this last altar accommodates the bust of a deity. A full-length figure appears in an arch on a stone from Housesteads (487) and in a round-headed niche on an altar from Chesterholm (372).

Masons of Cohors I Hispanorum working at Maryport in the second century used bands of semi-circles to create an interesting series of decorated capitals. In each case, the sunken field within the arc is carefully roughed or "sparrow-pecked" so that its texture is different from that of the rest of the stone. Four extant altars (310, 311, 312, 313) and fragments of at least one other are decorated in this way. Although three prefects are recorded in the inscriptions, the altars seem to be the work of one mason, but, since an auxiliary craftsman might serve under five or six commanders, assuming an average of four years' service for each, ²³ there is no reason why this should not be so. The first of these stones

(310) has a row of seven arches in a panel outlined by chip-carved bar chevron. Another (311), dedicated by the same prefect, Lucius Cammius Maximus, has two bands of nine smaller arches placed opposite each other, the lower, convex and the upper, concave; the eight interstices are filled by tiny circles, producing on the narrow fascia a pleasing and appropriate design. The mason used the same idea on the sides of another capital (312) but here the disks form a separate band placed between double strips of semi-circles, the lower convex and the upper concave as before, but positioned alternately. It is interesting to notice that semi-circles arranged in this way, although without disks, occur on an altar from Stockstadt dated A.D. 167.²⁴ The front of the altar from Maryport is very weathered, but has had two tiers of arcs, the upper, concave, out off from each other by a band of small chip-carved bar chevron. It may be significant that the prefect who dedicated this stone was a native of Nîmes, for the tiered arcs call to mind the Pont du Gard and other Roman aqueducts. Indeed, the fourth altar in the series (313) displays three rows of arcs separated by bands of chip-carved bar chevron. These rows of arcs are surmounted by two larger semi-circles. In the spandrels of the lowest tier and in the field between the two topmost arches, sunken roundels, similar to those on the two altars previously discussed, occur. The sides of the capital of this altar repeat the basic motif of the second stone mentioned above (311) except that the band of sunken disks is omitted.

Sunken arcades of two (239), three (392) or four (407) arches occur on third-century altars, and incised arcades were also popular in this period (41, 211, 218). Of the incised arcades, three (41, 218, 345) out of four examples come from Mithraea. Arcades outlined in relief also appear. A row of seven such arches seems to have decorated the capital of a third-century altar from Castlesteads (144). An altar still extant, with similar ornament, comes from Carrawburgh (345) and there is another whose provenance is uncertain (394).

All these arches and arcades are of the usual round-headed Roman type. Two altars (142, 366), however, display pointed arches. As one of these is the stone upon which a band of vesica piscis is found (142), it may be that the idea of the pointed arch sprang from the design of intersecting circles.

Another design based upon arcs gives the impression of a strip of bay leaves set diagonally end to end. The effect is created by arcs of the same radius alternately convex and concave being set so that the reverse curve begins at a point midway along the circumference of the first arc. Such a pattern, if it is to be well executed (as 310), requires the use of compasses but, where speed rather than elegance is the aim, the curves may be drawn free-hand (as apparently 365). A central groove is usually carved along the ellipse formed by this design (7, 366), but in two instances where the altar is particularly well cut (310, RIB 452) this is replaced by a rib. The effect of the groove is to emphasise the shape of the ornament. Where ribs occur, these seem to represent the median vein of a leaf. This bay leaf motif occurs on two stones, an altar (7) and a building inscription, ^{25.} carved by masons of Legio II; the stones may well be contemporary. In all the aforementioned stones the leaves stand out from a flat background, but a similar design, executed in chip-carving technique, occurs on a badly damaged altar from Newstead (190). Another imperfectly preserved altar (95), this time from Maryport, has a strip of decoration based on this pattern, but here the space between the arcs is completely removed so that the leaf shapes are sunken. The bay leaf motif seems to have been popular in the mid-second century. One of the altars ^{26.} is dated A.D. 154 and the Legio II stones may well come from the Antonine period. Two altars similarly decorated but from Stockstadt are dated A.D. 167, ^{27.} while another from Jagsthausen is dated A.D. 179. ^{28.}

The supine crescent, an individual motif based on the semi-circle,

was used on northern altars from the Antonine period until the second half of the third century. The crescent may be incised (175) or in relief (228), and figures on both large (207) and small (351) altars. Occasionally, crescents appear in pairs (354) or triplets (352). On two of the altars from Birrens (137, 139), the crescent appears with a triangular projection which serves as a support. The motif is known on tombstones from Asia Minor, Rome, Carnuntum and Leon and is taken by Cumont to represent a cult object.²⁹ Baldwin Brown, by contrast, interprets it as "a reminiscence of the tuft attached to the staff" of a Roman standard immediately below the lowest crescent.³⁰

A small group of altars has capitals carved with architectural designs requiring in some cases the use of both ruler and compass. The face of a small uninscribed stone from Lanchester (383) is entirely occupied by the front of a small shrine, the pediment of which fills the capital. The pediment is outlined by a double moulding; the innermost, like the pillars from which it springs, is decorated with cabling. Within the pediment, a sunken arch is outlined by a plain bead mould. A horizontal cabled bead-mould forms a cross-beam resting on two swelling columns with double rounded capitals and well defined rounded bases. This is the most complete representation of a shrine to appear on an altar in Northern Britain, although another is carved on a stone from Watercreek (790).

Two stones from Risingham (232, 233), both dedicated to Fortuna, display elaborate architectural patterns interpreted by Richmond as based on the facade of the administrative offices and central shrine in the Headquarters building of a Roman fort.³¹ In both cases the design is of a hexastyle portico but there the similarity ends. The more accomplished piece (232) has a solid architectural structure. Baluster-shaped columns with plain capitals and bases, the innermost pair on each side being widely spaced, support cross beams which bear the weight of a tall, gabled roof. In addition, the two central piers support, at a lower level, a

further cross beam from which springs an arch. Gable, cross beams and arch are defined by a plain moulding. By contrast, the second altar's architectural design is less easy to establish, for the capital is damaged (233). Nevertheless, it is clear that the gable was much smaller than that of the first stone, while the central feature is a round-headed, mushroomed-shaped recess over which the gable is precariously balanced. From the gable a series of pellets depends, calling to mind a tombstone from Chester ³². where gables decorated with upstanding pellets (but here, only incised), flank a large structure, a treatment frequently used by moneyers when depicting buildings; on coins, rows of beads often mark the horizontal and inclined cornices of the pediments. ³³. A sestertius of Vespasian, on which the temple of Jupiter Capitolinus in Rome figures, may be cited as an example. ³⁴. It seems that at Risingham the mason has reversed the position of the pellets. Flanking the gable and recess there stand three pairs of swelling columns, the central one of each group having a cable moulded shaft. The bases of the columns are plain but the capitals are large and scalloped, while above each, a sunken semi-circle echoes in reverse the pendent pellets of the gable. Below this architectural feature, a sunken panel, now much damaged, decorated the lower part of the fascia.

Another altar with an interesting architectural capital comes from Castlesteads (151). Here a pointed arch rises above, and is flanked by, two round-headed arches. All spring from projecting capitals surmounting plain shafts.

A triple arcade occurs on the large and unusual altar from Maryport (438) which was once at Lowther Castle. In the central arch there is a motif variously interpreted as a human bust ³⁵. and a pine cone. ³⁶. Animals' heads appear to occupy the other arches.

The central feature of the capital of a well-carved altar from Birrens (136) has been seen as the roof of a domed building, ³⁷. an arched niche, ³⁸. or alcove with semi-dome ³⁹. and a round, arched

gateway. ⁴⁰. Baluster-shaped shafts girdled by double bead mouldings and with moulded capitals and bases, insecurely underpin large, plain, chamfered imposts from which spring triple archivolt mouldings, the outer being cabled. Structurally the design is quite unsound for columns so positioned could never support such an archivolt. The extraordinarily large imposts may be paralleled by those on a bronze medal depicting, on the reverse side, the votive arch of Postumus; ⁴¹. here however, the archivolt is single and a small pilaster rests upon the impost at each side. Between the two columns of the Birrens altar there are two rectangular panels in mitred frames, apparently resting on three small baluster shafts. These panels may represent panels, ⁴². gates, ⁴³. or doors or even windows. ⁴⁴. Baldwin Brown rejects these suggestions but draws attention to the lids of sarcophagi of the Imperial period where similar panels are intended as cartouches to receive monograms or devices. ⁴⁵. However, it seems unlikely that, had this been the intention, such additional carving would have been omitted from a stone so well finished. Moreover the additional vertical lines cut between the median and inner edge of the panel scarcely supports the theory. Ward's suggestion that the panels were intended to indicate a marble-faced wall is, as he recognised, ⁴⁶. not a likely explanation. Baldwin Brown suggested further ⁴⁷. that the extra lines in the framing might indicate that the panels were joined in pairs like a folding diptych. This too seems hardly likely. It is clear that the panels must be considered in relation to the rest of the design. Above the panels there is a double string course, the lower, cable moulded, the upper decorated with tiny chevron. The tympanum is embellished with raised ribs radiating from the centre of the arch and curved at the lower end to give an impression of fan-shell enrichment. Indeed, although the field upon which the ribs are carved is quite flat, the illusion of a semi-dome is strongly given, as Baldwin Brown, Ward and Ross noted. The design is clearly not intended to represent a gateway, for, although it bears a superficial resemblance to the Bridge Gate at Trier, as depicted

On a gold coin of Constantine I, ^{48.} the ribs radiate in a contrary direction. On the coin the semi-circular area above the gate is filled with a grille, probably of metal, whose ribs spring from the centre of the horizontal, and there is no impression of a fan-shell vault. The design on the altar seems to be based upon a small arched niche, possibly a sacellum ^{49.} entered through doors of wood or of bronze ^{50.} which did not reach the full height of the building. The three small shafts upon which the doors rest may be best understood as representing three small altars, of a size and equidistant from each other, or perhaps a balustrade, set in front of the entrance and carved below the doors in accordance with "map technique". It seems likely that the mason has attempted to depict an open, fenced enclosure in front of the shrine, similar to that shown on a brass medal struck in honour of Faustina the Elder in A.D. 142 upon which the temple of Antoninus and Faustina is shown. ^{51.}

Chapter V

1. Celtic Art in Pagan and Roman Times (London, 1904), 28-36.
2. Ibid., 31, fig. 7b.
3. Ibid., 28.
4. Ibid. and 35, fig. 19.
5. Ibid., 34, fig. 16b.
6. RIB 2003.
7. RIB 758.
8. RIB 1818; RIB 1820; RIB 1234.
9. RIB 1818; RIB 1820.
10. Schoppa, Römische Götterdenkmäler, 58, no. 52; plates 50, 51.
11. RIB 910.
12. LS, p. 427.
13. Leeds, E.T., Celtic Ornament in the British Isles down to 700 A.D. (Oxford, 1933), fig. 20a facing 54.
14. See p. 26
15. RIB 448.
16. Leeds, op. cit., 39, fig. 16.
17. Cumont, 237, figs. 57, 59.
18. Lindqvist, S., Gotslands Bildsteine (Stockholm, 1941, 1942) I, plates 1-3, 5-7.
19. Mosaïque Gréco-Romaine, 234; fig. 5.
20. RIB 1290.
21. Eg. RIB 1093.
22. See thirteenth century oak chest: Victoria and Albert Museum, Catalogue of English Furniture and Woodwork edit. 2 (1929) I, plate 38.
23. RBRA, 138.
24. Esp. Germ., 172-3, no. 257.
25. RIB 1428.
26. RIB 452.
27. Esp. Germ., 172-3, no. 257; 174-5, no. 261.

28. ORL Band IV no. 41, Lieferung XXXII Das Kastell Jagsthausen (Berlin und Leipzig, 1929), 42-43, no. 3; fig. 6 p. 43.
29. Op. cit., 221-2
30. PSAS XXX, 177.
31. NCH XV, 133-4, nos. 13, 14.
32. RIB 544.
33. Donaldson, T.L., Architectura Numismatica (London, 1859), xix; plate facing xvi, no. 17.
34. Scherer, M.S., Marvels of Ancient Rome, impression 2 (London, 1956), fig. V facing 6.
35. Wright in RIB.
36. EE III, 129, ad. n. 370.
37. Brown, PSAS XXX, 130.
38. Ibid., 172.
39. Ward, 131.
40. Ross, PSAS XL, 545.
41. Donaldson, op. cit., 217-8, no. LIV; plate facing 217.
42. Brown, PSAS XXX, 130.
43. Ward, 131.
44. Brown, PSAS XXX, 172.
45. Ibid.
46. Op. cit., 131.
47. PSAS XXX, 173.
48. ed. Laufner, R., Schriftenreihe zur Trierischen Landesgeschichte und Volkskunde, Band 10, Geschichte des Trierer Landes I, (Trier, 1964), Abb. 29.
49. Ward, 131.
50. As Ghiberti's great doors to the Baptistery, Florence.
51. Donaldson, op. cit., 12-14, no. IV; plate facing 12.

Chapter VI

Designs set out Freehand.

The designs for much of the carved ornament must initially have been drawn on the stone freehand. Some conventional classical types of strip decoration fall into this category. These are, however, relatively rare in Northern Britain. Of the bead and reel design only two examples survive on altars (136, 374), although building slabs of Legio II display the motif.¹ The egg and dart pattern occurs only once (157). Here again, a fine building inscription of Legio II² provides a further instance of its use. It occurs too on an altar from Chester.³ Guilloche is rarely found in sculpture in Britain. The only example from the north is clumsily incised on the fascia of a third-century altar from Housesteads (211). In relief, it decorates a tombstone from Lincoln.⁴

Motifs such as the spiral and the S curve, possibly inspired by Celtic traditions, must likewise have been drawn freehand. The spiral appears both on bolsters (355)⁵ and fascia (23), sometimes incised (275), sometimes in relief (24). S curves are always in relief (206) and in one case are placed longitudinally (403). The undulating lines which are used occasionally to decorate the fasciae of capital and base must have been set out without mechanical aids. Sometimes these lines are raised to form an undy moulding (177), or they may be incised (355). In two instances they terminate in an in-curved arc (522, 675). A variant of this motif, found on both an altar (119) and a tombstone⁶ from High Rochester, is formed by breaking a series of wavy lines ranged one above the other, to make a strip of small isolated curves. A further example comes from the Carrawburgh Mithraeum (345).

The wavy-line pattern may be elaborated into a leaf design and sometimes appears as a fully developed vine-scroll (55, 68, 168). Indeed, the shape of the leaf is sometimes similar to that of a bunch of grapes (232)

and the leaf design may represent a devolved form of the vine-scroll. A more graceful leaf form, similar to that used as a punctuation mark in inscriptions (42, 304), resembles more the leaf of Black Bryony (Tamus communis),^{7.} than that of the ivy from which it appears to be derived. The ivy-leaf scroll has a history going back at least to Mycenaean times,^{8.} and was probably one of the motifs which reached the Celtic West from the Mediterranean.^{9.} It was frequently used in barbotine decoration in the Rheinzabern and Trier workshops about A.D. 130^{10.} and is a familiar motif on mosaic pavements.^{11.} Leaf shapes of this type terminated the pendant fillets which hung from the cross bars of Roman standards.^{12.} The plant itself appears to have had a Bacchic significance.^{13.}

On altars, the ivy leaf is sometimes used as an isolated motif, carved in relief in the centre front of the capital (184) or in twos (332) and threes (709) on either capital or shaft. At Cramond (332) two incised pendant leaves on long vertical stalks mark the centre of the capital; at Castlesteads (149), a single incised leaf is flanked by motifs which seem to have been leafy scrolls; at Maryport, a pair of incised leaves decorates the shaft of an altar (304). A different arrangement occurs on an altar from Lanchester (208) where two ivy leaves flank two bay leaves, all of them incised. In relief, the closest approximation to this more elaborate motif comes from Carrawburgh (269) where four raised leaves are set around a central triskeles. Leaf designs also decorate the pediments of capitals, as at Carrawburgh (265) and Corbridge (709). The Corbridge altar is interesting in that its triple leaves recall a similar motif on an enamelled patera from Pymont,^{14.} probably of second century date.

The ivy leaf also appears as a continuous strip decorating the fasciae of capitals and bases. Two altars from Birrens are notable examples (137, 138). One of them (137) has the sides of the shaft embellished by panels of similar leaves. One of the panels is of great interest, for it bears a striking resemblance to a large enamelled plaque in Karlsruhe Museum.^{15.}

This enamel was probably made in the workshops of the Villa d'Anthée in Tungria,¹⁶ the region from which the unit stationed at Birrens had been raised. Thus it seems that, on this altar, a mason of Cohors II Tungrorum was deliberately copying a metal-work design from his native land, a remarkable example of the interplay of motifs in different media and one which suggests that this auxiliary unit was being kept up to strength by levies or recruiting from the tribe whose name it bore. Alternatively, it is possible that the mason was taking his pattern directly from an imported plaque similar to that at Karlsruhe.

A leaf of a slightly different shape is incised on the capital of an uninscribed altar from Chesters (349). The leaf is heart-shaped, like the ivy, but, next to the stalk at the base, it is deeply indented like the leaf of the Birthwort, (Aristolochia clematitis),¹⁷ a plant used medicinally in ancient times.¹⁸ At the tip, however, the leaf does not come to the usual point but curves sharply inwards as if a slug had taken a gigantic bite from it.

More conventionalised patterns based on the ivy leaf come from two widely separated sites. At Doncaster (725), a civilian mason has placed two leaves tip to tip across the front of the focus mount. At Lancaster (337), two sunken leaf shapes with raised central veins enclose bosses with dished centres; the bases of the leaves meet in the centre of the capital.

Other naturalistic leaf motifs are the elm leaf, which is used in relief to ornament the concave fascia of an uninscribed altar from Birrens (148), and the palm leaf, the emblem of victory. This decorates the shaft of altars as at Brough-under-Stainmore (654) and Chesterholm (372) or, more impressively, is used to frame the wreath of bay leaves enclosing the inscription DEO on a Mithraic altar from Rudchester (41). Stylised versions of the leaf seem to have been used to give interest to the capital of a lost stone from Castlesteads (144) where a row of four are placed

diagonally across the focus-mount to form a pediment flanked by triangles. A less elaborate arrangement is to be seen on an altar from Tynemouth (241) where two leaves point diagonally upwards and outwards from a central roundel.

Vegetable motifs in the form of wreaths and swags are effective and relatively simple to carve. A wreath with ribbons sometimes encircles an inscription (421), a patera or jug (221), or acts as a frame for a palm branch (372); sometimes the wreath stands alone (494). The carving is occasionally well enough preserved for the nature of the foliage to be discerned, as on the altars to Tyrian Hercules from Corbridge (494) and to Mithras from Rudchester (41) where the leaves are those of the laurel tree. Wreaths are usually smoothly circular in shape. An exception to this rule is the strange, spiky chaplet on a damaged stone probably from Chesterholm (163).

Wreaths probably represent the trophies offered to deities by their devotees, and swags no doubt represent the actual garlands of leaves and flowers with which altars were festooned at festivals. The best preserved garlands in Northern Britain are those set above the sacrificial implements on an altar from Benwell (168). They are of bay leaves, echoing the decoration of the bolsters, but their form is not identical; one of them, bound with fillets, terminates in ribbons with triple loops at one side and a spade-shaped pendant at the other. The second swag is apparently intended to be floral. The garland springs from a central roundel of three concentric rings with depressed centre. Two pairs of smaller roundels, each with raised rim and centre boss, separate pairs of bay leaves attached to fillets which, after making a loop at the upper corners, make a double curve and terminate in roundels. The most elaborate swags are on an altar in Chollerton Church (429) which presumably came from Chesters. In varied form they decorate three of the four sides of the shaft. On the dexter side, a single garland, and on the back a double

festoon support four streamers with leaf-shaped terminals. By contrast, the tassels of a double swag on the sinister side, while ending in leaf shapes, are formed by reverse curves of the elongated festoon, the whole framing a sacrificial jug. Weathering makes it impossible to draw any conclusions as to the nature of the foliage or drapery depicted. Nearest to these swags in type are those carved on an altar of uncertain provenance, now in the Museum of Antiquities, Newcastle upon Tyne (445). The only example of a swag bound with ribbons comes from Risingham (224) where six fillets encircle the garland, and long tassels hang down on each side. A simple swag with pendant fillets comes from Carrawburgh (456).

The crescentic, strapped bundles on the capital of an altar from Lanchester (251) ought perhaps to be interpreted as swags, although it is impossible to distinguish any foliage. They resemble the curved ornaments flanking the inscription on a building slab from Bowes, ¹⁹: although the two stones are separated in date by thirty years and the building slab has more ribbons and floral decoration.

Conventionalised leaf shapes are the basis of the designs on altars from Old Carlisle (196) and Haddon Hall (206) and, so great is the correspondence between them, that they seem to be carved from the same pattern. Both are products of auxiliary workshops, those of Ala Augusta and Cohors I Aquitanorum. The stone from Derbyshire may be ascribed to the mid-second century and the other may well be contemporary.

The ends of bolsters and the fascia are sometimes decorated with naturalistic rosettes. This type of ornament is common in the Rhineland where the flower usually has four petals and an ovary marked by a boss.²⁰ In Northern Britain the number of petals usually exceeds four. Indeed, in the one instance of a four-petalled flower (136), petals are bi-lobed, giving the effect of a corolla of eight petals. The floral motif is carried further on this altar for three rosettes of the same size as those on the ends of the bolsters, but having eight bi-lobed petals, are carved

on the outer side of each bolster. This style of rosette may be paralleled on the tombstone of Philus from Cirencester,²¹ on Jewish ossuaries in Jerusalem and on a mosaic in the Western Palace at Masada.²² Five-(168), six-(88), seven-(308) and eight-petalled (498) flowers also occur.

Interestingly enough, three out of the five extant altars with naturalistic rosettes may be attributed to the second century. (See Appendix O).

The pine cone, a symbol of immortality,²³ is a favourite motif for tombstones. A fine example of its use on an altar comes from Risingham (253); the cone is set within a triangular, flat border, inside a sunken, curved panel. Cumont has shown²⁴ that the triangle too has a funerary significance and that the equilateral triangle was the symbol of the mystic Tetrakys, the numerical expression of the sky and of divine and celestial life. The association of the pine cone with the equilateral triangle on this altar points strongly to the possibility that the stone was originally intended for a grave altar and was only given a votive dedication after the completion of the carving. That is to say that the altar was a stock piece adapted to a customer's requirements. Alternatively, the pine cone may simply represent a sacrificial offering. Such cones were an expensive and popular gift in Egypt in Roman times²⁵ and were much used in sacrifice there. That they were used in Britain is shown by their detection in the Triangular Temple at Verulamium²⁶ and in the Carrawburgh Mithraeum.²⁷ This explanation, however, fails to account for the juxtaposition of cone and triangle, and, on balance, funerary rather than votive symbolism seems intended. Another example of the pine cone motif used on an altar comes from Chester.²⁸

The vase with foliage, a favourite motif in Roman art, is rare in Northern Britain. The largest example is carved on the back of an altar from South Shields (401); a fluted vase with elaborate scrolly handles contains four stylised leaves. A simpler, but much damaged version of this motif occurs on a stone from Doncaster (725). Canthari without

foliage also appear (148), and, in the case of an altar from Castlesteads (150), a row of three decorates the fascia. The urn which Hübner recognised²⁹ on the capital of a fragment from Great Chesters (730) seems better identified as an altar, although it is impossible to distinguish the nature of the small object between it and the creature on its sinister side. The urn shapes on the shaft of an altar from Manchester (341) seem best interpreted as situlae or pails in which the exta were cooked. Situlae are common in second century reliefs; they appear on one frieze of the Arch of Benevento,³⁰ on a panel of Marcus Aurelius in the Conservatori Museum³¹ and on the Cancellaria reliefs.³² Although only the lower portion of the altar from Manchester survives, the handles of the situla on the sinister side may be distinguished. The shape of the situlae is similar to the buckets carried by female figures on tombstones from the Regensburg region and to an extant example in bronze in the Regensburg Museum (Plate C). It is not surprising to note that the unit dedicating the Manchester stone is Vexillatio Raetorum et Noricorum.

Designs taken from the animal kingdom are not uncommon. One of these is the egg, three of which are carved on the fascia of a Mithraic altar from Carrawburgh (268).

Of the major sacrificial animals, only the bull and the boar are used as motifs. Both these animals were venerated by the Celts³³ and the possibility that Celtic rather than classical ideas are responsible for the iconography must not be overlooked. The docile bull carved on the shaft of an altar from Risingham (224) is clearly of classical inspiration for its body and neck are encircled by sacrificial bands, the dorsuale and the vittae. A huge beast walking behind four trees on a capital from the same site (237) may depict a wild bull, although this does not indicate that the animal is to be associated with native cult-practices. Less well preserved renderings of bulls decorate altars from Chesterholm (160) and Castlesteads (691). Whether the animal depicted on the capital

of a fragmentary altar from Great Chesters (730) is a bull as Hübner thought ³⁴. is difficult to determine. The dedication to Jupiter Dolichenus accords with such an identification, although Hettner suggested ³⁵. that the animal was a heifer, symbolising Juno; it would have been balanced by a bull on the other side of the capital, the pair of animals thus representing the Dolichenian couple. Merlat believed ³⁶. that the animal might be a fawn, a motif known from a relief found in Rome. ³⁷. In appearance the creature resembles a boar or bear, animals well known in Roman Britain ³⁸. and in Celtic mythology, ³⁹. but scarcely at home on an altar dedicated to Jupiter Dolichenus. On balance, perhaps Hettner's identification is the most acceptable although it can admit of no certainty.

The ox-skull or bucranium, a purely classical motif, is sometimes carved on altars in Northern Britain. One or more may adorn the capital (41, 219) or base (235) or, as at Corbridge (494), Chesterholm (162) and Wallsend (241), may be carved in high relief upon the shaft.

A boar, apparently wild and charging from one thicket to another, decorates the base of an altar of soldiers of Legio XX from Bankshead (175). The same motif, but minus trees, appears on four small altars (178, 180), 184, 382), two of them (178, 184) dedicated to Vitiris. ⁴⁰. It seems likely that they too may, with confidence, be ascribed to masons of Legio XX although, as Dr. Ross suggests, ⁴¹. when it appears on altars, the boar may have a cult significance. It is perhaps not pushing the evidence too far to suggest that Celtic recruits to Legio XX, would give special veneration to a creature which was at once their regimental badge and "the cult animal par excellence of the Celts." ⁴². Boar hunting was moreover a sport much enjoyed in Roman Britain as a dedication from Stanhope attests (254) and it is not difficult to imagine the appeal of this motif in Roman times. On two (178, 180) of these four altars, the opposite side of the shaft carries a representation of a serpent; a third (184) has the figure of a long-legged bird.

An altar from Greta Bridge (614) is unusual in that it bears in relief, a large, fearsome boar's head with threatening tusk. The other side of the shaft also has a rare motif, an oval shield with large umbo.

As mentioned above, the serpent finds a place in the mason's repertoire.^{43.} This is not surprising, as the snake was a Celtic cult-animal and was associated with several deities in the classical pantheon, Minerva and Aesculapius amongst them.^{44.} Three small altars (178, 179, 180) and two larger stones (192, 241) have snakes carved upon them. One of the large stones (192), from Old Penrith, must, in view of the sacrificial implements on its sides, be an altar,^{45.} and the serpent may, as Haverfield suggested,^{46.} point to a dedication to Aesculapius. The second stone, from Tynemouth (241), poses a more interesting problem, for here twin snakes flank a handled patera, and the dedication to Jupiter Best and Greatest rules out any association with the god of healing. Although it is possible that the serpents are apotropaic and intended to dispel charms and to protect worshippers against the evil eye, it seems best to regard them as essentially chthonic, symbolising the life-giving forces of the earth, a conception of the serpent which was widespread in Gaul.^{47.} This interpretation is reinforced by the figure of the anguipes^{48.} carved on the base of the altar, for it was by overcoming the serpent-footed giants that Jupiter had established mastery over the earth.

The horse, which in the Celtic world was closely associated with the cult of Epona,^{49.} appears on two stones, both uninscribed. One animal has the long back and short, strong limbs of a "forest horse",^{50.} very similar to the beast on which Epona sits in a bronze from Sarrazine (Jura)^{51.} and to two bronze horse statuettes from Brigstock, Northants. and Bourne, Lincs.^{52.} The other horse, from Lanchester (520), is of "plateau" type with slender limbs and a small head.^{53.} A horse of this type perhaps occurs on the lid of a bowl from Brigstock.^{54.} It is

interesting to note that bones of horses of both these types were found at Newstead. ⁵⁵.

A man with stag-like horns appears on an altar drawn by Horsley (724).

Toads, both incised and in relief, are to be found on a number of small uninscribed altars mostly from Lanchester (517, 518, 519, 521, 526, 533). Hodgson pointed out that these animals were used by the Romans in magic rites. ⁵⁶. These altars all seem to come from the same workshop and the fact that only one is known to come from a site other than Lanchester suggests that the cult was centred on the settlement or fort there.

Two other creatures may be mentioned briefly. One, on a crudely fashioned altar from Benwell (451), appears to be a rabbit or hare. Of these, the hare is the more likely, for the rabbit, during the Roman Imperial Period was apparently known only in Spain, ⁵⁷. whose badge it was. ⁵⁸. The other animal, from Carvoran (425) is so weathered that it defies identification; it may be intended for a bull.

Motifs copied from marine life appear on northern altars. The cockle-shell, the device popular with Roman sculptors for decorating the canopies of niches, occurs twice, in each instance with the valve uppermost as is usual in the western part of the Empire. On one altar (114) the cockle-shell is used in the centre of an enlarged fascia and on the other (372) it figures as a supporting motif on each side of an architectural feature. A similar motif set above a festoon is carved on the sides of the capital.

The dolphin, a motif popular with both classical and Celtic craftsmen, is usually (13, 37), although not always (343), carved in relief in Northern Britain. At Newcastle the fish is entwined around Neptune's trident (23), but commonly two dolphins either face (207) or move away from (137) each other.

Associated with dolphins on an altar from Birrens (137) are birds resembling sea birds. Two stand in the upper angles of the fascia of

the capital while a large bird is the central feature of the base. The dedication to Minerva gives no clue to the identity of the birds. They do not appear to be eagles, although it is just possible that they might be intended for ravens, a bird of great significance in Celtic religious thought. ⁵⁹.

Bird motifs occur on six other altars in Northern Britain. The goose, a bird of war in the Celtic world ⁶⁰. and sacred to the war god in the classical, ⁶¹. accompanies Mars on an altar from Housesteads (186). Of the other motifs, three are particularly interesting. The first, a statue base from Birrens (338), has on one side of the shaft a lively bird standing on a small cone-shape. Baldwin Brown suggested ⁶². that the mason was depicting the cock, the chthonic emblem of Mercury, the deity to whom the stone is dedicated. This is a reasonable interpretation. It may be that a domestic fowl is also figured on an altar from Ebchester (184) where the lower part of the bird, all that survives, resembles an enamelled bronze hen "presumably" found in Cologne. ⁶³. A stone from Castlesteads has a similar bird (428). A pigeon appears on the shaft of an altar from Chesters (179).

The sixth altar (159), from Chesterholm, is perhaps the most interesting of all, for its subject is unparalleled in Northern Britain. On both sides of the shaft, in sunken panels, the mason has carved birds with long legs and beaks. On the dexter side, below a raised, blank, ansate panel, a large adult bird and tiny chick move towards the rear of the altar; on the sinister side, a second full grown specimen stands in enigmatic pose upon a small rectangular projection. He rests on his left leg, the right being raised with claws extended; beneath this leg, a rounded pebble-like object lies upon the projecting platform. Bruce, ⁶⁴. Budge ⁶⁵. and Collingwood ⁶⁶. identified these birds as storks, imagining no doubt that Quintus Petronius Urbicus, the dedicator, stationed on the

bleak northern frontier of a remote province, wished to have upon the altar he erected, some reminders of the sunnier homeland so proudly recorded in the inscription. Yet such an interpretation leaves unsolved the problem of the stance of the sinister bird. Now the stork resembles another stately terrestrial bird, the crane, and indeed, in the absence of colour, an unpractised observer might easily mistake the one for the other. Both have long legs and beak, although the beaks of cranes are shorter than those of storks and in height the crane has the advantage. The crane is a motif not unknown in Roman metal-work and sculpture. It appears on two silver, handled vases in the Boscoreale Treasure ⁶⁷. and figures on shields forming part of a Gallic trophy on the Triumphal Arch at Orange. ⁶⁸. In this connection Richmond put forward the suggestion that, amongst the Gauls, cranes were associated with victory or good luck. ⁶⁹. Dr. Anne Rose notes the importance of the crane in Celtic mythology and ideas, ⁷⁰. while Toutain concludes that the bird had a sacred significance to the Gauls. ⁷¹. All this is especially interesting, for Quintus Petronius Urbicus was Prefect of Cohors IV Gallorum, a unit which, when stationed at Risingham, ⁷². had already ⁷³. used the crane as a motif. Furthermore, if, in spite of the length of their beaks, the birds are cranes, the posture of the sinister bird becomes intelligible. Literature provides the key. The early church fathers used the crane and other creatures as illustrations of Christian virtues. St. Ambrose, writing in the fourth century relates that, at night, cranes organise a system of sentries and patrols to guard the sleeping flock from surprise attack. ⁷⁴. Bishop Isidore, three centuries later, adds that the sentinel cranes keep themselves awake by holding stones in their claws, ⁷⁵. the idea being that if sleep overtakes any crane, he will relax his hold on the stone, which, dropping, will awaken him. This surely is what has just happened to the sinister bird. He is standing in a strategic position on an eminence. He has been holding a

pebble in his claw and has dropped it, thus startling himself out of sleep; the pebble lies beneath his raised leg; his eye is open; his intention must be the recovery of the pebble. These legends about cranes are probably of great antiquity and were no doubt current long before they were ever written down, so that the date of Isidore's work need provide no stumbling block. The sentinel crane thus suggests that Quintus Petronius Urbicus intended his altar to be graced by a decoration which would recall not only his native land and the victory which Roman arms had achieved, but also that quality most laudable in frontier troops - vigilance.

Chapter VI

1. RIB 1147; RIB 1148.
2. RIB 1428.
3. RIB 452.
4. RIB 260.
5. If these are to be interpreted as bolsters.
6. RIB 1290.
7. Martin, W.K., The Concise British Flora in Colour (London, 1965), plate 84.
8. Oswald, F. and Fryce, T.D., Introduction to the Study of Terra Sigillata treated from a Chronological Standpoint (London, 1920), plate XXXI, no. 1.
9. Sutherland, C.H.V., in The Root of Europe, ed. Huxley, M. (London, 1952), 33.
10. Henri, 123.
11. Ibid., 124, fig. 32,3; Mosaïque Gréco-Romaine, fig. 3 facing 84; D.J. Smith, fig. 9.
12. Cichorius, Taf. XVII, XXXI, XXXIII.
13. Euripides, The Bacchae, lines 80, 105, in Way's translation of Euripides: Plays Vol.II (Everyman Library 1956), 281.
14. Henri, 122; fig. 30, no. 4 facing 121.
15. Ibid., 123; 124, fig. 32, no. 2.
16. Ibid., 123.
17. Scott, T.H. and Stokoe, W.J., Wild Flowers of the Wayside and Woodland edit. 2 (London, 1944), plate 64, 2 facing 253.
18. Ibid., 255.
19. RIB 746.
20. Eg. Schoppa, Römische Götterdenkmäler, 71-2, nos. 115, 116; plate 94.
21. Toynbee, J.M.C., Art in Britain under the Romans (Oxford, 1964), plate XLVIII,a; RIB 110.
22. Yadin, Y., Masada (London, 1966), 129.
23. Cumont, 219.

24. *Ibid.*, 223-4.
25. Richmond and Gillam, AA⁴ XXIX, 6.
26. Wheeler, R.E.M. and T.V., Verulamium, a Belgic and Two Roman Cities (Oxford, 1936), 119.
27. Richmond and Gillam, AA⁴ XXIX
28. RIB 454.
29. CIL 725.
30. Ryberg, 152; plate LIV, fig. 82b.
31. Ibid., 158; plate LVI, fig. 86.
32. Ibid., 76-7; plate XXIII, fig. 37b.
33. PCB, 302-12.
34. CIL 725.
35. Hettner, F., De Iove Dolicheno (Bonn, 1877), 42-3, no. 48.
36. Répertoire, 271.
37. Ibid., 236-41, no. 242; plate XXIII, 2.
38. Fox, C., The Personality of Britain (Cardiff, 1952), 62, 64.
39. PCB, 312-21, 349.
40. There are various spellings of the Germanic deity Vitiris. This form has been adopted for the general introduction to the catalogue (Vol. I), but in the catalogue itself, the spelling given is that used in the inscription.
41. PCB, 312.
42. Ibid., 308.
43. Ibid., 345.
44. See p. 115
45. Cf. RIB and CW² LIII, 185.
46. EE IX, 1226.
47. Toutain, J., Les Cultes Païens dans L'Empire Romain vol. III (Paris, 1920), 275-7.
48. See p. 124
49. Toutain, op. cit. III, 240.
50. Dent, A.A. and Goodall, D.M., The Fools of Epona (London, 1962), 17.

51. Babelon, E., et Blanchet, J.A., Catalogue des Bronzes Antiques de la Bibliothèque Nationale (Paris, 1895), 300-01.
52. Taylor, M.V., Ant. J. XLIII part II, 265, no. 2; plate XXXIX, b,c; 265 (a); plate XL, b.
53. Dent and Goodall op. cit., 18.
54. Taylor Ant. J. XLIII part II, 265-6, plate XLI.
55. Ewart, in Curle, 564; plate XCV.
56. Quoted by Bruce in LS, p.364.
57. Toynbee, J.M.C., The Hadrianic School (Cambridge, 1934), 104.
58. Cat. B.G., 103.
59. PCB, 242-56.
60. Ross, PSAS XCI, 34.
61. Richmond, NCH XV, 135.
62. PSAS XXX, 175.
63. Aus Rheinische Kunst und Kultur, Auswahlkatalog des Rheinischen Landesmuseums Bonn, 1963, 72, no. 29; plate facing 40.
64. Wall 3 (1867), 214.
65. Budge, 344.
66. RIB 1686.
67. Héron de Villefosse, Le Trésor d'Argenterie de Bosco Reale (Paris, 1895), 11, nos. 9, 10.
68. Esp. I, 188-205, no. 260; figs., 197, 199.
69. NCH XIII, 134-5.
70. PCB, 279-89.
71. Op. cit. III, 283.
72. RIB 1227.
73. Birley, JRS XXII, 57.
74. Migne, J.P., Patriologiae Cursus Completus.....Tome XIV (Paris, 1845) Sancti Ambrosii Mediolanensis, Opera Omnia, Hexameron Lib. V, c. XV, col. 227.
75. Ibid. Tome LXXXII (Paris, 1850) Sancti Isidori Hispalensis Episcopi, Opera Omnia, Etymologiarum Lib. XII, c. VII, cols. 460-61.

Chapter VII

Gods and Their attributes; Mythical Creatures
and Human Figures.

It is not perhaps surprising that masons in Northern Britain were chary of attempting the representation of full-length figures of deities and humans, and that the results of their efforts in this direction were sometimes less than lifelike. The carving of figures in relief requires good draughtsmanship, painstaking work and a good deal of time, and the local sandstones are often too coarse to lend themselves to the rendering of minute detail. Nevertheless there are forty^{two}~~one~~ altars which bear figures and another which has carvings based on stories about Hercules. A list is given in Appendix P. Hercules, Mars, Apollo and Mercury are the most popular deities to be depicted. Most of the figures are carved in low relief (eg. 56) and are frequently set within niches (43, 372); occasionally the relief is much higher (43). The figures usually take a frontal pose (56, 186) but sometimes appear in profile (42), or may, in Egyptian manner, be depicted with legs, feet and sometimes the face in profile but with the torso facing the front (42, 430).

The cult of Jupiter, foremost of the Capitoline gods and protector of Roman prosperity and power, was the chief official cult of the Roman army, yet the god is seldom depicted on the altars of Northern Britain. Indeed only one representation survives, carved on one of the five uninscribed altars found at Old Penrith in 1813 (572). Here, the god, a naked, muscular, well-moulded figure, bearded, crowned with laurel and wearing over his left shoulder a cloak which falls behind him, grasps a lance with his raised left hand and displays a thunderbolt, emblem of his destructive power, in his right, gripping it in the centre and from behind. The thunderbolt is a solid object, its lower half having the shape of a tri-lobed leaf; it is similar to the missile held by a

youthful deity in bronze which is now in the Louvre. ^{1.} Jupiter is clearly not intending to hurl the bolt immediately but his grip is such that he could do so on the instant, and a token of its earth-shattering power is given by the arrow head at its topmost point.

The thunderbolts carved on the shafts of altars by masons of Cohors II Tungrorum (142, 143, 144) in the third century take a different form. At its simplest the missile looks like a double-ended three-pronged pitch-fork (142) but, with twisted outer prongs assumes a more dangerous aspect (143). Deadliest of all are the angular darts, identical with those on the reverse of a coin of Tiberius, ^{2.} and the rifled body which appear on a third altar (144), now lost. There is no instance in Northern Britain of the use of a motif of a winged thunderbolt such as appears on coins ^{3.} and on altars in Germany. ^{4.}

Associated with the thunderbolts, given to Jupiter by the Cyclopes, is the wheel, a solar symbol ^{5.} emblematic of his power as god of heat and light. As well as on the two extant altars of Cohors II Tungrorum from Castlesteads mentioned above, it occurs on stones from Maryport (310) and Lanchester (21). Dr. Ross' suggestion ^{6.} that the wheel indicates the identification of Jupiter with the Celtic god Taranis or his equivalent is an interesting one. As in Gaul, ^{7.} the number of spokes in the wheel varies; six (310), eight (21) and ten (142) appear in Britain.

The eagle, Jupiter's bird, is clearly recognisable when it is used as a motif, whether with wings outstretched (61), or partly opened and holding a wreath in its beak (62) to symbolise victorious power. ^{8.} Sometimes the bird rests upon a bar (61, 62), probably representing a thunderbolt. The eagle, as Dr. Ross points out, ^{9.} is, like the wheel, a symbol of Taranis the Thunderer.

No altar from Northern Britain bears a representation of Juno but Minerva, third of the Capitoline deities, appears on the dexter side

of a stone from Burrow Walls (665), clad in a stola and standing on a pedestal. She has a shaft in her right hand and, with her left, rests her shield upon a globe.

On the sinister side of the same altar, Hercules, naked, with his untrimmed club of wild olive at his right flank, stands on a pedestal. This hero-god, through whose labours so many of mankind's tribulations had ended, was at once the benefactor and servant of men and the epitome of physical strength and vigour. The popularity of his cult amongst soldiers requires no explanation. Hercules is depicted on an altar from Castlesteads (691), standing alone with his club at his right side, as at Burrow Walls; here however, the god wears a cloak which falls over his left shoulder. The cloak may be intended to represent the pelt of the Nemean lion, but no trace of the beast is now distinguishable. In addition to the cloak, Hercules wears a torc around his neck; behind his left shoulder he carries a quiver to contain the eagle-feathered arrows given to him by Apollo and he holds in his left hand an object which may be one of the Hesperidean apples.

Reliefs of Hercules are not confined to representations of the god in formal pose. His life, so eventful from the beginning, provided many incidents capable of graphic depiction. An altar from Whitley Castle (42) illustrates the story of how the infant Hercules killed the two serpents sent by Juno to devour him. The design is symmetrical; the smiling child stands astride, clutching in either hand the neck of a serpent whose tail is entwined around his legs. Hercules' first labour appears on an altar from Housesteads (745); the hero stands in profile, strangling the Nemean lion as it grapples with him. The sinister side of this stone carries a representation of the Lernean hydra, the water serpent with a dog-like body and many snaky heads, whose destruction was Hercules' second task, while the dexter side depicts the apple tree of the Hesperides with its guardian, the ever-watchful dragon or serpent Ladon, coiled around its trunk. The god himself does not figure on the

sides of the shaft. By contrast, the altar from Whitley Castle (42) already mentioned includes Hercules in a relief based upon this, his eleventh labour; he advances on Ladon, who, mouth slightly agape, is entwined around a schematic apple tree from each of whose four stylised branches an apple depends. The dragon's tail is almost touching Hercules' right foot. In Greek mythology, one version of the story asserts that Hercules killed Ladon with an arrow shot over the wall erected by Atlas to protect the golden apples,¹⁰ but the sculptor of the altar has here depicted an alternative account according to which the hero slays the dragon with his club. This club he holds in his right hand; in his left he holds an object which may be a stone; it can scarcely be an apple for Ladon is still alive. Hercules has curly hair, a lentoid eye and a deeply hollowed ear. Head, feet and legs are in profile and the head is large in proportion to the body, reflecting the importance paid to the head in Celtic iconography.¹¹ The incident of the Hesperidean apples also appears on an altar from Maryport (89). The hero stands astride with his head in profile. The pelt of the Nemean lion is over his left shoulder. He holds his club in his right hand and the apples in his left. The tree itself appears behind his left shoulder.

Two other altars which have associations with Hercules must now be mentioned. The first (372), an uninscribed stone from Chesterholm, has on its dexter side a club which clearly must be identified as the club of wild olive used by Hercules. An arched recess at the front of the capital contains the figure of a warrior, holding a lance in his right hand and supporting a shield with his left. This figure resembles the type used to represent the god Mars but the club on the side of the shaft undeniably points to an identification as Hercules and it may well be that here the god is depicted either as he set out on his labours, wearing the golden breast-plate, given to him by Hephaestus or Athene,¹² and carrying the unbreakable shield which was the present of Zeus, his father,¹³ or as

he prepared for his struggle against Cyonus.¹⁴ It seems clear that the stone was intended to be dedicated to the hero god. Linked with this altar by the style of its bolsters, its mouldings and the foliate capitals of its pilasters is a small altar from Netherby bearing an inscription DEO HVE TIRI (374). This admirably carved stone, as Professor Birley first realised,¹⁵ has on its shaft designs originating in the Hercules story. On the sinister side, a boar runs towards the front of the stone from a thicket, indicated by a stylised tree. This would not in itself imply any connection with Hercules for the boar and tree motif was well loved by masons of Legio XX,¹⁶ but, when taken in conjunction with the dexter side of the stone, which portrays a tree encircled by a serpent, it seems likely that here, as at Chesterholm, the craftsman has had the labours of Hercules in mind and has carved scenes from the story. The serpent-entwined tree must represent the Hesperidean apple tree with Ladon its guardian, here as at Whitley Castle depicted as a snake, while the sinister side recalls Hercules' fourth labour, the slaying of the Erymanthean bear, which the hero, dislodging from a thicket with loud cries, drove deep into a snow drift; Hercules was then able to spring upon its back, bind it in chains and carry it alive to Mycenae.¹⁷ Professor Birley suggests¹⁸ that the dedicator identified the North-British god Vitiris with Hercules and this indeed may be the explanation of the juxta-position of motifs and inscription, but it is possible that the altar was fashioned as a stock piece by the mason responsible for the Chesterholm stone and that the Hercules scenes were carved before a purchaser was found. Moreover the inscription DEO HER CULI would fit as well on the die as DEO HVE TIRI.

Dr. Ross sees in the northern cult of Hercules evidence of the worship of a native deity in Roman guise.¹⁹ Certainly, the torc, a Celtic neck ornament with magico-religious connotations,²⁰ and the large head of the Whitley Castle altar are pointers to Celtic influence. The scenes

from the labours of Hercules however must surely indicate a classical conception of the deity, and those parts of the story which were most popular in Roman times. There is no evidence of the methods by which religious ideas and legends were imparted to Roman troops but it is reasonable to suppose that some instruction was given, at least about the nature and power of the chief gods of the pantheon. It is interesting to note that the handle of one patera of the Capheaton hoard depicts six of the animals slain by Hercules, the four which occur on the altars mentioned above, together with the Keryneian stag and the Stympalian birds. ²¹:

It is natural that Mars, god of war, should be a popular deity with the Roman army. Where he appears as a full length figure on the shafts of altars, he is sometimes in full panoply with helmet, cuirass, cloak, grieves, shield and lance (186) but occasionally, the armour is omitted and he is naked except for a crested helmet (573). This is invariably present, as are the lance and shield. Mars usually adopts one of two poses; either he stands astride gazing resolutely forward (186) or he rests his weight on one leg and appears to be moving off towards his left (89). His shield sometimes stands on its edge at his right side (89) or he holds it in his left hand (186). It may be circular (828) or oval (89). Generally the lance is held at least shoulder height with the right hand (186, 235), but on an altar from Maryport the god grasps the weapon with his left hand and with arm extended downwards (89). A sword belt is slung across the god's right shoulder on one stone (573) although the sword is not visible; the pommel of a sword can, however, be seen on a stone probably from Ribchester (828). Mars is associated with Victory on the capital of a lost altar from Risingham (235). If Horsley's figure is to be relied upon, the god is naked except for a knee-length kilt, although he seems to have had a helmet. He holds a lance with his right hand and supports the upper edge of a shield with his left. Dr.

Ross sees in these reliefs evidence of the fusion of Roman and Celtic warrior gods. ²².

Two dedications to Apollo Maponus have representations of the god on the shaft (43, 430). A third has an interesting series of reliefs on the capital (329). On all these stones Apollo is depicted with his lyre, thus clearly indicating classical iconography. In one case, the lyre is carried by the god (430), in another it rests upon a boulder (43) and in the third (329), the deity supports it with his left hand. Of these lyres, that on a stone from Ribchester (43) comes closest to representing the true nature of the body of the lyre, which had originally been fashioned by Hermes from a tortoise shell. The instrument on the capital of the stone from Whitley Castle (329) is very stylised, the rectangular body being decorated by widely spaced grooves.

The pose of the god on the two altars with decorated shafts varies considerably. On that from Corbridge (430), Apollo is moving to his right and holds a laurel wreath in his right hand, a reminder of his unsuccessful pursuit of Daphne, who was spirited away to Crete by Mother Earth and replaced by a laurel tree, from whose leaves Apollo, to console himself, made a wreath. ²³. On the Ribchester stone (43), Apollo is in repose and in reflective mood. He stands on his left leg, the right being bent and crossed behind the left at the ankle; his left arm grasps the cross-piece of the lyre which is, however, at the right side of Apollo's body; his right arm, bent at the elbow, supports his chin. The pose is an unusual one and equally strange is the head-gear of the god for he appears to be wearing a Phrygian cap. He is naked except for a cloak falling in four folds over his left shoulder and visible behind his back. He stands in a round-headed niche and has his quiver at his left shoulder.

The figures of Apollo decorating the capital of an altar from Whitley Castle (329) are of a different order for, as Mr. R.P. Wright has pointed out, ²⁴. they provide an excellent illustration of the syncretism which

characterised the religion of the Roman provinces. On the front of the stone in an arch set in a shouldered gable three figures appear; the central form, apparently wearing a knee-length enveloping garment, stands on a platform and has a curved object, interpreted by Wright as a sceptre, in his right hand; on each side a nude figure faces him, stepping forward with the near-side leg; in the case of the dexter figure, the right leg rests on a rounded object similar to a globe. Both the supporting figures hold in their hands objects taken by Wright to be torches. His interpretation of the scene as depicting Apollo identified with the sun-god Mithras accords well with the pose of the lateral figures representing Cautes on the sinister and Cautopates on the dexter side. Apollo appears in the same rôle on the dexter side of the capital but here he is alone and naked except for a five-spoke radiate crown encircling his large head; he stands astride, facing to the front and holding in his left hand a whip; his right arm is bent, the hand being open as if in greeting or blessing. Dr. Ross equates this figure with a native radiate god.²⁵

On the back of the capital the god features as the sole motif; his pose is similar to that just described, but he wears a cloak which hangs behind him and he supports the cross bar of the lyre with his left hand. It is difficult to establish the nature of the roll grasped by the god in his right hand and held with arm outstretched; it is surely too large for the plectrum suggested by Wright. The fourth side has two figures in profile, both fully clad. At the dexter side, a figure wearing a tunic and cloak stands on a low platform; a rod or staff rests on his right shoulder; advancing towards him, a large, bearded man wearing a tunic carries a cup raised high in his right hand and grasps in the other the top of the handle of a jug, clutching it as if it were a pail. Wright suggests that the figure on the platform represents Apollo as a local god, possibly Maponus, and that the cup-bearing figure is the dedicator of the altar. The execution of the

figures is crude and the poses are extremely awkward. The sculptor had not the skill to master the problem of perspective presented by the holding of the jug. Moreover, he has made little attempt to render the figures plastically; Cautes and Cautopates apart, the figures are flat and lifeless. Wright's third century dating for the altar accords well with the use of the arcade motif ^{26.} and with the period when Mithraism was an important element in the religious life of some of the troops of Hadrian's Wall.

One of the five uninscribed altars from Old Penrith (571) was thought by Lysons ^{27.} to depict Apollo. The god stands with right hand raised in open-handed salute, as does the figure on one side of the Whitley Castle altar described above. He is naked except for a cloak which hangs down behind him and, crossing his body from the right shoulder, passes over his left forearm. His body and legs are sturdy; his hair is long. In his left hand he grasps an object which, at first sight, seems to be a stick entwined by a serpent. Now the stick with serpent is not usually an attribute of Apollo but of his son, Aesculapius, the god of healing, ^{28.} who was honoured in the form of a snake at Sicyon ^{29.} and in whose temple at Epidaurus several tame serpents were kept. ^{30.} Aesculapius, however, is not of major importance in the pantheon, in contrast to the other deities carved on the Old Penrith altars. Moreover, the object held by the god is not Aesculapius' usual rod; it is no ordinary stick, for its upper part swells and curves inwards. It is clearly not a weapon and, were the snake not sculptured upon it, it might be supposed that the carving had been left unfinished. As it is, it resembles a curved distaff with wool tied around it at the top, falling away to expose the stick just before it reaches the god's hand. Now the distaff is more appropriate to Minerva, the patroness of women's crafts, than to Apollo; so too is the snake, for her ægis contained a serpent. Yet the deity is clearly male. Apollo's attributes are normally the lyre, bow and quiver and the laurel or radiate crown.

Roach-Smith suggested ^{31.} that the Old Penrith altars were emblematic of the days of the week and that this stone represented Apollo in the role of sun-god. This interpretation poses difficulties as none of the sun-god's attributes are shown; the strange, distaff-like stick is certainly not among them. Nevertheless, it seems most likely that the traditional identification of the god is correct for the strange object can best be equated with the wool-wreathed laurel branch carried by Orestes in token of Apollo's protection. ^{32.} The laurel branch was a symbol of Apollo ^{33.} and the wool recalls the god's year of service in the sheepfolds of King Admetus of Thrace after his slaying of the Cyclopes, ^{34.} and his role as guardian of the divine flocks and herds in Pieria. ^{35.} The snake probably reflects the association of Apollo either with healing, ^{36.} for it was a snake which produced the magic herbs which restored Glaucus to life, ^{37.} or with prophecy, for Cassandra and Helenus had received this gift after sacred serpents had licked their ears. ^{38.}

Apollo's attributes, the bow and quiver, decorate the shafts of two other altars (98, 100). A bow appears at Newstead (173).

Both the stones from Corbridge and Ribchester upon which Apollo is figured have representations of other deities. The Corbridge altar (430) depicts Diana, his sister, on the dexter side; she is wearing her red-hemmed saffron-coloured hunting tunic ^{39.} and holds a bow in her left hand; with her right hand she takes an arrow from her quiver. The identification of the figures on the stone from Ribchester (43) is less easy, since their attributes cannot be clearly distinguished. Two goddesses stand in adjacent round-headed niches. One is fully draped, but the other, on the dexter side, has only the lower part of her body covered. Both wear mural crowns set above veils falling behind their shoulders. With her right hand the dexter figure is handing an urn or jug to the other female who extends both hands to receive it. Richmond suggested ^{40.} that the figures might represent Leto, to be equated with

Modron, the mother of Maponus, and Diana, the sister of Apollo or that, as the mural crowns suggest, they were the personifications of Britannia Inferior and the Regio Bremetennacensis.⁴¹ Dr. Ross, by contrast, sees them as perhaps Modron and a native goddess of venery, although, as she admits, certainty is impossible.⁴² It is perhaps most satisfactory to see the figures as portrayals of the administrative regions.

Mercury, messenger of the gods and protector of travellers and of commerce, has as his attributes winged sandals, a winged helmet, a herald's staff with white ribbons which usually appear as serpents,⁴³ and a purse. He is figured on one of the five altars from Old Penrith (574). His chubby, muscular body is naked except for a cloak, fastened by a circular brooch; the cloak hangs over his left shoulder and, passing over the left forearm, falls behind his left leg. In his right hand he holds a purse and the caduceus or herald's staff is in his left hand. An uninscribed altar from Carlisle was thought by Haverfield to carry a representation of Mercury (622). Rooke⁴⁴ interpreted the deity as Silvanus. Dr. Ross⁴⁵ identifies it as the Celtic Horned God in the guise of Silvanus. The deity appears with either winged helmet or horns, naked but for a cloak around his shoulders, fastened in front by an annular brooch. The cloak passes under his left arm and falls over his left thigh. His left foot rests upon a rock. In his right hand he holds an animal, probably a goat or large hare, over an altar; he grasps in his left hand an object which is clearly not a globe⁴⁶ nor a patera⁴⁷ but a purse, the symbol of Mercury.

Another representation of Mercury comes from Corbridge on an altar, of which only the upper part survives, dedicated to Dea Panthea, the Great Mother, Cybele (495). The back of the shaft bears the head of the god wearing his winged cap, set in a round-headed niche. Mercury took part in the mysteries of the cult of the Great Mother as the agent who led the soul through the purifications with bull's and ram's blood.⁴⁸ On

the sides of the shaft of this altar, within sunk, moulded panels, are carved the heads of two youths, each wearing a Phrygian cap, similar to those of Cautes and Cautopates, the Mithraic torch-bearers. Their heads, however, are not held upright as is the case with the Mithraic figures; they lean heavily to one side and, as Richmond pointed out, ⁴⁹. probably represent the mourning youths of the cult, Attis and Men; Attis, the shepherd boy and either the son or the lover of Cybele, ⁵⁰. after self-mutilation had bled to death and been restored to life as a pine tree, ⁵¹. while Menotyrranus was the Phrygian moon god. ⁵². Both were associated with the yearly round of the seasons and their presence on the shaft of an altar dedicated to the Great Mother is entirely appropriate.

Venus, goddess of love and the essence of feminine beauty, displays her charms on one of the group of five altars from Old Penrith (575). Her thick hair is dressed in a bun on top of her head and apart from a diaphanous, bordered robe covering one leg, she is naked. The robe is caught between her legs and, coming forward, then passes behind her back to be held away from her body with the left hand. In her right hand she holds up a circular object, probably a mirror.

There is no representation on altars of the marine deities Neptune and Ocean but their emblems, the trident with entwined dolphin (23) and the anchor (24) appear on the shafts of altars dedicated to them.

The cult of Fortuna was popular in Northern Britain and seems to have been especially associated with the bath-house, either because of the games of chance which were enjoyed there ⁵³. or because she was the presiding deity of the bath. ⁵⁴. An altar from the bath-house at Chesters (56) has a crude representation of Fortuna carved on the shaft; she wears a long robe and holds what looks like a trident but is probably intended to be the cornucopia; this was the horn of plenty, always filled with whatever food or drink its owner might desire, which Zeus had borrowed from the goat-nymph Amaltheia and given to the daughters of Melisseus. ⁵⁵.

At Fortuna's right side is a globe or wheel, one of the signs of her power over men's lives.

The abstract idea of Victory was personified in the classical world and given an artistic convention. Victories often appear in pairs and are usually winged and draped, with one leg exposed. They frequently carry palm branches and rest their feet on globes. Figures of this type were popular with masons carving building inscriptions where they are sometimes used to support an inscribed panel.⁵⁶ On altars their appearance varies. The companion of Mars on the lost stone from Risingham mentioned above (235) has small wings; she holds a palm branch in her left hand and the globe, instead of being at her feet, is held aloft in her other hand. The equinoctial and solstitial lines are shown on the globe. She wears an ankle length tunic with an overfold. A pair of Victories with crescentic wings support a wreath on the capital of a fragment from Halton Chesters (499). Other figures, on the front and sides of an altar top from Corbridge (181) may be intended for Victories although they are apparently wingless.

The cult of the Genius was essentially Roman and an integral part of Roman religion. Every person, group, military unit, town or mountain had its guardian Genius, and dedications such as those to the Genius of the Regiment (122), of the Standards (121), of the Praetorium (160) and of this Place (612) are by no means rare. Professor Toynbee has pointed out⁵⁷ that the hallmarks of a genius are the draping of the lower limbs, the patera held in one hand over a flaming altar and the cornucopia held in the other. Genii of this type occur on the shafts of altars from Corbridge (709) and, without the altar, at Carlisle (621). The Corbridge figure is especially interesting for the altar is dedicated to Jupiter Dolichenus, to Celestial Brigantia and to Salus, and the genius wears a mural crown. Spain suggests⁵⁸ that this crowned figure may be meant for the goddess Brigantia herself but the attributes are clearly those

of a genius. Merlat, by contrast, sees the figure as the personification of Jupiter Dolichenus' power as the god of prosperity and plenty.⁵⁹

This is a more acceptable interpretation especially as the other side of the shaft bears a relief of a winged Cupid, holding in one hand a sickle and in the other a bunch of grapes, a motif perhaps reinforcing the idea of fruitfulness indicated by the genius.⁶⁰ Alternatively, and even more satisfactory is the suggestion that the figure represents the Genius of Brigantia,⁶¹ the Genius Loci, a conception paralleled at Cirencester⁶² and perhaps at Carlisle (621). The presence of the Cupid with grapes reflects the fertility of the region, while the sickle symbolizes Jupiter Dolichenus' rôle as god of the after-life. The identification of Brigantia with Juno Caelestis, a semi-mystery goddess, links up the country and its prosperity with the prosperity-bringing deities, while Salus was the goddess of personal well-being.⁶³

The altar from Carlisle (621) is similar in that it, too, has a genius which may once have worn a mural crown, and there is here also an interesting figure on the opposite side of the shaft. Identification of this figure, in spite of very high relief, is not easy. Rooke believed⁶⁴ that the second figure was that of a Roman general but was clearly mistaken in this, for the figure is female. She wears a cloak falling back over each shoulder and fastened in front by a circular brooch. Like a genius she holds a cornucopia and patera but the flaming altar is absent and instead of standing, she sits in a projecting niche. The clothes and posture make it likely that a goddess rather than a genius is intended. The genius with the mural crown may represent the protective spirit of the Roman town of Carlisle, while the seated figure may depict the goddess Brigantia in her guise as patron deity of the whole northern area.

The reliefs on two other altars may conveniently be mentioned here. One, from the well at Carrawburgh (366), carries the representation of

a deity in short skirt holding aloft a wreath in its right hand and bearing a cornucopia or palm branch in the other. The figure seems to be that of either a genius or goddess. Budge suggested ⁶⁵ that the deity portrayed was Fortuna, a suggestion satisfactory only if the wreath is understood as a wheel. The dedication to Coventina adds little to the understanding of the figure, for the altar may have been a stock piece completed before the inscription was cut. The other stone, part of an uninscribed altar (194), bears a relief of winged figure supporting a cornucopia overflowing with fruits and attached by a swag to a feature now missing.

The cult of the Matres came to Britain from the lower Rhine and Moselle basins. ⁶⁶ The goddesses were widely worshipped in Celtic countries and represented motherhood and the creative force of nature. ⁶⁷ They are usually depicted fully draped with fruit either in baskets on their knees ⁶⁸ or in the folds of their robes, ⁶⁹ as probably once on an altar from York (74). Here they sit in a round-headed niche, their right arms laid across their breasts. This altar has full-length figures on two other sides; a pair of cloaked humans stand on the dexter side, one grasping the lappet of his cloak with his left hand and the other carrying an object, probably an offering, supported by one hand and steadied with the other. On the other side a single figure in a shorter cloak holds a sacrificial animal. The back of the altar has a boar in relief running towards an object resembling a large jar. The Matres also appear on an altar probably from Ribchester or Kirkham; it is now in Lund Church (64). The figures are standing on a raised bar at some distance from each other. They wear long robes and their arms are extended downwards with their hands resting on the front of their thighs. A feature of the carving is the way in which the shoulders are heavily emphasised, a convention which may be paralleled on a tombstone from the east of Great Chesters fort. ⁷⁰ The heads have almost gone. A

unique feature of this altar is the carving of dancing figures on each side of the shaft. They wear long draperies and have arms upraised in attitudes reminiscent of the Highland Fling.

A mutilated altar from Ilkley (748) has carved on its shaft a female figure of uncertain identification. She wears an ankle-length tunic with an overfold, slashed to expose the right leg from the knee. She is bare-headed and holds a long wavy object in each hand. It has been suggested that the deity represented is Verbeia, the Celtic goddess of the River Wharfe,^{71.} to whom another stone was dedicated at Ilkley (324). As Woodward points out^{72.} however, the goddess is not associated with the usual attribute of a river deity, namely the stream of water flowing from an urn.^{73.} The objects she holds cannot be snakes, as Dr. Ross supposes,^{74.} although they have a serpentine form; snakes would surely have been gripped by the neck rather than by the tail. Nor does it seem likely that they are cornucopiae,^{75.} for the figure is neither a genius nor Fortuna. The bared leg is suggestive of a Victory, but wings are lacking and the objects held do not have the configuration of palm branches. Indeed they are more like the broad, flat, sinuous leaves of a water-plant such as Potamogeton Praelongus,^{76.} and, it seems best to interpret them in this way and to regard the figure as a personification of Verbeia.

Another Celtic deity, the horned god of the Brigantes, is incised upon a small altar from Maryport (556). The figure is very schematic, the squareness of the body emphasised by the saltire incised upon it. The feet are turned to the right but torso and head face the front.

Cocidius was a Celtic deity whose devotees seem principally to have lived in the area of the Roman Wall. One of the altars dedicated to him (231) has an interesting scene, framed in a plain, flat border, on the capital front. The deity is the central figure. He stands facing the spectator, wears a short tunic and holds a bow in his left hand;

from his right, a deer beneath a damaged tree moves towards him; a dog sits under another tree on his left. Richmond suggested ⁷⁷ that Coccidius, here clearly associated with the life of the woodland, is identified with the god Silvanus, the patron of wild places and of hunting, rather than with Mars whose name is often linked with his on inscriptions (eg. 263). The decoration of the sinister side of the capital lends further support to this view, since the scene is again arboreal; a doe and her young walk under a stylised tree.

One of the most impressive altars found on Hadrian's Wall is that set up to Mithras by M. Simplicius Simplex at Carrawburgh (269). Above the inscription, a frontal bust of the god depicts his epiphany. ⁷⁸ He is naked except for a grooved cloak fastened on his right shoulder by a circular brooch. The cloak falls over his left arm, covering it completely. His hair is bound with a laurel wreath and he wears a radiate crown of pierced openings through which a lamp could throw light. In his right hand he holds the whip of Sol and his association with the heavenly bodies is further strengthened by the lunar and solar symbols which decorate the dagged fillets flanking the shouldered niche in which the bust is set.

Another representation of the sun god is carved on the capital of an altar from Housesteads (504). He wears a radiate crown of seven spokes and holds a whip. The head is set within a sunken roundel and the effect given is similar to that of the imago carried by the standard bearer Flavinus on the Hexham tombstone. ⁷⁹

A figure which most probably should be interpreted as Mithras himself occurs on the base of an altar from Rudchester (41). He grasps a bull by the horns, presumably intending to throw it to the ground preparatory to slaying it. The suggestion that Mithras is guiding the animal ⁸⁰ is hardly suggestive of the sacrifice of the bull, an event of paramount importance in Mithraic doctrine. The capital of the altar is very interesting, for it has a much weathered figure in relief in a sunken panel. Wright

interprets this as Mithras rising from the rock; ^{81.} Bosanquet sees it as a "conical object and behind its top.....a crescent". ^{82.} The lunar symbol is most certainly present and the figure may well have been a Phrygian cap surmounted by a crescent, an attribute of Mithras, occurring for instance on a base ^{83.} and a mosaic from Ostia. ^{84.} A further representation of a head-dress may be seen on the sinister side of the capital; ^{85.} priests of Mithras may have worn caps of this style during Mithraic ceremonies.

A motif rare in Northern Britain decorates the dexter side of the base of an altar from Wallsend (241). This is the anguipes, the serpent-footed giant, one of Jupiter's adversaries, as so terrifyingly worked out on the great altar of Pergamon ^{86.} but also, in Roman provincial thought and art, representing the kindly powers of the earth assisting Jupiter. Its appearance on a coffin from Chester may also be noted. ^{87.}

Sacrificial scenes, featuring figures either human or divine, occur on two altars from Northern Britain. The first is a small altar from Lanchester (516) where a roughly carved figure in a sunken panel holds offerings beside an altar. The other, from York (443), is more elaborate. It is carved in friable, shelly limestone and is so damaged that it is difficult to distinguish either the nature of the objects depicted or the exact action of the figure, in knee-length tunic, who stands on the dexter side of the shaft. He appears to be either pouring a libation or to be holding up an animal, the hind quarters of which are turned towards him. This is an odd position for a sacrificial animal and even more strange is the head-covering worn by the soldier, for sacrifices were normally performed with head veiled so that evil omens were excluded from sight. On the same panel, a bucranium and wreath are also carved. The motifs on the sinister side of the shaft include an axe; other objects defy identification.

It is difficult to be certain whether some of the figures are intended

as mortal or divine. The faces (308, 344) and busts (243) carved on the capitals of altars are often weathered, and figures on the shafts are often broken. The dexter side of an altar top now in Hexham Priory Church (60) displays the head of a man within a sunken arch; a fragment from Wallsend (240) has a belted figure on its shaft; these appear to be humans. The same may be true of the relief of a female holding up and playing a tuba which ornaments an altar (163), possibly from Chesterholm.

Emblems reflecting the occupations of dedicators of altars are rare. The sole instance is a set of writing tablets with carrier handle on a stone set up by an optio at Carrawburgh (364); his military duties were no doubt concerned with the keeping of records of one kind or another.

Chapter VII

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3. Ibid.
4. Esp. Germ., nos. 257, 261.
5. Toutain, op. cit., III, 199.
6. PCB, 196, 379.
7. Toutain, op. cit., III, 198.
8. Merlat, 35.
9. PCB, 275.
10. Graves, R., The Greek Myths (Penguin Books 1955, revised 1960), II, 146.
11. Fox, C., Pattern and Purpose: Early Celtic Art in Britain (Cardiff, 1958), 72.
12. Graves, op. cit., II, 101.
13. Ibid., 102.
14. Ibid., 197.
15. CW² LIII, 37.
16. Eg. RIB 2184; RIB 2198.
17. Graves, op. cit., II, 114.
18. CW² LIII, 37.
19. PCB, 381.
20. Ibid., 83.
21. Walters, H.B., Catalogue of the Silver Plate (Greek, Etruscan and Roman) in the British Museum (London, 1921), 50, no. 191; fig. 51.
22. PCB, 200.
23. Graves, op. cit., I, 78.
24. JRS XXXIII, 36-38.

25. PCB, 381.
26. See p. 83
27. Cumb., clxxxviii.
28. Graves op. cit., I, 174.
29. Ibid., 175.
30. Ibid., 177.
31. Quoted in LS p. 411.
32. Graves, op. cit., II, 66.
33. See p. 113
34. Graves, op. cit., I, 79.
35. Ibid., 77.
36. Ibid., 174.
37. Ibid., 304-5.
38. Ibid., II, 263.
39. Ibid., I, 83.
40. AA⁴ XXI, 210.
41. JRS XXXV, 28.
42. PCB, 215.
43. Graves, op. cit., I, 66.
44. Arch. IX, 221.
45. PCB, 161.
46. Rooke, Arch. IX, 221.
47. Lysons, Cumb. no. 59, clxxii.
48. Richmond, AA⁴ XXI, 198.
49. Ibid., 197-8.
50. Frazer, J., The Golden Bough, Part IV, Vol. I. Adonis, Attis, Osiris, edit. 3 revised (London, 1919), 263.
51. Ibid., 265.
52. Richmond, AA⁴ XXI, 198.
53. Collingwood, AA⁴ II, 57.
54. Macdonald, AA⁴ VIII, 272.

55. Graves, op. cit., I, 39.
56. Eg. RIB 1093; RIB 2200.
57. Art in Roman Britain, 139b.
58. PSAN⁴ I, 205.
59. Répertoire, 267.
60. Ibid.
61. I owe these suggestions to Professor J.M.C. Toynbee.
62. RIB 102.
63. Harris, E. and J., The Oriental Cults in Roman Britain (Leiden, 1965), 57.
64. Arch. IX, 221.
65. 312, no. 70.
66. Collingwood, CW² XXII, 215.
67. Toutain, op. cit., III, 243.
68. As at Cirencester: Toynbee, Art in Roman Britain, Cat. no. 73; plate no. 84.
69. Ibid., Cat. no. 74; plate no. 81.
70. RIB 1747.
71. Woodward, YAJ XXXVIII, 317.
72. Ibid., 319.
73. Cf. Budge, 310-11, no. 63; fig. 151.
74. PCB, 217.
75. Woodward, YAJ XXXVIII, 317.
76. Martin, op. cit., plate 89.
77. AA⁴ XIV, 104 and NCH XV, 139.
78. Richmond and Gillam, AA⁴ XXIX, 38.
79. RIB 1172.
80. Wright in RIB but cf. JRS XXXIII, 37.
81. JRS XXXIII, 37.
82. NCH XII, 22.
83. Cumont, 208, fig. 38, although the stone is attributed to the Great Mother.

84. Vermaseren, M.J., Corpus Inscriptionum et Monumentorum Religionis Mithriacae (The Hague, 1956), I, 140-41, no. 299.
85. Bosanquet, NCH XII, 22.
86. Schmidt, E., The Great Altar of Pergamon (London, 1965), plates 7, 8.
87. Wright, R.P. and Richmond, I.A., Catalogue of the Roman Inscribed and Sculptured Stones in the Grosvenor Museum, Chester (Chester and North Wales Archaeological Society, 1955), 51, no. 138; plate XXXV.

Chapter VIII

Sacrificial Implements and Vessels.

The use of motifs based on sacrificial utensils is by no means as widespread as might be supposed. They occur on only one hundred and twenty-nine out of a total of eight hundred and thirty-one altars and fragments. Many of these one hundred and twenty-nine stones are more than thirty inches in height (Table 6), and many seem to be the products of military workshops, for they are dedicated either by regiments or their commanders. Seventeen units, including three legions, are named in their inscriptions. (See Appendix Q, (1)).

The four most common sacrificial utensils are the axe, knife, jug and patera. Strainers are carved on four altars. (See Appendix Q, (1)). These motifs may stand alone on the shaft or may be associated with one or more of the other ritual objects. In fourteen cases all the four usual utensils are carved on the shaft; three of these altars have in addition other motifs (160, 241, 438).

The axe is the least popular motif. It appears on only twenty-eight extant inscribed altars and of these, fifteen are dedicated by military personnel. (See Appendix Q (2)). This close identification of the axe with the army is perhaps natural, for the sacrifice of animals large enough to warrant its use must have been rare in civilian circles in the military zone. Two types of sacrificial mallet or pole-axe are known from Roman reliefs. One is similar in shape to a modern sledge-hammer and presumably had a stone head.¹ The other has a spherical terminal.² It has been suggested³ that this instrument was used for killing calves and heifers while the axe was reserved for the slaughter of cows and bulls, but reliefs indicate quite clearly that both types of mallet were used to stun or kill large animals.⁴ This makes it the more surprising that neither the rectangular nor circular-headed mallet has so far appeared on a northern altar. Six types of axe may however be distinguished

among the twenty-four representations known.

Daremberg-Saglio suggests ^{5.} that the ordinary military pick-axe was used for slaughtering animals. This idea is supported by the reliefs on northern altars for axes of this type, although apparently smaller than examples found for instance at Wroxeter ^{6.} and Loudoun Hill, ^{7.} are carved on stones from at least seven sites. (See Appendix A, (2)). A variant form in which the convergent arcs of the blade come together to make a short point beyond the haft, is probably a specialised sacrificial implement. It may be seen on a relief from the Forum of Trojan ^{8.} and appears in Northern Britain on a large third-century altar from South Shields (401). Another type of axe, depicted on altars from widely scattered sites (see Appendix Q (2)), has a double-curved blade but, instead of a pointed pick, terminates in a square, hammer-like projection. This is the axe held by the victimarii in two sacrificial scenes from Trajan's Column. ^{9.} Many specimens have been found in Britain, for example at Richborough ^{10.} and Lydney. ^{11.} A third variety of axe has a blade with divergent edges that are almost straight, and a square end projecting beyond the haft. A relief depicting Marcus Aurelius sacrificing on the Capitol ^{12.} gives a good representation of this type. In Britain, examples have been found at Richborough, ^{13.} Milton, ^{14.} Newstead ^{15.} and Housesteads Milecastle. ^{16.} Another axe with straightish-sided blade but without any projection beyond the haft may be seen on the frieze of Augustus and his family on the Ara Pacis. ^{17.} It is clearly not a general-purpose tool, unlike three of the hatchets already mentioned. Axes of this shape are carved on altars from York (443) and Risingham (231) and a similar, miniature bronze axe, possibly votive, was found at Richborough. ^{18.} A more unusual type seems to have been depicted on the shafts of two altars now lost (52, 249). Here the blade curves in divergent arcs so that the head is like a small version of a Saxon battle-axe. ^{19.} According to Ward, ^{20.} an axe-head of this type was found at Lydney. A splendid example of its use in

Roman art may be seen on a relief depicting a sacrifice to a Divus.²¹ On altars, an axe of this type, decorates the shaft of a stone from Steinbach.²²

A knife was used in conjunction with axe or mallet to slay the sacrificial victim. Indeed, the knife seems to have been plunged into the neck of the animal before oblivion descended with the axe's lethal blow.²³ The knife used for the initial thrust had a triangular blade as a relief from the Arch at Lepcis makes clear,²⁴ but other reliefs indicate that this was not the only type of knife used in sacrifice. Ritual demanded not only the slaying of the victim but also the opening of its body for the removal and examination of the entrails and then the cutting up of the flesh for cooking and consumption. In a well-furnished sacrifice special knives were probably used for each varying task. Thus, in the relief depicting the Vota Decennalia of Hadrian,²⁵ one of the two kneeling victimarii, whose position suggests that he has already inserted a knife into the victim's neck, has, at his waist, three other knives in a sheath. These are probably smaller than those used for blood-letting. The knife with a long double-edged blade²⁶ and the type with a short, curved, beak-like projection on one side of the blade,²⁷ although known from Gaulish reliefs, never appear in Northern Britain. Five other distinctive shapes may however be identified.

The first type has a blade which is broad in proportion to its length. The cutting edge is parallel to the back of the blade and makes a sharp angle to form a tip. A knife similar to this occurs on a tombstone from Bordeaux.²⁸ In Northern Britain it appears principally in the eastern sector of the Hadrianic frontier and in forts on the road over Stainmore and on Dere Street. (See Appendix Q (3)). It has not been possible to parallel this type of knife with any extant example, although it is just possible that one found at Housesteads Milecastle in 1853²⁹ was of this shape.

Similar in proportion, but lacking the sharp angle of the cutting edge, are the knives of the second group. The blunt side is straight; nearest the handle, the cutting edge lies parallel but then tapers to a point in a gentle curve. The shape of the blade is exactly the reverse of that depicted on the tombstone of a cultrarius in Capua³⁰. where the back is curved and the cutting edge straight, a type of knife (type 5) of which one example appears in Northern Britain (670). Examples of knives of type 2 have been found at Verulamium,³¹ London,³² Cirencester³³ and Wroxeter.³⁴

The third shape of knife differs from the second in that the blunt side of the blade slopes in to the tip. This type of blade was popular with legionary masons. (See Appendix Q (3)). No extant parallel to this knife has been traced.

Another type is triangular-bladed, the shape of that held by the victimarius on the relief at Lepcis.³⁵ The back is usually straight but may slope slightly inwards as the point is reached (177). The cutting edge forms the hypotenuse of the triangle. In the main, altars bearing representations of this type of knife come from the eastern sector of Hadrian's Wall and its outpost forts. (See Appendix Q (3)). A good example of the type was found in a hoard of metal-work in Southern Scotland.³⁶ It is interesting to note that the cutting edge of the knife carved on an altar from Benwell (168) is slightly concave in the centre, as if the blade were worn by constant sharpening; the length of the blade is eight inches, not much longer than that found in Scotland. It seems a possibility that the actual knife used in sacrifice was taken as the model for this motif; it may even have been used as a templet.

There is usually little indication of whether the blade was tanged or socketed. Both types were common in the Roman world. In two instances (160, 385) the terminal knob of the handle suggests that the blade may have been socketed. A similar knife with knobbed handle is represented

on a tombstone from Bingen. ³⁷. Another interesting handle appears on a Benwell stone (168). Here the grip is ridged transversely; the blade is apparently tanged. Perhaps on this altar the sacrificial knife approximates most closely to the ivory-handled implements used in the ancient official cults of Rome. ³⁸. The carved representations of the knives give no indication of the metal from which the blades were made. It seems that both iron and bronze were used. ³⁹.

Reliefs attest that sacrificial knives were kept in sheaths holding one ⁴⁰. or more ⁴¹. and carried by the victimarius either suspended at his waist ⁴². or secured by a strap across the shoulder. ⁴³. The motif of knives in sheath is found as a decoration of the shaft on altars from Stockstadt ⁴⁴. and at Jagsthausen, ⁴⁵. but never occurs in Northern Britain. Actual examples of these sheaths were found in a grave in the Marne region; one side was of bronze and one of wood; the latter had perished before discovery. ⁴⁶.

A constant feature of sacrificial reliefs is the camillus, or boy attendant, bearing an incense box or acerra. This ritual casket never became a popular ornamental motif, although it is represented on the shaft of one of the altars carved on the Arch at Lepcis ⁴⁷. and on the shaft of an altar from Niederberg. ⁴⁸.

The pitcher in which the ceremonial wine was carried to the altar is a more common decoration, often associated with the patera from which the libation was poured. Von Schaewen has established ⁴⁹. the name of the pitcher as guttus rather than praefericulum. There can be little doubt that the gutti used in the solemn rites of public ceremonial were often of precious metal. When such costly vessels were not available, bronze was probably an acceptable substitute or, in humbler rituals, gutti of glass or earthenware would suffice. The use of glass vessels in sacrifice is attested by a wall painting in Trier where the earlier of two superimposed sacrificial scenes depicts a boy dressed as a camillus holding a glass jug containing a yellow fluid, presumably Moselle wine. ⁵⁰.

Evidence for the use of pottery gutti comes from Ribchester where an earthenware pitcher was found with a patera of similar fabric.⁵¹ In seeking parallels therefore for the gutti carved on the shafts of northern altars, extant vessels of metal, glass and pottery must be considered.

Gutti often stand alone on one side of the shaft of altars; or they appear with paterae, or in association with knives or wreaths or swags and, in one instance, with a snake. There is one altar on which jug, knife, axe and bucranium all appear on one side of the shaft. (See Appendix A (5)).

A wide variety of gutti appears, but two features are almost invariably present, a handle and a well-defined foot-ring.

At the simplest, the handle is marked only by a groove in the neck of the vessel, as if the mason had, by mistake, punched away the stone from which the handle should have been carved. As there are few examples of this type of handle (229, 512, 538) this may well be the explanation. All other handles fall into two broad divisions: those with an angular bend and those which curve to join the body of the vessel. Sometimes the shape of the base of the handle may be clearly distinguished. This is especially the case where, as on altars from Gaul,⁵² on some coins,⁵³ and on a jug from Burrow-in-Lonsdale⁵⁴ the handle is given an ornamental outward flare or spiral as a terminal feature (168, 403, 493), but it may also be noted on others less flamboyant in style, as at Chesterholm (160). Sometimes the handle has a projecting knob for ease in holding (106, 403). Thumb-rests of this kind were common on jugs in Roman times.⁵⁵ In the main, handles spring from the mouth of the guttus (217, 589) but there are some which are attached below the rim, as for instance at Benwell (626) and Binchester (385). This latter style is typical of many pottery vessels, as for instance of those found at Silchester.⁵⁶ Sometimes, as is the case with many metal jugs,⁵⁷ the handle sweeps upwards before curving to join the body (243, 725). The point of union of handle and

body is usually at the shoulder but in two instances it extends as far as the base of the vessel, giving a grotesque appearance (251, 530).

There is a surprising number of variant forms of handle. Those of the most elegant jugs often make a double curve before meeting the body (106) and, even where only one curve is used, the shape and projection may produce significant changes in outline. A jug on an altar from Binchester (123), for example, has a large handle standing well away from the vessel; it would be easy to grasp it with the whole hand. On other jugs, however, the arc of the handle is less pronounced (251) and on some small examples only a finger or two could be inserted between the handle and the neck of the vessel (626).

The handles of two gutti of otherwise normal shape deserve mention. In one case (589) the handle makes an awkward angle before touching the body. This may be an accident of carving or it may be that the mason is trying to depict both the shape of the handle and the plate which attached it to the jug. The other jug, from Risingham (232), has a curved handle with projections at the outer corners. The shape of the handle suggests that it may have been modelled on those in the form of a human figure bent backwards. There is a good example of this type in the Museum at Karlsruhe. ^{58.} Indeed, the guttus from Risingham is the same type as the Karlsruhe jug.

There are only ^{three} ~~two~~ examples of gutti which have no clearly indicated foot-ring or pedestal base. This is remarkable for the great majority of extant vessels of metal either lack this feature altogether or have small and insignificant base-rings. The Lesmahagow flagon ^{59.} is a good example of a well-designed and valuable jug which is almost without a foot-stand. Moreover the foot-stands of the gutti are in most cases large and impressive. One from Bowes (106) is decorated with grooves sloping inwards from the outer edges. Another, from Benwell (168), is encircled by two raised hands. In some examples they are big enough to

have covered the umbo of a patera, as in the set of sacrificial vessels in the Rijksmuseum G.M. Kam at Nijmegen.⁶⁰ Most of the foot-rings and pedestals have flat bottoms, but masons in Northern Britain sometimes followed a convention known from altars in Gaul⁶¹ and Northern Italy⁶² whereby the base was carved in a concave arc. This is either an attempt to give a three-dimensional effect or it is meant to indicate the hollow nature of the foot-stand. The pedestal of a jug on a Housesteads altar (217) carved with a concave recess above its flat base lends support to the second of these two possibilities. There are thirteen altars with concave bases and of these eight certainly, and three probably come from military workshops. (See Appendix Q (4)). All three legions are represented.

The mouths of the jugs are often spouted; the spouts may be quite short (241, 493) or they may project considerably (123, 243). They are sometimes on the same horizontal plain as the rim of the mouth (502, 629), or they may curve upwards to a greater (405) or lesser (233) degree. If the handle has a thumb-rest close to the rim, the curvature of the mouth is sometimes very pronounced (106, 403). A few jugs have both sides of the mouth indicated (26, 168). In one case this may be intended to represent the pinched-in shape of the mouth (26); in two others the lids of jugs may be depicted (168, 338). Lidded vessels are known from extant examples⁶³ and from fragments of handles with either lids or hinges attached.⁶⁴ The necks of the gutti may be broad (232) or narrow (217) and vary in length.

There are two main types of body, globular and ovoid. In addition there are some bag-shaped jugs and two which have very sharply defined shoulders.

Gutti with globular bodies have, in most instances, a long narrow neck with spouted mouth (37). Every jug except one (515) has a foot-ring or pedestal base. These vessels are similar in general shape to glass jugs from Shefford⁶⁵ and Cologne⁶⁶ or, where the neck is shorter,

to a jug from Tewkesbury. ⁶⁷. Three altars display gutti which are much more squat and have a short broad neck (61, 177, 243). Although all three have foot-rings, in shape they compare best with a jug found near Poitiers. ⁶⁸. Two gutti with globular bodies and handles emerging below the mouth can best be paralleled by pottery ewers; one, from Binchester (385), is similar to a flagon from Cologne ⁶⁹. while the second, from Benwell (626), is the same shape as clay jugs from the same region. ⁷⁰.

A vessel of strange shape is carved on an altar from South Shields (405). Here a globular body is set above a well-defined pedestal base. There is no neck but at one side a high curved handle rises steeply from the mouth while at the other a small spout points obliquely upwards. The closest parallel to this vessel seems to be a spouted ewer in the Sambon Collection in the Ashmolean Museum, Oxford. ⁷¹. This ewer is Roman, but its provenance is unknown.

The commonest type of jug with ovoid body has a long, slender neck, small spout and foot-ring or pedestal base (26, 106, 168). The most elegant examples approximate closely to a jug figured by Schumacher, ⁷². although flutings are lacking. Two gutti (337, 338) in this group are noteworthy. Instead of a normal base, both have an inverted conical projection. This is so remarkable a feature as to suggest that both were carved by masons trained in the same workshop. The neck of one of these jugs (337), from a military workshop, rises high above a steeply sloping angular handle.

The gutti of another group have necks which swell towards the base (31, 404). These are similar in shape to an earthenware vessel from Trier. ⁷³. Others, with wider necks gradually merging into the body (229, 291), are of the same shape as the Lesmahagow flagon. ⁷⁴.

Shorter, broader necks, wide mouths and small spouts mark the jugs of the next type (123, 232). Two of these may be paralleled from

Continental examples; a jug from Binchester (123) is almost identical with a jug from Erd ⁷⁵. and one on an altar from Risingham (232) corresponds closely to a vessel in the Karlsruhe Museum. ⁷⁶. This last jug may too be the model for another small group (218, 251, 326). Here, although the handles differ, the basic ovoid shape with short, broad neck and projecting spout is preserved.

Some jugs of basically ovoid shape taper at the base to such a degree that the sides of the body lose almost all curvature (217, 400). This is especially marked on an altar from Chesterholm (400) where the guttus, without foot-ring, is of almost the same shape and size as an actual vessel from Nijmegen. ⁷⁷. Another jug with tapering body, from Housesteads (217), may be paralleled most closely on a relief on the entablature of the Temple of Vespasian. ⁷⁸. It also appears on a coin, ⁷⁹. although with a differently shaped handle. A strange, elongated jug with long neck and body, is carved on a phallic altar of uncertain provenance (821).

Two ugly jugs with ovoid bodies, large curved handles and round mouths come respectively from South Shields (402) and Stanwix (501).

In all the ovoid jugs so far mentioned the maximum width of the body occurs about, or slightly below, a point midway between the mouth and base of the vessel. There is, however, a significant number of gutti where the widest part of the body is nearer the base. These jugs are described as bag-shaped. A good example of this type of jug forms part of the Boscoreale Treasure and is illustrated by Sieveking. ⁸⁰. The shape is elegant, simple and restrained. The guttus carved on an altar of Cohors IV Gallorum (160) depicts it exactly. Another (175), apparently with lid, comes from a Legio XX workshop. Smaller specimens, but without foot-rings, are also to be found, as for instance at Lanchester (512, 513). In shape they resemble a bronze jug in Speyer. ⁸¹.

The last gutti to be considered are the most impressive of all. One is carved on the altar to Astarte from Corbridge (493) and another

appears on a stone from Great Chesters (496). They have fluted bodies with sharply defined shoulders. These clearly represent vessels cast in precious metal and reflect the sacrificial jug at its most luxurious. Parallels have proved impossible to find, although the general shape of body is well known^{82.} and flutings appear on several examples of gutti of different types.^{83.}

There are a few examples of canthari carved on the shafts of altars, but one is damaged (464) and another is lost (444). A more distinguished vessel complete with foliage decorates the back of an altar from South Shields (401). This is a handsome cantharus with concave pedestal base; the lower part of the body is ornamented by three scalloped flutes similar to those on gutti carved on altars found at Marignac-las-Peyres^{84.} and Castelnaud-de-Picampeau.^{85.} The handles adjoin the mouth in a tightly-rolled inward curving spiral and, sloping straight to the body of the vessel, terminate in similar ornaments but with spirals reversed. Two-handed vessels do not seem to have been in regular use as sacrificial utensils but they may have served this purpose from time to time.

The rôle of the patera in sacrificial ritual is an important one, for from it the wine was poured out as a drink offering. The transfer of wine from guttus to patera is well illustrated on the Base of Ahenobarbus^{86.} where a camillus is depicted pouring the liquid into a patera held by the sacrificiant. The patera seems to have been similar to the Greek phiale^{87.} to which a handle was added.^{88.} It had both sacred and profane uses and might be of earthenware or metal.^{89.} Although paterae with handles are carried by camilli, reliefs depicting the act of pouring a libation usually show the sacrificiant holding a handleless patera.^{90.} An uninscribed stele from Bologna,^{91.} however, provides an example of a handled patera in use. The bowl of the patera is gripped by thumb and fingers, the handle lying under and parallel to the forearm of the sacrificing figure. This is the normal position for pouring from a handled dish if the thumb

is to be inserted into the actual bowl, although it is more comfortable if the fingers encircle the handle. The insertion of the thumb into the bowl gives better control over the contents than is the case when the vessel is grasped only by the handle.

Most frequently paterae stand alone on the side of the shaft. They also often appear with gutti and rarely with knives, snakes, wreaths and disks. (See Appendix Q (5)). There is great variety in the placing of the handle in relation to the four sides of the shaft. Right positions are possible and examples of all may be noted. (See Appendix Q (6)). The handle may be parallel to the sides of the shaft with the bowl either at the top or bottom of the stone, or it may be placed obliquely, pointing to either the back or front of the altar and again the bowl may be carved in either the upper or lower part of the shaft. The handle may also be placed horizontally, with the bowl at the front or back of the stone. Handleless paterae also appear, but in no great number. (See Appendix Q (7)).

Although simple dished paterae may be found (106, 405, 530), most of the bowls of paterae have umbones (40, 464). In some instances the bowls are so shallow that they are almost flat-bottomed (243, 400). Umbones are occasionally large (136, 228) and sometimes have depressed centres (37, 192); in one case, from Risingham (232), an additional small boss is carved in the middle of an umbo with sunken centre, a style which may be paralleled on the vessels decorating friezes now in the Louvre,⁹² and in the Capitoline Museum, Rome.⁹³ One umbo from Birrens (136) has incised lines bisecting at right angles to form a solar disk; another from Chesterholm (160), is carved in the form of a human mask, calling to mind the patera of the Codex Pighianus altar.⁹⁴ The patera on an altar from Housesteads (218) has an umbo encircled by a concentric raised rim. A few bowls are of the flat-bottomed variety. One of these has straight sides and a sharply pointed centre boss (310). Many of the bowls have a pronounced rim (26, 493).

All these types of bowl may be found in paterae surviving from the ancient world. The dished patera, both with ^{95.} and without umbo ^{96.} is common in bronze. A patera with an umbo with depressed centre was found at Kőrnye in Pannonia. ^{97.} The patera from Chesterholm (160) with a human face on the boss is surely essaying to imitate elaborate vessels such as that found at Faversham, Kent. ^{98.} The samian form Dragendorf 31 provides the nearest approach to the flat-bottomed patera with pointed umbo from Maryport (310).

Only in one instance (136) is any ornamentation of the rim of the bowl attempted. Here a cabled bead runs around the edge of the bowl. The rims were sometimes decorated in the ancient world, as paterae from Faversham, Kent, ^{99.} Pannonia ^{100.} and Fichtenberg ¹⁰¹ attest.

The most elaborate work was put into the handles of carved paterae. (See Appendix Q (8)). In three instances the handle has a ridged grip (106, 168, 403), a feature which also appears at Stockstadt. ^{102.} A sizable group of paterae has handles terminating in knobs. The camillus on the altar of Vespasian, Pompeii, ^{103.} is carrying a patera with knobbed handle and this too is the type of handle on a gravestone from Bingen. ^{104.} Another group has animal-headed handles. Owing to weathering it is not always possible to distinguish the exact nature of the creature. Altars from Birrens (136), Bowes (106) and Bankshead (175) on Hadrian's Wall seem, however, to have had ram-headed handles such as those found at Richborough, ^{105.} Bartlow Hills, ^{106.} Welshpool ^{107.} and elsewhere. Another, from Chesterholm (26), has a long-eared animal. The handles of these paterae are cylindrical and, except for the one from Bowes, are fluted, as in the examples surviving from Roman times. The handle of the patera from Birrens has a cord border and a band of cabling running down the centre of the upper surface to terminate at the rim of the bowl in a raised arrow-head design. This is perhaps a barbarised version of the thyrsus, the fir-cone staff of Bacchus. This motif was a popular decoration of the flat handles of saucepans, as many extant examples

prove. ^{108.} Five other altars have paterae with fluted handles. These may be trying to imitate the animal-headed handles, although one of them (40) has a hole both at the end of the handle and close to the bowl. The cylindrical handle of the patera on an altar from Chesters (485) terminates in a splayed bar. This may be intended to represent a bifurcated end, such as is found on some ladles. ^{109.} A handle of unusual shape is to be found on an altar from Housesteads (218). Here the end terminates in "horns." The closest parallels seem to be on strainers now in the Louvre, where horns project from a loop. ^{110.} A similar handle with the heads of serpents entwined around a terminal ring and projecting from it is figured by Schumacher. ^{111.} The British example however has no loop. Another group of paterae has handles with curved ends. The same feature may be seen on an altar from Mainz. ^{112.} It seems likely that this type of handle attempts to depict a hooked end, such as is frequently found on sieves and ladles. ^{113.}

Four paterae have flat handles widening towards the outer end. The shape of one from Ilkley (326) may be paralleled from a deep vessel figured by De Ridder, although the perforation is different. ^{114.} Two others (513, 787) have indented ends.

In the great majority of cases the handle is attached to the bowl without any elaborate mount. A vessel with animal-headed handle from Chesterholm (26), however, has a mount which grips the rim of the bowl on each side of the handle. This feature may be noted on a patera from Pannonia, ^{115.} although here the mount extends into the bowl itself, as it does on the patera of an altar of Legio VI from Manchester (31). Two other less ambitious vessels from Birrens (338) and South Shields (589) respectively have angular projections on either side of the handle at the point where it joins the bowl. These are reminiscent of the handles in the form of human figures with arms bent upwards to support the bowl. ^{116.}

The terminal cone-shape on the handle of the Birrens example is similar to the terminals of many of these handles. ^{117.}

There is one patera which, in addition to a handle, has a projecting trapezoidal flange for steadying the vessel (310). The same feature is to be seen on the strainer carved on an altar from Chesterholm (26).

It is perhaps significant that at least nineteen out of forty-one paterae with elaborate handles come from military workshops. (See Appendix Q (8)).

Mention must be made of the "raised patera-like disk with a rosette in the centre" ¹¹⁸. which is carved on the shaft of a statue-base from Birrens (338). This is not a handleless patera but a phalera and is identical with several in the set of thirteen silver phalerae found at the Villa Vecchio di Manerbio, near Brescia. ¹¹⁹.

The strainer or colatorium through which the wine was passed ¹²⁰. seems to be represented on four altars (26, 78, 266, 400). Strainers were made in a lighter material than were paterae, have a longer handle and usually have round or rounded bases which prevent their being able to stand upright. ¹²¹. Many examples survive from early times. Sometimes the strainer has the shape of a simple bowl; ¹²². sometimes the perforations are made in a secondary dished cavity set within the larger basin. ¹²³. It is this second type of strainer which seems to be carved, base uppermost and with flange for steadying, on the shaft of an altar from Chesterholm (26). The others, if indeed they are to be interpreted as strainers, are of the simple bowl variety; their depth is indicated only by a shallow dished hollow.

Daggers appear amongst the ornamental motifs of Northern Britain. They are carved on two altars, one of them Mithraic (41). The other is an uninscribed stone from Maryport (551).

Conclusions

Sacrificial utensils were motifs especially popular in military workshops. In the main they are carved on large altars. Most of the

types of implements and vessel can be paralleled on reliefs from other parts of the Roman world and by extant examples.

1. Ryberg, plate LVII, fig. 89a; 106 and plate XXXV, fig. 53.
2. Ibid., plate XXVII, fig. 41d; Esp. X, 62, no. 7347; Cichorius, Taf. LXVI, LXXVI.
3. Daremberg-Saglio, IV part ii, 976.
4. Eg. Cichorius, Taf., LXVI, LXXVI.
5. II part i, 329.
6. Atkinson, D., Report on Excavations at Wroxeter (the Roman City of Viroconium) in the County of Salop 1923-1927 (Oxford, 1942), 219; plate 53B.
7. Hunterian Museum F. 1944.2.
8. Ryberg, plate XLV fig. 69a.
9. Cichorius, Taf. X, XXXVIII.
10. Richborough IV, 154, nos. 341, 342; plate LXI.
11. Wheeler, R.E.M. and T.V., Report on the Excavations of the Prehistoric, Roman and Post-Roman Site in Lydney Park, Gloucestershire (Oxford, 1932), 92, no. 188; fig. 23, no. 188.
12. Ryberg, plate LVI, fig. 86.
13. Richborough II, 52, no. 72; plate XXIV.
14. Hunterian Museum F. 1946. 237.
15. Curle, plate LXI, nos. 1, 4.
16. Clayton AA¹ IV, 274 with fig.
17. Ryberg, plate XII, fig. 23b.
18. Richborough IV, 145; plate LII, no. 190.
19. ed. Stenton, F.M., The Bayeux Tapestry (London, 1957), plates 62, 63, 64, 65, 70, XI.
20. P. 195.
21. Ryberg, plate XXIX, fig. 45e.
22. Esp. Germ., 216-7, no. 348.
23. Ara Pietatis, Ryberg, plate XXI, fig. 36b; Arch at Lepcis, ibid., plate LVII, fig. 89a.
24. Ibid., plate LVII, fig. 89b.

25. Ibid., plate XLVI, fig. 71.
26. Esp. I, 234, nos. 313, 315; 237 no. 320.
27. Ibid., III, 6-8, no. 1737; 8, no. 1738; 10, no. 1740; II, 236-7, no. 1267.
28. Ibid., II, 198-9, no. 1210.
29. Clayton, AA¹ IV, 274.
30. Daremberg-Saglio, I part ii, 1585, fig. 2117; CIL X, 3984.
31. Wheeler, R.E.M. and T.V., Verulamium, a Belgic and Two Roman Cities (Oxford, 1936), 219, nos. 12, 14; plate LXIVB.
32. London in Roman Times (London, 1930), 78, fig. 19 no. 3.
33. Sewell, E.C., Discovery of a Romano-British Interment at Stratton, near Cirencester, in The Wiltshire and Gloucestershire Standard, Saturday, 26th March, 1927.
34. Atkinson op. cit., 223-4, no. B155; plate 58, B155.
35. Ryberg, plate LVII, fig. 89b.
36. Piggott, PSAS LXXXVII, 46, fig. 12, no. B32.
37. Esp. VIII, 163, no. 6126.
38. Daremberg-Saglio, IV part ii, 1164.
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Chapter IX

The Decoration of the Die.

The die on which the inscription is carved usually occupies the entire front of the shaft but there is a significant number of altars whose dedications are set in a wreath or in a moulded panel. (See Appendix R.)

The most impressive of the wreaths is that framing the word DEO on an altar from Rudchester (41). From it three ribbons support a pendant, ansate tablet bearing the name of the dedicator, the whole being flanked by large, curving palm leaves. A smaller and less elaborate beribboned wreath encircles the inscription of an altar from Brough on Noe (421). Instead of a complete wreath, a bay leaf swag seems to have bounded the die of an uninscribed altar from Watercreek (362).

Panels are more common. Sometimes, when the altar is small, the panels are indicated by grooves (518), but for the most part they are sunken and edged by a flat (114) or rounded (241) border, the latter sometimes decorated by twisted flutings to form a cable pattern (379). In one instance the upper border has a decoration of incised egg shapes (709). The panel may be outlined by mouldings such as fillets (442) and quarter-round mouldings (709). Sometimes a double (68) or even a triple (401) bead moulding, in one case with quarter-round (497), border the panel. Weathering and damage often make it difficult to determine the original nature of some of these small mouldings and it is possible that some at least of those which now appear to be double beads may have been intended for cymas, an elegant moulding requiring the use of a templet. Cymas frame the panels of twelve extant altars, of which eleven certainly come from military workshops. (See Appendix R). Not surprisingly, these altars are large and imposing and probably represent the work of expert and experienced craftsmen. The twelfth altar is from York (71) and measures only seventeen inches high but it too may well have been carved by a

soldier or one trained in a military school. Cyma mouldings were used to frame military building inscriptions as the beautifully cut stone of Legio IX at York attests. ^{1.}

In four instances panels are in relief, two being rectangular (261, 327) and two ansate (163, 270). Of the rectangular panels, those on four sides of an altar from Ribchester (261) are unparalleled in Northern Britain; they are produced by flutings carved on either side of the corners of the shaft, the arrises being rounded off to create vertical bead mouldings. The other remarkable altar in this group is a small, uninscribed stone on which the ansate panel is repeated on the front of the base (270). Interestingly enough, the three inscribed altars are the products of auxiliary workshops.

Pilasters decorate the shafts of another small group of altars. These may be plain (372) or fluted (31), or swelling (40). The flutings are sometimes indicated by grooves (72) or they may be more elaborate, as for instance on a fragment from Corbridge where they are stopped (30). Pilasters are usually, although not invariably (403) crowned by capitals. These may be decorated with foliate motifs, either incised (194) or in relief (372).

A variant of the pilaster is the column with twisted flutings which appears on a small altar from Netherby (374). Here the stiff-leaf capitals are identical in conception with those of an uninscribed altar from Chesterholm (372) and this and other features point to its origin in the same workshop. It is perhaps noteworthy that three of the fourteen stones with pilasters or attached shafts were dedicated by soldiers of Legio VI, while another two come from an auxiliary workshop. (See Appendix R). Of the remainder, six have no ancient inscription; the remaining one, from South Shields (403), is the product of a skilled craftsman.

An altar of Vexillatio Raetorum et Noricorum from Manchester (341) is of very strange design. Only the lower portion survives and even

this is damaged, but it seems that the shaft with its sunken die was flanked either by angular columns or by acroteria projecting from the base of the stone. If there were columns these must have stood clear of the shaft to make an altar of unique design.

Chapter IX

1. RIB 665.

Chapter X

The Colouring of Altars.

It is difficult to visualise the polychrome splendour of altars in ancient times for few vestiges of the colours which enlivened them are to be seen today. This is not surprising, for only rarely have altars been protected from those climatic conditions which affect pigments adversely; sunlight, frost, humidity and changes of temperature all lead to the fading and eventual disappearance of colours and the disintegration of their undercoats. Only three of the altars of Northern Britain (71, 391, 269) preserve traces of their original colouring, yet there can be little doubt that, when they were erected, the vast majority were painted. Vitruvius writes of the pigments available to fresco painters in Roman times; ^{1.} it is clear that a wide variety of tints was used.

Any attempt to reconstruct the appearance of altars must draw on two sources; continental sculpture upon which colour is still preserved and enamel work.

Most of the evidence for the painted decoration of Roman reliefs has come from grave monuments, tombstones for the most part. Of these, the collection from Neumagen is the most important. Von Massow's detailed study of these stones ^{2.} has revealed the colour schemes of masons working in the Moselle Valley in the second and first half of the third centuries A.D. Some of his conclusions, especially those relating to the figures of men and animals, metal objects and leather, may apply to Northern Britain and to votive altars, for it is likely that there were conventions to which, for the most part, masons adhered. This view is reinforced by the colouring of a gravestone from Mainz ^{3.} where metal and leather are painted in the tones used for these materials at Neumagen, although at Mainz both red and yellow are used to represent leather.

Two of the coloured altars of Northern Britain (71, 269) retain traces of a plaster undercoat, a feature noted by von Massow on the sand-

stone monuments of Neumagen, ^{4.} and which was also found at Mainz. ^{5.} Von Massow found that even the reliefs carved in good quality limestone had a thin groundwork of white plaster. ^{6.} The purpose of these under-costs seems to have been to throw up the brightness of the superimposed colours, for the darkness of some stone would mute rather than enhance the pigments of the decoration. There is no need to suppose that masons were trying to simulate the appearance of marble. ^{7.}

Apart from providing a suitably light foundation for paint, the plaster coating performed another function; it concealed any tool marks remaining after the final rubbing down of the stone, an explanation perhaps of the lack of finish exhibited by most of the altars in the northern area. Plaster too, could compensate for the gritty nature of the local rock by ensuring a smooth surface on which to paint. Moreover, St. Járdányi Paulovics has shown ^{8.} that plaster was sometimes applied to milestones as a base for painted inscriptions and has suggested that, as an alternative to chiselling away old lettering, it might be covered up by a plaster coating upon which a new text could be carved or painted. The possibility of the re-dedication of altars by this means must be remembered, for thus an unscrupulous and impious mason could refurbish old stones for resale with a minimum of effort. The large number of altars without carved lettering probably reflects the popularity of dedications painted directly on to a plaster groundwork. Such altars were undoubtedly cheaper to buy, since quicker to produce, and their inscriptions, although without the benefit of the play of light and shade enjoyed by lettering in sunken characters, would stand out boldly from the pale surface on which they were painted. It is highly probable that all altars were rendered with a white coating, the thickness depending on the quality of the stone. It is also likely that this white groundwork formed an important element in the decoration.

Characteristic of the Neumagen masons is the convention of picking out with red paint all the elements of a relief. Thus a finered line

defines the edge of ornaments and the borders of reliefs, and emphasises human physical features. This practice was not confined to the Moselle region however. On a figure of Neptune from Housesteads ⁹. the traces of red paint outlining eyes and nostrils testify to a similar convention in Britain. There seems therefore some ground for supposing that the sculptured reliefs of northern altars were originally gay with bright red outlines.

On the Neumagen stones the letters of inscriptions are invariably red in colour, set in either a white ¹⁰. or pale yellow ¹¹. ground. In the one case where colour survives, the frame enclosing the inscription is golden-yellow. ¹². The inner and outer edges of moulded panels may well have been rimmed in red. From these indications it is possible to imagine the appearance of the front and panelled sides of the shaft of an altar.

Another type of panelling occurs on an altar from York (71). Here the dexter side of the shaft has a carved decoration of raised, rounded straps, springing alternately from the top and bottom and coloured red and yellow. The sinister side has a series of large flutings, stopped in red, alternating with irregularly spaced grooves, some close together, others wider apart. From the surviving traces of paint it seems that the main body of this side was yellow, red being used to accentuate the grooves and the stops of the flutings.

A clue to the decoration of the sides of the shafts of other altars may be obtained from Neumagen. On the monuments from this site, all large surfaces seem to have been coloured, sometimes blue, ¹³. sometimes yellowish-pink ¹⁴. and greenish-yellow. ¹⁵. Against these tinted backgrounds, the figures of men and animals stand out in bold relief. As on the Simplex altar from Carrawburgh (269) faces and naked bodies are covered only by the white undercoat, although all facial features are outlined in red. ¹⁶. Blond hair is frequently painted yellow ¹⁷. but

sometimes, as on the Simplex altar, hair is painted red. ^{18.} At Neumagen, clothing is usually left with the white undercoat prominent, colour being reserved for hems and borders; sometimes a hint of the colour of the garment is given by shading-in the lowest contours of the folds with pigments. ^{19.} Only rarely is clothing completely coloured. ^{20.} It is clear that both methods of handling drapery were practised in Roman times and it is impossible to say which was favoured by masons working in Roman Britain, although it may be significant that the cloak of Mithras on the Simplex altar seems to have been entirely covered in red paint. ^{21.} Individual preference no doubt played a large part in deciding the method adopted, and fashions may have changed with the passage of time. In the reconstruction of colour schemes both ways of dealing with clothing must be held in mind.

Von Massow found that animals are usually left with the white undercoat showing, hollows and significant outlines being painted. Thus, dolphins have their eyes, mouth and chins tinted green. ^{22.} Green is the colour used for dolphins on a gravestone from Vienna. ^{23.} Von Massow suggests that horses, bulls and dogs were all predominantly white in colour, ^{24.} although there is one example of a dog which may have been entirely covered in bright red paint. ^{25.} This, together with the green dolphins from Vienna, indicates that, as with human clothing, there were two different approaches to the painting of animals. It is impossible to lay down any rules for Britain.

Yellow is the colour used regularly at Neumagen to depict metal objects. ^{26.} It seems probable that many of the sacrificial implements and vessels carved on British altars were painted in this hue, together with the two-handled vases which occasionally contain foliate motifs. All were probably outlined in red. It is possible that the foci of altars, carved in the form of paterae, were also painted yellow in their original state. At Neumagen, two examples of light-blue dishes occur. ^{27.}

Von Massow suggests that these may be intended to represent vessels of silver or glass, ^{28.} and, as it is very likely that utensils in these materials were used in sacrifice, the possibility of blue pigments for some sacred jugs and dishes must be borne in mind. The offering dish, for instance, which forms the central feature of the frontal decoration of a large altar from Chesterholm (160) may well have been painted in this colour. In this connection too, it is interesting to note that the vases on an enamelled altar plaque from the River Thames ^{29.} are blue. Other metal objects such as Jupiter's wheel and thunderbolt, the anchor and trident on the altars of Legio VI from Newcastle, the tips of lances and the rims of shields were probably yellow like the bulk of the sacrificial vessels.

Wood at Neumagen is painted light red or orange; leatherwork is red. ^{30.}

These are the colours in which Hercules' club, the shield of Mars and the quiver of Apollo were probably depicted.

It is possible to make some suggestions about vegetable motifs.

Naturalistic rosettes may have been coloured red as on a tombstone from Arlon, ^{31.} while a key to the treatment of leaves comes from Neumagen and from enamels. At Neumagen, leaves are usually left with the white ground-colour showing. ^{32.} The hollows which indicate the veins are coloured green and a red line is sometimes superimposed on these green mid-ribs. ^{33.}

Stylised leaves are tinted in this way when decorating both pilasters and mouldings. It seems likely that the crude attempts at palmette motifs on altars from Benwell (168) and Haddon Wall (206) were painted in a similar fashion to those at Neumagen. The leaves on enamels are treated differently. On the Linlithgow patera, ^{34.} the serrated lance-shaped leaves are green with yellow tips, while those of ivy leaf shape are parti-coloured in the same hues, although, instead of the rigidly straight rib of the Neumagen sculptors, the division is achieved by a graceful curving line typical of Celtic art. It is possible that the ivy leaves flanking the triskeles on

the capital of the Simplex altar (269) were coloured in this way, for the triskeles points to Celtic influence. On the altar plaque from the River Thames ³⁵. leaves of a similar shape are blue in colour. The elaborate leaf scroll on the altar to Minerva from Birrens (137), presumably followed the pigments of the plaque from which it was copied. ³⁶.

The leaves of wine-scrolls at Neumagen follow the white-with-green-shading convention of other leaves there. The grapes are painted a light green, ³⁷. an indication that, then as now, these were the favoured products of the Moselle vineyards. Whether the fruit on British vine-scrolls was of the same variety and how it is impossible to determine.

Garlands of leaves were probably treated in much the same way as leaves.

The bay leaf designs which occasionally decorate the bolsters of altars are similar in shape to the scales which appear on bolsters and pilasters on the Neumagen grave monuments. These scales are painted green and yellow, an indication perhaps of their vegetable origin. Sometimes the scales are parti-coloured; the area on one side of a red mid-rib is left white; the other is painted green or yellow. ³⁸. Sometimes the scales are wholly green or golden-yellow. ³⁹. They are usually outlined in red. From these indications it is possible to visualise the appearance of the bay leaf bolsters of altars.

The semi-dome featured on the Birrens altar to Discipulina (136) finds an echo in the shell canopies of many funeral monuments as well as in the semi-circular exhedra in the Street of the Tombs at Pompeii. ⁴⁰. The latter is gaily painted; the shell is white; the rest of the vault is blue. More adventurous colour schemes appear at Neumagen. Red, green and yellow stripes, together with a red meander and a row of dabs, decorate the white shell of one monument, while tiny red dashes bespeckle the whole canopy. ⁴¹. A tombstone from Mainz ⁴². displays another mode of ornamentation; on a plain white canopy, an illusion of ribs is created by alternating stripes of green and yellow. The Birrens motif is small and

is the central feature of an elaborate fascia. If the doors of the semi-dome are of metal, they would be coloured yellow as would the small baluster shafts below the doors, if these are to be thought of as representing a balustrade. Patterns of green, red and yellow would therefore seem artistically appropriate to the shell canopy itself, rather than the simple blue and white coloration of the Pompeian exhedra.

The mouldings of the Neumagen grave monuments are much more elaborately decorated than those of British altars. Cymas are rich with acanthus motifs, and astragals with bead and reel designs. In colouring, the red outline is ubiquitous; hollows are usually painted green; ⁴³. There is no surviving ornamentation as ambitious as this on altars in Britain. For the most part, mouldings are undecorated by carved relief and Neumagen parallels are therefore of limited value. A clue, however, is given by an altar from Carnuntum. ⁴⁴. Here the capital mouldings, fillet, cavetto, stepped-in fillet, still retain their paint; the cavetto is dark red while the lower fillet is painted yellow; immediately below the mouldings, the top of the shaft is coloured red for the space of about half an inch. This colouring suggests that the tinting of mouldings was designed to intensify that modulation of light and shade upon which their effectiveness depends. Working on this principle, it seems therefore that the projecting surfaces of mouldings were painted in a light colour such as yellow, or were left white, while the hollows were made to recede further by the application of a darker pigment, perhaps red as at Carnuntum, or green as at Neumagen.

An interesting and thought provoking feature of the painted stones of Neumagen is the way in which colour was used to remedy deficiencies in carving. Just as plaster might conceal inadequate rubbing down of the stone, so paint might fill in items omitted from the relief. The most striking example of this is the figure of a man only one of whose legs is in relief; the other is merely painted in. ⁴⁵. These painted additions

open up the possibility that patterns may have been applied directly to surfaces which are now completely unadorned. Support is given to this suggestion by a gravestone from Vienna ⁴⁶. on which a dark red chevron pattern is painted on to the stone without underlying relief. It thus becomes possible to imagine the fasciae of altars bright with designs of meanders, scrolls, leaves and geometrical motifs.

For the colouring of these geometrical motifs, enamels may have provided the inspiration, for Celtic craftsmen, who increasingly made up the bulk of the Roman army in Britain, had long been expert in the decoration of flat surfaces and, while following Continental conventions in the colouring of figures and objects, might elsewhere be expected to reflect the colour schemes of the brightly enamelled metalwork in which their fellow countrymen excelled and which was also imported into Britain from Gallia Belgica. ⁴⁷. In one case at least, a mason drew his motif directly from a metalwork design. ⁴⁸. The geometrical patterns which appear on northern altars can all be paralleled from enamelled fibulae. In particular, the dragonesque brooches, produced in Northern Britain probably from about the mid-first century A.D. until the latter part of the second century, ⁴⁹. display almost every type of geometrical motif. ⁵⁰. In addition, bow and disk brooches, dress fasteners, and enamelled vessels have their contribution to make.

The concentric rings which often decorate the ends of bolsters resemble some disk brooches. An example from Corbridge ⁵¹. is in red and blue, the same colours as encircle the central enamel, now missing, of a dress fastener from Newstead. ⁵². These two are the tints usually used to mark the eye of animal brooches, as at Lamberton Moor ⁵³. and Faversham, Kent. ⁵⁴. Bolster ends with sunk centres or centre bosses may have been treated similarly. The incised roundels to be seen on altars at Maryport (301, 304) are reminiscent of those on a disk brooch from Newstead. ⁵⁵. On the brooch, the mullets are red with a darker centre and are set in a pale blue ground. A fibula from Silchester ⁵⁶.

is of the same design but has different colours. Here the field is green and all the mullets except the central red one, are blue. The geometrical rosettes familiar from bolster ends appear on a brooch from Castor, Northants., ^{57.} where the colouring is blue on a yellow ground.

Leeds points out that towards the close of the first century A.D., triangular- and lozenge- shaped cells supplemented the squares commonly used in enamel work. ^{58.} These patterns were used on altars by northern masons at a time when they were fashionable in enamels. The double row of triangles on the Bartlow vase, ^{59.} perhaps a second-century British product, ^{60.} has groups of twos and threes coloured red, green and blue, alternating with an upper row in which the bronze is left in its natural state. If a pattern like this were transferred to stone work, and the conventions touching metal held, the upper row of triangles would be coloured yellow. Yellow was a favourite colour with the Celts ^{61.} and it appears, alternating with red, on a series of triangles decorating an enamelled bronze mount from Chepstow. ^{62.} Other colour combinations are of course possible: red and blue, ^{63.} yellow and green, ^{64.} blue and green, ^{65.} blue, red and green. ^{66.} In spite of a relatively limited palette the choice open to a mason was varied.

Red and blue seem to have been favourite colours for lozenge motifs, ^{67.} although a bow brooch from London ^{68.} is enamelled in red and white. The lattice pattern which sometimes appears on the capitals of altars (162, 164) may have resembled similar designs on dragonesque fibulae. ^{69.} In this connection it is perhaps significant to note that one (430) of the three altars (162, 164, 430) and two of the four fibulae ^{70.} with this motif come from Corbridge. A fine cock, possibly found in Cologne, ^{71.} displays a similar reticulation in red, yellow, green and blue. In this ornamentation on altars, the outlines were probably picked out in bright red, or possibly yellow if the mason were consciously copying from a metal original.

Cable moulding may have had its twisted flutes or incisions outlined in red or may, like the rim of the Bartlow vase, ^{72.} have been gay with groups of flutings alternating in shades of red, green and blue.

The Linlithgow patera ^{73.} suggests a possible colour scheme for a moulding such as occurs on an altar from Benwell (177). The patera has two widely separated bands of red enamel, each traversed by a wavy metal line. Translated into paint this becomes a yellow moulding on a red ground, a suitably bold treatment of a simple pattern.

It is difficult to know in what colour crescents, and unusual motifs on altars, were tinted. If the device is taken from the crescents on Roman standards or from lunate gold ornaments, one would expect it to be yellow. If the figure has a symbolic significance and is intended to represent the moon itself, then white or pale yellow would be more appropriate. In any event the outlines were no doubt accentuated by red paint and it seems likely that incised crescents were tinted in the same colour. Incised swastikas may have been treated in the same way. The guilloche carved on the front of an altar from Housesteads (211) may have had red paint in the grooves with additional bands of colour within the twisted strands. White and blue, as at Rudston villa, ^{74.} spring to mind as one possibility.

In conclusion it must be emphasised that apparent absence of decoration in no way proves that an altar was not originally bright with polychrome designs. Even those altars which by their incised and projecting motifs testify to ornamental schemes, may have had painted additions. The incised semi-circles embellishing the capital of an altar from Housesteads (218), for instance, may well be the framework for a strip of egg and dart decoration, the darts being painted on to the stone. The fascia might thus have appeared as mainly white with DEO in red, the incised eggs in red also, with yellow darts, as on an acanthus ornament

at Neumagen. ^{75.} The ovolo on an altar from Corbridge (709) may have been treated in this way. Indeed it is to be expected that the painted decoration of well-carved altars equalled in technique the execution of the sculpture. The present ornamental condition of an altar is no real indication of its former appearance.

Although paucity of evidence makes any attempt to reconstruct the pigmentation of altars in Northern Britain largely speculative, the two most obvious sources of information about coloured motifs may perhaps serve as a pointer to the original appearance of newly-dedicated altars.

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8. Mentioned by Peterson, H., JRS XLV, 57.
9. Cat. Ant., 113, no. 278.
10. Massow, 121-22, no. 173.
11. Ibid., 39-41, no. 2.
12. Ibid., 167, no. 185.
13. Ibid., 276.
14. Ibid., 125, no. 178; Taf. 65.
15. Ibid., 44.
16. Ibid., 277.
17. Ibid.
18. Ibid.
19. Ibid.
20. Ibid.
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24. 277.
25. Ibid., 78-9, no. 12.
26. Ibid., 276.
27. Ibid., 89, no. 43; 197-8, no. 261.
28. 276.
29. Richmond, I.A., Roman Britain (Britain in Pictures, London, 1947), plate facing 32.

30. Massow, 276.
31. Bertrang, A., Le Musée Luxembourgeois, edit. 3 (Arlon, 1960), 90, no. 12; plate , 62.
32. Massow, 278.
33. Ibid.
34. Anderson, J., PSAS XIX, 46; plate I facing 46.
35. Richmond, I.A., Roman Britain (Britain in Pictures, London, 1947), plate facing 32.
36. See p.92f
37. Massow, 276; eg. 160, no. 184.
38. Ibid., 167, no. 185; 156, no. 183.
39. Ibid., 182, no. 213.
40. Dyer, T.H., Pompeii: its History, Buildings and Antiquities (London 1867), 527-8; fig., 527.
41. Massow, 172-4, no. 186.
42. Lindenschmit, Mainzer Zeitschrift III, 137; Taf. III.
43. Eg. Massow, 191, no. 248; Taf. 68.
44. Swoboda, E., Carnuntum, Seine Geschichte und Seine Denkmäler (Graz-Köln, 1964), Taf. XXXIX, 1.
45. Massow, 160, no. 184.
46. Neumann, op. cit., Abb. 24.
47. Henri, 135.
48. See p. 92f.
49. Feachem, R.W. de F., Ant. J. XXXI, 34.
50. Ibid., 37, fig. 2.
51. ed. Forster AA³ IV, 299.
52. Curle, 332, no. 9; plate LXXXIX, 19.
53. Anderson, J., PSAS XXXIX, 375-6.
54. Smith, R.A., PSAL² XXII, plate facing 59, fig. 2B.
55. Curle, 330, no. 1; plate LXXXIX, 14.
56. Ibid.

57. B.M. Guide (1951), 22, no. 46; fig. 12, 46.
58. Op. cit., 112.
59. Gage, Arch. XXVI, 303; plate XXXV.
60. Henri, 114-5.
61. Leeds, op. cit., 130, note 2.
62. Ibid., fig. 20(b) facing 54; 98, note.
63. Dress fastener: Charlton, AA⁴ XI, 203-4; plate XXIX, E, fig. 1.
64. Linlithgow patera: PSAS XIX, 46.
65. Braughing cup: ibid., 47.
66. Maltboek cup: ibid., 48.
67. Eg. from Faversham PSAL² XXII, plate facing 59; fig. 2B 4.
68. London in Roman Times (London, 1930), 95, no. 26; 97, fig. 28.
69. Eg. Ant. J. XVIII, 149, fig. 3, G2.
70. Feachem, Ant. J. XXI, 32.
71. Aus Rheinischer Kunst und Kultur (Bonn, 1963), 72, no. 29; plate facing 40.
72. Gage, Arch XXVI, plate XXXV.
73. Anderson, J., PSAS XIX, 46; plate facing 46.
74. Richmond, I.A., The Roman Pavements of Rudston, East Riding (Hull, 1963), plate 1 and page facing.
75. Massow, 191, no. 248; Taf. 68.

Chapter XI

Influences Discernible in the Sculptured Decoration of North-British Roman Altars.

In few periods of history can the influx of people of disparate origins into Britain have been greater than in the years from A.D. 43 to the final severance of links with Rome. The newcomers were soldiers and imperial officials, or merchants and craftsmen who saw opportunities of exploiting new markets and new demands. They came from Italy and the older colonies, from provinces more recently conquered and from beyond the bounds of the Empire. Although the greatest increase in population came at, and in the years following, the Conquest, immigration may have continued on a smaller scale throughout the period. In spite of increasing local recruiting to the army, it is clear that soldiers from outside Britain served in the province in both the second and third centuries; the citizens of Italy and Noricum at Castlecary (35) in the earlier period and the vexillation of Suebs at Lanchester in Gordian's reign (251) will illustrate this point. Civilians probably entered the province in small numbers and are more difficult to trace; a few inscriptions in Greek,^{1.} coffins^{2.} and tombstones erected in memory of persons of foreign origin or with names that are not British,^{3.} and sculpture executed in Palmyrene style^{4.} are all that remain of them. Nevertheless, they must have flocked to Britain in considerable numbers; Tacitus' description of London in A.D. 60^{5.} is proof of that.

All these immigrants brought with them differing traditions of design and decoration. Yet they had all, in greater or lesser degree, been subjected to the unifying influence of classical ideas, and it would be unwise to expect any violent departure from the accepted practices of Greece and Rome in the carving of votive altars in Britain.

There seems to be no evidence of the erection of these altars in Britain before the Roman period nor does there seem to have been any deeply-rooted tradition of stone-carving there. The first altars to be fashioned

in Britain therefore, must have been the work of immigrants. The form of the altars is essentially classical, based upon the three elements of columnar and pedestal design: capital, shaft and base. Even those carved by non-Roman craftsmen in the auxiliary units preserve these features. This is not surprising, for they were probably instructed by legionaries.⁶ Moreover, the design of altars for regimental ceremonial would no doubt have to be approved by prefects or tribunes from Italy or the older provinces, whose tastes had been formed in a classical environment. As local recruiting became more general in the second century, the army, always conservative, doubtless continued in the main to work to traditional patterns, although as time went on and templates wore out or were lost and never replaced, modifications were made. As has been shown already, in the third century, chamfers tended to replace elaborate mouldings, and bolsters gradually became absorbed into the capital. This might be seen as a barbarization of military sculpture, but it is clear that classical types continued in use, as a Legio XX altar dated A.D. 262-266 (175) attests. The dating of this stone rests upon the inscription and it might be argued that it has been cut upon an earlier altar reused in the later period. Nevertheless the incorporation of a running boar, the badge of Legio XX, as the central feature of the decorated base seems to establish the altar as the product of a legionary workshop and to suggest that the inscription is contemporary with the altar; it would be surprising indeed if men of Legio XX chanced upon an abandoned, well carved, uninscribed altar from their own workshop in a relatively isolated spot on Hadrian's Wall. That this altar was erected by legionaries may be significant, for it is in the legions that old traditions might be expected to survive longest.

In the civil sphere, the first masons who came to Britain were probably Gauls whose forebears had learned their craft under Greek and Roman inspiration. At a later stage, Britons must have been accepted as

apprentices and in time set up in business on their own account. Aliens other than Gauls also set up workshops in Britain: the Palmyrene craftsman working at South Shields is well known⁷ and there may well have been others of different and equally exotic origins. The form of altars from civilian workshops is no less classical in conception than that of those from military sources, although the stylistic evolution referred to above may be discerned amongst this group of altars also. The function of altars is the key to their form; all that is really required is a flat top on which to lay offerings or light a fire and, as long as this is preserved, there is no need to maintain traditions of elaborate bolsters, focus and mouldings. Hence the simplification and even elimination of these features in the third century, while the pedestal design is retained.

It is in the sculptured decoration of the altars that greater evidence of non-classical influences might be expected. The increased numbers of native soldiers in both the legions and the auxiliary regiments, and the presence in the third century of new units such as the Numerus Barcariorum Tigrisiensium (336) and the Cuneus Frisiorum Vercovicianorum (243), no doubt reinforced non-Roman ideas about design. Similarly, as the Roman occupation wore on and more British masons were at work, the impulse towards Celtic decorative forms might be expected to accelerate. Yet altars rarely exhibit ornamental systems that are purely Celtic in design and it is remarkable that they retain so much that can be traced directly to the Mediterranean world.

In their ornamental craftwork, the Celts had little tradition of representing natural forms, although these play an important part in classical sculpture. Their art was linear rather than plastic. Hence the naturalistic motifs to be found on altars spring from classical models. The figures of deities, often with special attributes, a non-Celtic conception, are usually standardised types which might be

paralleled in many parts of the Roman world. The five altars from Old Penrith depicting respectively Jupiter, Mars, Apollo, Mercury and Venus are excellent examples (571-575). In Northern Britain the execution of figures such as these is often crude and unlikelike (ag. 42, 56); the relief is frequently low and attempts at a plastic rendering of the drapery usually fails. Nevertheless the inspiration is clearly drawn from Mediterranean traditions. In some of the figures, however, a glimpse of another world may be seen. The neck of a figure of Hercules on an uninscribed altar from Castlesteads (691) is ringed by a torc, a token of riches and an ornament frequently worn by Celtic gods.⁸ Here is visual evidence of the syncretism so frequently to be observed in religious inscriptions. Celtic emphasis upon the importance of the head⁹ is perhaps reflected in the large crania of the figures on an altar from Whitley Castle (329), although caution is needed, for this may be the result of bad draughtmanship rather than of conscious iconography.

Classical sculptors made use of motifs based on living creatures. Motifs of this kind are not uncommon in Northern Britain, as has already been shown.¹⁰ Dr. Ross has demonstrated¹¹ that most of these creatures constitute an essential element in pagan Celtic belief, so that their use as motifs may spring from Celtic, rather than from Roman, religious symbolism and their carving may perhaps be seen as an example of the union of Celtic ideas with Mediterranean stylistic traditions and techniques. However, the wisdom of equating all these creatures with native cult-animals, would seem to be in doubt.

Vegetable motifs drawn from the Mediterranean world appear in Britain; the vine scroll (68), swags (168) and wreaths (168), the palm branch (41) and the bay leaf (168) used to decorate bolsters, do not differ significantly from those to be found on altars from other parts of the Empire. All these motifs are usually in low relief.

Occasionally, and perhaps here Celtic influence may be detected, the motif is incised; the dolphins on an altar from Carrawburgh (343) and the bay leaf on the bolsters of two altars from Newcastle (23, 24) may be cited as examples. The cordate leaf design based on the Karlsruhe plaque ^{12.} (137) represents a half-way stage between purely classical and purely Celtic conventions; the leaves are in relief but the scheme is clearly not drawn from observation of nature, for on one side of the die a stiff schematic branch is depicted, while on the other, the plant appears to be of the climbing variety with leaves springing irregularly from the stalks.

The naturalistic carving of rosettes is rare in Northern Britain, although common elsewhere. One example, the flower with eight bi-lobed petals on an altar from Birrens (136), is of exceptional interest. Apart from a tombstone from Cirencester, parallels from the western frontiers of the Empire seem to be lacking. Identical motifs, however, are to be found in the Levant, as stated above. ^{13.} Is there then on this altar evidence of the hand of a mason reared in Syrian traditions of ornament? The suggestion receives support from the focus, which takes the form of a two-handled dish, similar to, but by no means identical with, that of an altar set up at Carvoran in A.D. 136-138 by Cohors I Hamiorum Sagittariorum (97). This unit was originally raised in Syria as the name indicates, a fact still remembered in Calpurnius Agricola's day when the commandant of the regiment erected an altar to Dea Syria (99). This suggests that, until at least the latter part of the second century, the unit was kept up to strength by continued recruiting in Syria. It is a pity that this second altar is at present in a position which allows no examination of its focus, for this might confirm the view that the two-handled dish form is of eastern origin and add weight to the suggestion that the mason responsible for the Birrens altar came from Syria. In turn this might explain the elaborate decoration of the fascia and the curious feature of rosettes

carved on the sides, as well as on the ends of the bolsters. Nor is the suggestion unlikely, for inscriptions attest the presence of a beneficiarius whose dedication of an altar to Dea Syria (695) may well indicate his native land unless he intended to identify the goddess with Julia Domna, as in an inscription from Carvoran.¹⁴ This seems improbable. In addition to the men of Cohors I Hamiorum and the beneficiarius, there may have been many other Syrians in the army of Britain. The Nabat~~ean~~ "crow-steps" on an altar from Halton Chesters (497) may point to this. Nor are civilians lacking and it is not beyond the bounds of possibility that an immigrant from the east enlisted in the auxiliaries after he arrived in Britain. A substantial eastern element in Northern Britain is indicated by the altars to Tyrian Hercules (494) and Astarte (493) found at Corbridge, deities whose worshippers were probably eastern merchants or soldiers,¹⁵ while the wide popularity of the cult of Jupiter Dolichenus in the military zone may be a further pointer to the presence of Levantines. Oriental influence in the religious sphere is of course indicated by the worship of the Persian Mithras and the Asian Magna Mater; altars dedicated to these deities display appropriate iconography (eg. 41, 269, 495).

The mouldings used to make the transition from capital and base to the shaft are clearly based on classical models, although the preference for the *cyma reversa* as against the *cyma recta* is noteworthy and appears to reflect the essential provincialism of masons working in Northern Britain; they seem to have had little real understanding of the function of mouldings as elements in an architecturally conceived structure such as an altar. The decoration of mouldings, where it is attempted, follows Mediterranean conventions; the ovolo is embellished by egg and dart designs (149), the torus by bead and reel (374) and the *cyma* by palmettes (168, 206).

Architectural motifs (151, 232, 233), too, are drawn from the classical world and so are the sacrificial implements and vessels carved on the shafts and the two-handled canthari which occasionally appear. The curved "gables"

on one or two altars (eg. 343, 411) may represent Celtic adaptations of a classical design or may simply indicate a devolution of style.

Many motifs cannot with certainty be attributed to any one source for they are to be found in widely separated parts of the world. The swastika, for instance, occurs in America as well as in Tibet and Europe;^{16.} roundels decorated with concentric rings, or with geometrical designs made with compasses, are found in both Eastern and Western Europe, in the Mediterranean and in the North. Nor are these confined to any one historical period and it is therefore impossible to assign them to any region or racial group. They are simply patterns which anyone with a device for drawing circles could discover.

Celtic love of stylised forms may explain the popularity of geometrical rosettes as ornaments for the ends of bolsters,^{17.} in preference to the more naturalistic types frequent on Rhenish altars. Similarly, patterns based on lozenges, chevrons and semi-circles may reflect Celtic taste, for they may all be paralleled in enamel work.^{18.} Spirals (23) and S curves (206) may also spring from the Celtic world and the affection for groups of three is of native rather than of classical origin,^{19.} although it must be remembered that the chief deities of Rome formed a triad. The triskeles on the capital of the Mithraic altar dedicated by M. Simplicius Simplex at Carrawburgh (269) and the three leaves decorating the pediment of an altar from Corbridge (709) smack of the Celtic North in contrast to the sculptured figures on each stone. As stated above,^{20.} incised designs may point to Celtic influence, even when these are of classical motifs, and it is impossible to estimate to what extent the colouring of the altars reflected Celtic love of bright hues and curving patterns of great intricacy.

The sculptured ornament of North British altars therefore, like many of the religious dedications, mirrors the fusion of the classical, oriental and Celtic traditions which came together in Roman Britain.

Chapter XI

1. Eg. RIB 758.
2. RIB 678; RIB 687.
3. Eg. RIB 758; RIB 955; RIB 1828.
4. RIB 1064; RIB 1065.
5. Annals XIV, c.33.
6. See p. 179.
7. Smith, AA⁴ XXXVII, 203-10.
8. Ross, PSAS XCI, 19.
9. PSAS, XCI, 21.
10. See p. 97f.
11. PCB, 234-353.
12. See p. 92f.
13. See p. 96.
14. RIB 1791.
15. Harris op. cit., 96.
16. Chambers Encyclopaedia, new edit. (London, 1959 with supplementary information 1961), XIII, 332.
17. See p. 80.
18. See p. 162f.
19. Powell, T.G.E., The Celts, revised edit. (London, 1959), 124.
20. See p. 173.

Chapter XII

The Transmission of Designs.

The monumental stone masons of Roman Britain may be divided into two groups: civilians catering for the demand for tombstones, dedicatory inscriptions, votive slabs and altars, and military personnel producing the building inscriptions, altars and slabs required by their units. They too may have carved tombstones for their fellows. Both groups probably provided ornamental building features such as decorated capitals, and both may have attempted more ambitious projects such as free-standing sculptures.

Civilian masons in Northern Britain probably worked in independent workshops, perhaps attached to their own houses, and no doubt employing relatively few craftsmen. It seems likely that the craft was to a certain extent hereditary.¹ Beginners would be trained in the necessary skills and techniques by example, precept and practice, graduating with experience to the more difficult tasks. Within each workshop there would be standard styles and designs which would be handed on to newcomers. The first civilian masons in Britain must have brought with them knowledge of the accepted iconography of the classical world and this too would be handed down, although in time its significance might be forgotten and distortions might creep in.

In the army, votive altars and religious slabs attest the piety of both legionary and auxiliary troops. But inscriptions do not always give a guide to the type of soldier responsible for the carving. That the legions had trained and skillful masons in their ranks cannot be questioned. At the time of the Conquest these specialist craftsmen, drawn from Italy and the Roman towns of Gallia Narbonensis and Baetica,² would be familiar with the sculpture and artistic conventions of the Graeco-Roman world and might be expected to perpetuate classical mouldings and motifs. Furthermore, it is easy to see that in the legions, with their large

numbers of troops and permanent fortresses containing the accommodation and equipment necessary for the practice of many crafts, these patterns and styles could be handed on from one generation of craftsmen to another in a continuous tradition.

With auxiliary units, from the beginning, the situation must have been different. These non-Roman-citizen troops, often drawn from newly-conquered provinces or from areas where romanisation was scarcely more than a veneer, presented to Rome the primary task of integrating them into her military system. Problems of language must have been formidable. Professor Birley has drawn attention to the fact that two prefects of Cohors I Hamiorum (97, 98) in Britain may have come from the Greek-speaking East and were therefore more likely than Westerners to be able to communicate with their troops.³ Problems of literacy must also have been immense, while the need to adapt drill and battle tactics to the requirements of the special weapons used by some auxiliary soldiers, as for instance, the Dacians⁴ and Hamians (97), indicates that those responsible for the training of newly-raised troops must have had an imagination and flexibility of mind not always associated with army officers.⁵ But military training formed only one part of the romanising process. Along with the routine exercises of parade-ground and field went the practice of crafts such as those of the builder and metal-smith, and the introduction of religious ceremonies designed as a focus of loyalty to the Empire and its head. Tacitus makes it clear that the responsibility for the initial training of auxiliary recruits and for the creation of esprit de corps rested with a centurion and a number of soldiers seconded to the unit.⁶ Among the skills essential to Roman military life was that of stone carving which was necessary if Emperor and gods were to be honoured by the erection of building inscriptions and the dedication of altars. In auxiliary units these lettered stones could be provided in four ways: peripatetic legionary masons could visit the auxiliary regiments to carve the altar dedicated annually to Jupiter

Best and Greatest and to execute other needful inscriptions; or, legionary masons might, in the fortress workshops, prepare altars and inscriptions for all their associated auxiliary units, distributing them from this central depôt; or, civilian masons might be commissioned to carry out the work; or, auxiliary craftsmen might themselves be trained to do it. Of these suggestions, the last seems the most acceptable, for the first two involve an inordinate amount of legionary time and effort; the third is hardly likely to have been considered as long as military discipline was rigorous, for regimental pride would scarcely allow the task of carving an official altar to be delegated to a civilian. The second suggestion is ruled out on other counts also: it is clear that most altars are carved in local stone, making centralised production in centres remote from the forts unlikely, while problems of transportation, although not insuperable, add to the impracticability of this arrangement. Moreover, if legionary craftsmen had been responsible for the execution of all military altars and slabs, a much closer stylistic connection between these carved stones would be now apparent. Thus it seems that auxiliary recruits must have been selected for training as masons. Unlike the legionaries of the first century, most auxiliary soldiers could fall back on no well established native tradition of stone-carving and had to be introduced to a craft unfamiliar in material, tools and techniques. In Britain, for example, before the Conquest, Celtic craftsmen, although expert in metal work and enamels and with well established types of ornament, had not apparently explored the possibilities of stone as an artistic medium to any great degree. The auxiliary masons selected for specialist training might be sent to learn their craft in the workshops of a legionary fortress or perhaps in those of an auxiliary unit already well-established. Alternatively they might be trained by one of the experienced soldiers detailed to work with the newly-enlisted men. This training would bring the auxiliaries into contact with Mediterranean traditions of stone-carving and with the patterns and styles in the

legionary repertoire. Once skills were acquired, designs would be transferred from man to man within the normal framework of a unit's life and activity.

The close connection between the legions and their associated auxiliary units is well illustrated by the use of templets issued, as shown above, ⁷ as practical tools for the use of masons. No doubt they accompanied the supplies of chisels, compasses and rulers which were drawn from legionary stores. Another clue to the dependence of auxiliary styles on those of the legions is provided by the cigar-shaped bolsters, an unusual feature occurring on altars of auxiliary units associated with Legio VI. ⁸

One further point about auxiliary masons ought to be made. In regard to stone-carving they were unfavourably placed as compared with their legionary counterparts, for the legions with their large complement of skilled craftsmen could always expect to maintain fairly high standards of work and a continuous tradition. By contrast, auxiliary units of five hundred or a thousand men had to select their masons from a much more restricted field and might have spans of time when no really first-rate craftsman emerged. The risk of losing a skilled man in battle was an additional hazard for auxiliary troops, whose rôle was to bear the brunt of the fighting so that the legionaries might be spared; one mason the fewer out of five hundred men is more significant than one out of six thousand. On the other hand, an able mason might by his own example and the training he gave to others, set his seal on the sculptural achievements of his unit for many years. For these reasons standards of stone-carving might be expected to fluctuate more violently in auxiliary units than in the legions.

Although in the main it seems likely that patterns were handed down within the military or civilian family, this in no way precludes the possibility of the introduction of new styles and motifs. Gifted

men would, from time to time, pick up new ideas, either from observation of other sculptured stones or from the study of objects made in or imported into Britain. Sometimes craftsmen must have worked out motifs which were completely original. When new designs were successful they were no doubt taken into the standard pattern-repertoire of the firm or unit. In the army new motifs might spring from the suggestion of the commanding officer, as perhaps at Maryport (310, 311), or from the adaption of motifs from the mason's homeland, as perhaps at Birrens (136, 137) or Halton Chesters (497). Or they might result from visual experiences gained while serving in other provinces, as perhaps Cohors II Tungrorum in Raetia in the second century. 9.

There is a generally held view that designs were transmitted by copy-books, perhaps commercially produced, which circulated widely through the Roman Empire. 10. Military pattern books, or at least books of masons' working drawings must have been brought to Britain at the Conquest. Immigrant craftsmen too would bring their own copy-books with them. Throughout the Roman period, commercially produced books of designs may have been peddled by immigrant traders, and some of these books may have originated in the Roman provinces. Such copy-books would give the basic outline of motifs based on human figures, mythological scenes and vegetable ornaments and perhaps included sketches of decorative gutti, paterae and canthari. While it seems likely that the patterns for elaborate motifs were transmitted in this way, there seems little evidence to suggest that copy-books played a great part in influencing the basic style of votive altars in Northern Britain. Indeed there are indications that the army of Britain had its own idiosyncratic designs. For instance, the affection for the *cyma reversa* moulding as the main element separating shaft from capital and base is peculiar to Britain and out of keeping with classical usage;

altars from Mediterranean workshops and from the Rhine and Danube frontiers usually support the projecting cornice by a cyma recta moulding. Again, as has been demonstrated above, ^{11.} these cyma reversa mouldings were set out with the aid of templates apparently issued as standard equipment. Soldier-masons for the most part were probably content to carve their altars with the minimum of effort; it was easier to use the templates provided than to make the new ones which new patterns might require. Furthermore, the unorthodox use of the cyma reversa moulding is readily understood once the method of training auxiliary masons is established; they perpetuate the mouldings they have learned whether or not they accord with classical ideas; for them the cyma reversa is appropriate for they know no other. Again, had copy-books been widely consulted for the design of votive altars, it might have been expected that such features as secondary capitals, bolsters decorated with large bay-leaves and the four-petalled naturalistic rosette, all common in Gaul, the Germanies and Raetia, would appear more frequently in Northern Britain. The converse is the case and it must be concluded that, in the army at least, the basic designs for altars were not taken from widely-distributed copy-books. It is less easy to see whether this is true of altars from civilian workshops. Yet here, as in the military sphere, it seems likely that basic designs were handed down in the course of training. Thus, while ambitious motifs may have been copied from pattern books, it seems likely that the actual shape of altars was usually determined by workshop tradition transmitted from generation to generation of craftsmen, and preserved in working drawings and sketches.

Chapter XII

1. Toynbee, J.M.C., Art in Britain under the Romans (Oxford, 1964), 12.
2. Parker, H.M.D., Roman Legions (Oxford, 1928), 170.
3. RBRA, 169-70.
4. RIB 1909; RIB 1914.
5. As Tacitus, Agricola, c. 9.
6. Ibid. c. 28.
7. See p. 62f.
8. See p. 28f.
9. Radnóti, Germania 39, 94, 98; CIL XVI, 94.
10. Toynbee, J.M.C., Art in Britain under the Romans, 10-11.
11. See p. 62f.

Table 1Types of Fascia on Datable Stones

<u>Type</u>	<u>Pre-Severan</u>	<u>Severan or Later</u>	<u>Total</u>
1. Narrow	14	8	22
Medium	13	16	29
Deep	14	8	22
2. "Moulded"	20	5	25
"Enlarged"	18	49	67
No Fascia	6	5	11
Unknown	3	5	8
	<hr/>	<hr/>	<hr/>
	88	96	184

Table 2Types of Focus Mount on Datable Altars

<u>Type</u>	<u>Pre-Severan</u>	<u>Severan or Later</u>	<u>Total</u>
1.	24	13	37
2.	23	7	30
3.	1	3	4
4.	0	1	1
5.	9	3	12
	57	27	84

Table 3Types of Central Profile of the Capital

<u>Type</u>	<u>Pre-Severan</u>	<u>Severan or Later</u>	<u>Total</u>
1.	29	28	57
2.	9	1	10
3.	8	0	8
4.	4	0	4
5.	5	0	5
6.	4	4	8
7.	1	4	5
8.	1	1	2
9.	2	0	2
10	8	38	46
11	0	1	1
Odd	0	1	1
Damaged	15	20	35
	86	98	184

t. → X1329

RIB 1329 is not included.

Table 5

Cyma Reversa Mouldings: Ratio of Chords c:d on
Datable Altars

	<u>Pre-Severan</u>	<u>Severan or Later</u>
Less than .5	2	1
.5 to .9	18	8
1.0 to 1.4	12	8
1.5 to 1.9	3	4
2.0 to 2.4	1	2
	<hr/>	<hr/>
	36	23

One moulding per stone.

Table 6

The Heights of Altars and Pedestals bearing
Carvings of Sacrificial Implements and Vessels on the
Shaft

Under 10 inches:	3
10 to 20 inches:	24
20 to 30 inches:	14
30 to 40 inches:	22
40 to 50 inches:	20
Over 50 inches:	12
Damaged:	21
Lost:	13
	<hr/>
	129

Heights taken to the nearest inch.

Table 4aCyma Reversa Mouldings: Ratio of Radius of Convex : Concave Arcs on DatableAltars

	<u>Pre-Severan</u>		<u>Total</u>	<u>Severan or Later</u>		<u>Total</u>
	<u>Intersect.</u>	<u>Tangent.</u>		<u>Intersect.</u>	<u>Tangent.</u>	
.2:1	5	1	6	2	2	4
.3:1	3	3	6	1	0	1
.4:1	10	3	13	4	0	4
.5:1	2	2	4	2	0	2
.6:1	3	0	3	2	2	4
.7:1	6	1	7	1	1	2
.8:1	1	3	4	0	2	2
.9:1	1	4	5	0	1	1
1.0:1	0	2	2	1	5	6
1.1:1	0	3	3	3	3	6
1.2:1	0	0	0	0	0	0
1.3:1	0	0	0	0	1	1
1.4:1	0	2	2	1	3	4
1.5:1	0	0	0	1	1	2
1.6:1	0	1	1	0	0	0
1.7:1	0	0	0	0	1	1
1.8:1	0	0	0	0	0	0
1.9:1	0	0	0	0	1	1
2.0:1	0	1	1	0	0	0
2.1:1	0	0	0	0	0	0
2.2:1	1	0	1	0	0	0
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	32	26	58	18	23	41

Ratio of Radius of Convex : Concave Arcs R1:R2I. Pre-SeveranA. Intersecting Arcs

	<u>Cat. No.</u>	<u>No. of Mouldings</u>
<u>.2:1</u>	81	1
	117	1
	28	2
	156	1
	Total:	<hr/> 5
<u>.3:1</u>	82	2
	99	1
	Total:	<hr/> 3
<u>.4:1</u>	81	1
	442	1
	24	2
	140	2
	35	1
	80	2
	156	1
Total:	<hr/> 10	
<u>.5:1</u>	116	1
	12	1
Total:	<hr/> 2	
<u>.6:1</u>	23	1
	16	2
Total:	<hr/> 3	
<u>.7:1</u>	117	1
	138	2
	139	2
	173	1
Total:	<hr/> 6	

Ratio of Radius R1:R2 cont.

	<u>Cat. No.</u>	<u>No. of Mouldings</u>
.8:1	173	1
		<hr/>
		Total: 1
.9:1	35	1
		<hr/>
		Total: 1
2.2:1	54	1
		<hr/>
		Total: 1
B. <u>Tangential Arcs</u>		
.2:1	177	1
		<hr/>
		Total: 1
.3:1	32	1
	4	2
		<hr/>
		Total: 3
.4:1	23	1
	5	2
		<hr/>
		Total: 3
.5:1	177	1
	172	1
		<hr/>
		Total: 2
.6:1		0
.7:1	88	1
		<hr/>
		Total: 1
.8:1	137	1
	639	2
		<hr/>
		Total: 3

Ratio of Radius R1:R2 cont.

	<u>Cat. No.</u>	<u>No. of Mouldings</u>
.9:1	137	1
	172	1
	3	2
		<hr/>
	Total:	4
1.0:1	206	1
	89	1
		<hr/>
	Total:	2
1.1:1	261	1
	115	1
	136	1
		<hr/>
	Total:	3
1.2:1		0
		<hr/>
	Total:	0
1.3:1		0
1.4:1	396	1
	171	1
		<hr/>
	Total:	2
1.5:1		0
1.6:1	136	1
		<hr/>
	Total:	1
1.7:1		0
1.8:1		0
1.9:1		0
2.0:1	114	1
		<hr/>
	Total:	1

Ratio R1:R2 cont.

	<u>Cat. No.</u>	<u>No. of Mouldings</u>
Total number of intersecting mouldings:	32	
Total number of tangential mouldings:	26	
	Total:	58

II. Severan or LaterA. Intersecting Arcs

.2:1	120	2
		Total: 2
.3:1	106	1
		Total: 1
.4:1	245 122	2 2
		Total: 4
.5:1	106	1
	291	1
		Total: 2
.6:1	121	2
		Total: 2
.7:1	244	1
		Total: 1
.8:1		0
.9:1		0
1.0:1	214	1
		Total: 1
1.1:1	239 243	2 1
		Total: 3

Ratio R1:R2 cont.

	<u>Cat. No.</u>	
1.2:1		0
1.3:1		0
1.4:1	244	1
		<hr/>
	Total:	1
1.5:1	243	1
		<hr/>
	Total:	1
 B. <u>Tangential Arcs</u>		
.2:1	280	2
		<hr/>
	Total:	2
.3:1		0
.4:1		0
.5:1		0
.6:1	200	1
	401	1
		<hr/>
	Total:	2
.7:1	143	1
		<hr/>
	Total:	1
.8:1	217	2
		<hr/>
	Total:	2
.9:1	291	1
		<hr/>
	Total:	1

Ratio R1:R2 cont.

	<u>Cat. No.</u>	
1.0:1	207	1
	212	2
	275	1
	276	1
	Total:	<hr/> 5
1.1:1	107	1
	211	1
	143	1
	Total:	<hr/> 3
1.2:1		0
1.3:1	401	1
		<hr/> 1
	Total:	1
1.4:1	211	1
	275	1
	266	1
	Total:	<hr/> 3
1.5:1	207	1
		<hr/> 1
	Total:	1
1.6:1		0
1.7:1	276	1
		<hr/> 1
	Total:	1
1.8:1		0
1.9:1	175	1
		<hr/> 1
	Total:	1
Total number of intersecting mouldings:		18
Total number of tangential mouldings:		23
	Total:	<hr/> 41

Table 4b

Cyma Reversa Mouldings: Ratio of Radius of Convex : Concave Arcs
on Datable Altars.

	<u>Pre-Severan</u>	<u>Severan or Later</u>
Less than .5	25	9
.5 to .9	23	11
1.0 to 1.4	7	17
1.5 to 1.9	1	4
2.0 to 2.5	2	0
	<hr/> 58	<hr/> 41

N.B. Not more than two mouldings per altar are included.

Appendix A.Altars and Pedestals datable by their inscriptions, in chronological order.

<u>Site</u>	<u>Unit Mentioned</u>	<u>Date</u>	<u>Cat. No.</u>	<u>RIB</u>
York	<u>Legio IX</u>	?Pre-Hadrianic	167	659
Maryport	<u>Coh. I Hispanorum</u>	Hadrianic	303	823
"	"	"	302	824
"	"	"	300	825
"	"	"	301	826
Carvoran	<u>Coh. I Hamiorum</u>	136-8	97	1778
Benwell	<u>Legio II</u>	138-61	177	1330
Maryport	<u>Coh. I Delmatarum</u>	"	89	810
"	"	"	88	833
"	"	"	90	847
Corbridge	<u>Legio VI</u>	155-58	30	1132
Risingham	(Tribune)	161-83	442	1237
Carvoran	<u>Coh. I Hamiorum</u>	163-66	99	1792
"	"	"		1809
Stanwix		167	786	2026
Lanchester	<u>Coh. I Vardullorum</u>	175-8	116	1072
"	"	"	115	1083
Old Carlisle	(Prefect)	185	204	903
"	<u>Ala Aug. ob Virt.</u>	188	197	893
"	"	191	198	894
"	"	197	199	895
Bowes	<u>Coh. I Thracum</u>	197-202	105	730
Greta Bridge		After 197	732	745
Old Carlisle		198-211	203	896
Risingham	<u>Coh. I Vangionum</u>	205-8	224	1215
"	"	"	249	1216
Greetland		208	407	627
Castlesteads		209-211	149	1978
Corbridge		"	57	1143
South Shields		211-212	401	1054
Carrawburgh	<u>I Batavorum</u>	After c. 198	268	1545
Ribchester		212-217	68	590
Birdoswald		"	291	1911
Hadrian's Wall	(<u>Proc. Aug.</u>)	"	733	2066
High Rochester	<u>I Vardullorum</u>	213	119	1268
Birdoswald	<u>I Dacorum</u>	213-222	274	1892

<u>Site</u>	<u>Unit mentioned</u>	<u>Date</u>	<u>Cat. No.</u>	<u>RIB</u>
Carrowburgh	<u>I Batavorum</u>	213-222	265	1544
Chesterholm	<u>IV Gallorum</u>	213-235	159	1686
Piercebridge	(Centurion)	217	62	1022
Netherby	<u>I Ael. Hispanorum</u>	222	315	968
Housesteads	<u>Cuneus Frisiorum</u>	222-235	243	1594
Birdoswald	<u>I Dacorum</u>	235-238	278	1896
"	"	237	277	1875
Old Carlisle		238-244	530	899
High Rochester	<u>I Vardullorum</u>	238-241	121	1262
Ribchester	<u>Legio VI</u>	238-244	43	583
Lanchester	<u>Vex. Sueborum</u>	"	251	1074
Eastgate	(Prefect: <u>ILingonum</u>)	"	207	1042
Birdoswald	<u>I Dacorum</u>	"	-	1893
Papcastle	<u>Cuneus Frisiorum</u>	241	334	882
"	<u>Aballavensis</u>	"	335	883
Castlesteads	<u>II Tungrorum</u>	"	142	1983
Old Carlisle	<u>Ala Aug. ob Virt.</u>	242	200	897
Old Penrith	<u>II Gallorum</u>	244-249	134	915
Bowness	(Tribune)	251-253	419	2057
"	"	"	420	2058
Housesteads	(Centurion)	252	244	1600
Burgh-by-Sands	<u>Numerus Maurorum</u>	253-258	340	2042
Cardewlees	<u>Numerus.....</u>	255-259	202	913
Housesteads	(Prefect)	258	245	1589
Birdoswald	<u>I Dacorum</u>	259-268	284	1882
"	"	"	283	1883
"	"	"	282	1886
Milecastle 52	<u>Legio XX</u>	262-266	175	1956
Birdoswald	<u>I Dacorum</u>	270-273	279	1885
"	"	276-282	288	-

N.B.

Benwell	(Prefect)	180s or C. 208	411	1329
Chesterholm	(<u>B.F.Cos.</u>)	After division of province	371	1696
Newcastle	<u>Legio VI</u>	?Hadrianic	23	1319
"	"	"	24	1320

Appendix B.Altars attributable to the Pre-Severan and to the Severan or Later Periods.A. Pre-Severan

<u>Site</u>	<u>Unit Mentioned</u>	<u>Cat. No.</u>	<u>RIB</u>
Auchendavy	<u>Legio II</u>	2	2174
"	"	4	2175
"	"	3	2176
"	"	5	2177
"		12	2178
Balmuildy	(Tribune)	49	2189
Bar Hill		100	2165
"	<u>Legio II</u>	6	2166
"	<u>Cohors I Hamiorum</u>	98	2167
"		101	2168
"	<u>Cohors I Baetasiorum</u>	80	2169
Birrens	<u>Cohors II Tungrorum</u>	136	2092
"	<u>Cohors I Nervana Germ.</u>	319	2093
"	"	--	2097
"	<u>Cohors II Tungrorum</u>	138	2100
"	"	137	2104
"	"	140	2107
"	"	139	2108
"	"	141	2109
Bollihope	<u>Ala Sebosiana</u> (sec. inscrip.)	254	1041
Carrawburgh	<u>Cohors I Cugernorum</u>	365	1524
Carriden		396	--
Carvoran	? <u>Cohors I Hamiorum</u>	103	1780
Castlecary	<u>Leg. II, Leg. VI</u>	16	2146
"	(Milites)	17	2147
"	<u>Legio VI</u>	35	2148
"	<u>Cohors I Vardullorum</u>	114	2149
"		54	2150
"	<u>Legio VI</u>	27	2151
"		687	2152
"		686	2153
"	? <u>Cohors I Batavorum</u>	262	2154
Castlehill	<u>Cohors IV Gallorum</u>	156	2195
Castlesteads	"	157	1979
"	"	158	1980

<u>Site</u>	<u>Unit Mentioned</u>	<u>Cat. No.</u>	<u>RIB</u>
Corbridge	<u>Legio VI</u>	32	1120
Cramond	<u>Cohors V Gallorum</u>	332	2134
"	<u>Cohors I Tungrorum</u>	210	2135
Croy Hill		434	2159
"	<u>Legio VI</u>	28	2160
Dunnocher		182	2201
Great Chesters	<u>Legio XX</u>	174	1725
Haddon Hall	<u>Cohors I Aquitanorum</u>	206	278
Housesteads	<u>Legio II</u>	7	1583
Ilkley	<u>Cohors II Lingonum</u>	324	635
Lanchester	<u>Cohors I Vardullorum</u>	117	1076
Maryport	<u>Cohors I Hispanorum</u>	312	814
"	"	304	815
"	"	313	816
"	"	308	817
"	"	307	818
"	"	305	819
"	"	306	820
"	"	314	821
"	"	299	822
"	"	310	827
"	"	311	828
"	"	309	829
"	<u>Cohors I Baetasiorum</u>	83	830
"	<u>Cohors I Dalmatarum</u>	91	831
"	<u>Cohors I Baetasiorum</u>	84	837
"	"	82	838
"	"	85	842
"	"	81	843
"	<u>Cohors I Hispanorum</u>	--	846
Milecastle 19	<u>Cohors I Vardullorum</u>	118	1421
Mumrills	<u>Ala Tungrorum</u>	79	2140
"		65	2141
Newcastle	<u>Legio VI</u>	23	1319
"	"	24	1320
Newstead	<u>Legio XX</u>	173	2120
"	<u>Ala Vocontiorum</u>	205	2121
"	<u>Legio XX</u>	170	2122
"	"	172	2123

<u>Site</u>	<u>Unit Mentioned</u>	<u>Cat. No.</u>	<u>RIB</u>
Newstead	<u>Legio XX</u>	171	2124
"	"	190	2125
Ribchester	<u>Ala II Asturum</u>	261	586
Rough Castle	<u>Cohors VI Nerviorum</u>	242	2144
Scotland		22	2214
Westerwood		375	--

N.B. All Altars from the Antonine Wall have been included in this list.

B. Severan or Later

Bewcastle	<u>Cohors I Dacorum</u>	--	991
Binchester	<u>Cuneus Frisiorum Vin.</u>	259	1036
Birdoswald	<u>Cohors I Dacorum</u>	285	1874
"	"	289	1877
"	"	--	1878
"	"	--	1879
"	"	275	1880
"	"	--	1881
"	"	284	1882
"	"	276	1887
"	"	271	1889
"	"	287	1890
"	"	280	1891
"	"	281	1894
"	"	272	1898
"	"	273	1904
"	"	286	1906
Bowes	<u>Cohors I Thracum</u>	107	732
"	"	106	733
Burgh-by-Sands	<u>Cohors I Nervana Germ.</u>	--	2041
Carrawburgh	<u>Cohors I Batavorum</u>	267	1535
"	"	264	1536
"	"	268	1545
"	(Prefect - Mithraic)	269	1546
"	<u>Cohors I Batavorum</u>	266	----
Carvoran	<u>Cohors II Delmatarum</u>	238	1795
Castlesteads	<u>Cohors II Tungrorum</u>	143	1981
"	"	144	1982
"	(Mithraic)	153	1992
"	"	150	1993
"	"	154	1994
Chesterholm	<u>Cohors IV Gallorum</u>	160	1685
"	"	161	1687
"	"	162	1688
Great Chesters	<u>Vex. Gaes. Raetorum</u>	248	1724
High Rochester	<u>Cohors I Vardullorum</u>	122	1263
"	<u>Num. Exploratorum</u>	120	1270
Housesteads	<u>Numerus Hnaudifridi</u>	247	1576

Housesteads	<u>Cohors I Tungrorum</u>	212	1578
"	"	215	1580
"	"	217	1584
"	"	211	1585
"	"	214	1586
"	† "	220	1587
"	? "	219	1588
"	"	213	1591
"	"	216	1598
"	(Mithraic)	218	1599
"	"	504	1601
Moresby	<u>Cohors II Thracum</u>	331	797
Netherby	<u>Cohors I Nervana</u>	320	966
Old Penrith	<u>Cohors II Gallorum</u>	133	917
Ribchester	<u>Numerus Barcariorum</u>	336	601
Risingham	<u>Cohors I Vangionum</u>	226	1208
"	"	227	1213
"	"	---	1214
"	"	249	1216
"	"	250	1217
"	"	253	1224
"	"	228	1230
"	"	225	1231
Rudchester	(Mithraic)	391	1395
"	"	392	1396
"	"	390	1397
"	"	41	1398
Wallsend	<u>Cohors IV Lingonum</u>	239	1299
"	"	241	1300
"	"	240	1301
Whitley Castle	<u>Cohors II Nerviorum</u>	329	1198

Appendix C
Types of Focus

<u>ite</u>	<u>Unit</u>	<u>Deity</u>	<u>Shape</u>	<u>Cat. No.</u>
<u>. Dished</u>				
<u>ype la:</u> Sunken hollow				
del		Brigantia	Circular	545
enwell		Mars	"	450
"		"	"	452
inchester		<u>I.O.M.</u>	"	385
owes			"	627
rough-on-Noe		Arnomecta	"	421
rougham		Belatucadrus	"	657
arlisle		Mars Barrex	"	668
arrawburgh	(Miles)	<u>Matres</u>	"	456
"		Fortuna	"	671
"			"	459
"			"	580
arvoran		Belatucadrus	"	683
"		"	"	397
astleford, nr.		Victoria Brigantia	"	548
astlesteads, nr.	<u>Legio VI</u>	Cocidius		39
astlesteads			"	688
"			"	165
hesters		Ratis	"	453
"			Elliptical	462
lifton, West.	<u>I V.....</u>	<u>I.O.M.</u>	Circular	229
orbridge		Vitiris	"	712
Durham			"	809
reat Chesters		Vitiris	"	503
reetland		Victoria Brigantia	"	407
adrian's Wall		<u>Matres</u>	"	222
igh Rochester		Silvanus	"	437
"			"	132
"			Rect.	738
ousesteads		Vitiris	Circular	507
"			"	633
"			"	508
"		Vitiris	"	351
"			"	352
"			"	353

Housesteads	(<u>F.F.Cos.</u>)	Mithras	Circular	218
"	<u>Num. Hnaud.</u>	Alaisiagae	"	247
"			Elliptical	510
Ilkley			Circular	360
Kirkbride		Belatucadrus	"	750
Lancaster	(<u>B.F.Cos.</u>)	Mars Cocidius	"	387
"			"	354
Maryport	(Prefect)	<u>I.O.M.</u>	Elliptical	94
"			"	552
"			Circular	554
Milecastle 3, nr.			"	529
Milecastle 42, nr.		Apollo	"	440
Mumrills	(<u>Signifer</u>)	<u>Matres</u>	Elliptical	65
Netherby			"	635
"		Silvanus	Circular	624
"			"	488
Old Carlisle		<u>I.O.M.</u> Vulkanus	Rect.	530
"		Belatucadrus	Circular	625
Old Penrith	(Military)	<u>Omn. Dei</u>	"	464
Rudchester			"	584
"			Rect.	585
"			Circular	587
Scarcroft		Apollo	"	500
South Shields			"	69
York			"	73
"		Vitiris	"	795
"		<u>Num. Aug.</u>	"	399
?			"	823
?			"	821
?			"	819
?			"	809
?			Elliptical	454
<u>Type 1b: sunken with umbo</u>				
Carrawburgh			Circular	348
Chesters			"	525
"			"	349
Lanchester			"	520
"		Mithras	Rect.	381
"		Victoria	Circular	209

With pointed umbo

Maryport		<u>I.O.M.</u>	Elliptical	93
 <u>Type 1c:</u> sunken with <u>umbo</u> with depressed centre				
Carrawburgh	<u>I Cugernorum</u>	Coventina	Circular	365
Chesterholm	<u>IV Gallorum</u>	<u>Gen. Praet.</u>	Elliptical	160
Eastgate	(Prefect, <u>I Lingonum</u>)	Silvanus	Circular	207
Lanchester			"	516

Type 1d: sunken with inner rim and umbo

South Shields			Circular	590
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Type 2a: sunken in projection between bolsters

Birrens	<u>II Tungrorum</u>	Mars, Victoria	Circular	138
Chesterholm			"	696
Chesters			"	180
Maryport	<u>I Baetasiorum</u>	Mars	"	84
"	"	<u>Vict. Aug.</u>	"	85
"	<u>I Hispanorum</u>	<u>I.O.M.</u>	"	302
"	"	"	"	299
"	"	"	"	304
" (B7a)	"	"	"	311
	<u>I Baetasiorum</u>			
"	"	Mars	"	82
"	"	<u>I.O.M.</u>	"	83

Type 2b: dished with rim

Aldbrough		<u>I.O.M., Matres</u>	Circular	48
"	, nr.		Rect.	618
Benwell		Vitiris	Circular	626
Bewcastle		<u>Disc. Aug.</u>	"	13
Birdoswald		Ratis	"	645
Birrens			"	148
"			"	579
Bowness			"	628
Brough-on-Noe		Mars	Elliptical	422
Brougham		Belatucadrus	Circular	656
"		Mars	"	337

Carlisle			Circular	622
Carrawburgh			Elliptical	345
"			Circular	458
"			"	676
"			"	678
"			"	681
"		Coventina	"	457
Carvoran		Vitiris	Elliptical	425
"		<u>Matres</u>	Circular	102
"		Vitiris	Elliptical	479
Castlecary	<u>I Vardullorum</u>	Neptune	"	114
Castlesteads	<u>II Tungrorum</u>	<u>I.O.M.</u>	Circular	142
"		<u>I.O.M.</u>	"	18
"		<u>Disc. Aug.</u>	Elliptical	149
Chesterholm		<u>Domus Div.</u>	Circular	696
"	<u>Legio VI</u>	Fortuna	"	26
Chester-le-Street		Vitiris	"	379
"		Dig.....	"	378
Chesters		Vitiris	"	460
"			"	489
"			"	486
"			"	526
Corbridge		Vitiris	"	373
"		"	"	710
"			"	60
"			Rect.	718
Croy Hill	<u>Legio VI</u>	<u>Nymphae</u>	Circular	28
Doncaster		<u>Matres</u>	"	725
Ebchester		Vernostonus Cocidius	"	183
Great Chesters	<u>Vex. Gaes. Raet.</u>	Fortuna	"	248
Haddon Hall	<u>I Aquitanorum</u>	Mars Braciaca	"	206
Hadrian's Wall		Maponus	"	603
"		Vitiris	"	484
Halton		<u>Matres</u>	"	499
Housesteads	<u>Legio II</u>	<u>I.O.M.</u>	Elliptical	8
"			Circular	607
"	<u>I Tungrorum</u>	Silvanus	"	212
"		Cocidius		
"	<u>Cun. Fris.</u>	Mars, <u>Num. Aug.</u> ,	"	243
		<u>Alâisiagae</u>		

Housesteads		Vitiris	Circular	742
"	<u>Legio VI</u>	Cocidius	"	37
"	<u>I Tungrorum</u>	<u>I.O.M.</u>	"	214
Lanchester		Vitiris	"	129
"			"	519
"			"	518
Maryport	<u>I Hispanorum</u>	<u>I.O.M.</u>	"	306
"	"	"	"	305
"	"	"	"	300
"	"	"	"	301
"	"	"	"	303
"	"	"	"	307
"			"	316
"		<u>Virt. Aug.</u>	"	92
"			"	551
Milecastle 52	<u>Legio XX</u>	Cocidius	"	175
Moresby			"	769
Newstead	<u>Legio XX</u>	Apollo	"	173
Old Carlisle	<u>Ala Aug.</u>		"	196
Piercebridge		Jupiter	"	778
Risingham	(Tribune)	Fortuna	"	232
"	"	<u>Dei Cult.</u>	Elliptical	226
"	<u>I Vangionum</u>	Hercules	"	224
Rudchester			Rect.	586
Scotland			Circular	22
South Shields		Brigantia	"	403
"			"	404
Wark			"	490
Watercrock			"	790
Whitley Castle	<u>VI Nerviorum</u>	Apollo	Elliptical	329
Wyke nr. Harewood			"	63
York		Mars	"	594
"			Circular	75
"		Arciaco	"	70
"			"	409
?			"	638
?			Elliptical	270
?			"	824
?			"	486
?			"	802

?			Rect.	637
?			Circular	132
?			"	806
?			"	808
?			"	357
?			"	803
?			"	826
?			"	195
?			"	814

Type 2c: dished with rim and umbo

Auchendavy	<u>Legio II</u>	Mars, Minerva	Circular	5
Benwell		Minerva	Elliptical	395
Bowes			"	652
"			Circular	650
Carlisle		<u>Genius Loci</u>	"	621
Carrawburgh			"	370
"		Coventina	"	366
"		"	"	367
"		"	"	364
"			"	15
"	<u>I Batavorum</u>	<u>Nymphae</u>	"	266
? "			"	680
Carvoran		Vitiris	"	178
"		"	"	483
Castlecary	<u>Legs. II, VI</u>	Fortuna	"	16
Chesterholm			"	372
"			"	702
Chester-le-Street		Mars Condatis	"	522
Chesters		Vitiris	"	461
Corbridge	<u>Legio VI</u>	<u>I. Dolich.</u>	"	709
"			"	723
Great Chesters		Vitiris	"	606
Halton			"	737
Housesteads		Mithras	"	504
"			"	487
Lanchester		Mars	"	512
"			"	521
Maryport	<u>I Baetasiarum</u>	<u>I.O.M.</u>	"	83
"	<u>I Delmatarum</u>	"	"	91
"			"	553

Milecastle 59	<u>I Batavorum</u>	Mars Cocidius	Circular	263
Mumrills	<u>Ala Tungrorum</u>	Hercules	"	79
Newcastle		<u>I.O.M.</u>	"	66
"		Silvanus	"	602
Newstead	<u>Legio XX</u>	<u>I.O.M.</u>	"	172
South Shields			"	402
Wallsend			"	591
York			"	408
?			"	394
?			"	538
?			"	534
?			"	492

Type 2d: dished with rim and pointed umbo

Maryport	<u>I Hispanorum</u>	<u>I.O.M.</u>	"	313
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Type 2e: dished with rim and umbo with depressed centre

Auchendavy	<u>Legio II</u>	<u>Gen. Terrae</u>	Circular	4
"	"	Diana, Apollo	"	2
"		Silvanus	"	12
Benwell		<u>Lamiae</u>	"	50
Carrawburgh	<u>I Batavorum</u>	Fortuna	"	264
Corbridge		Astarte	? "	493
Greta Bridge		Mars	"	614
Hadrian's Wall		Nemesis	Rect.	356
Lanchester			Circular	21
Milecastle 55, nr.	<u>Legio VI</u>	Cocidius	"	40
Newcastle		<u>I.O.M.</u>	"	189
South Shields		"	"	401

Type 2f: dished with rim and umbo with small boss

Birrens	<u>II Tungrorum</u>	Viradeathis	Circular	139
Carrawburgh	(Military)	Minerva	"	455

Type 2g: dished with flat umbo

Carvoran			Circular	484
Newstead			"	190
Risingham	(Tribune)	Fortuna	"	233

Type 3a: dished with double rim

High Rochester	(Decurion)	<u>Mountes</u>	Circular	350
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Lancaster, nr.	<u>Num. Barc.</u>	Mars	Circular	336
<u>Type 3b:</u> dished with double rim and <u>umbo</u>				
Housesteads	<u>I Tungrorum</u>	Mars	Circular	213
<u>Type 3c:</u> dished with double rim and <u>umbo</u> with depressed centre				
Birrens	<u>II Tungrorum</u>	Minerva	Circular	137
<u>Type 4a:</u> with rim and bottom sloping up to centre				
?			Circular	297
<u>Type 4b:</u> with double rim and bottom sloping up to centre				
Castlesteads		Sol	Circular	150
<u>Type 4c:</u> with rim and bottom sloping up to central depression				
Bar Hill	<u>I Hamiorum</u>	Silvanus	Circular	98
<u>B. Flat-bottomed</u>				
<u>Type 5a:</u> sunken				
Birrens		Fortuna	Rect.	649
Carrawburgh		Coventina	"	343
"		"	"	629
"			"	630
"			"	465
"			"	682
"			"	583
Chapel Allerton, Leeds			Circular	547
Corbridge			Rect.	716
Ebchester			"	727
Hadrian's Wall		<u>Matres</u>	Circular	222
Housesteads		<u>I.O.M.</u>	"	219
"		<u>Dei</u>	"	506
Kirkstall, Leeds			Elliptical	634
Malton			Circular	757
Maryport			Rect.	556
Risingham		<u>Nymphae</u>	Circular	779
Whitley Castle	<u>Legio VI</u>	Hercules	Rect.	42
?			"	76
?			"	296

York			Rect.	600
<u>Type 5b:</u> sunken with flat bottom encircled by a groove				
Chesterholm	<u>Legio II</u>	Silvanus	Circular	371
Netherby		Vitiris	"	374
<u>Type 6a:</u> with rim				
Adel			Rect.	47
"			Elliptical	546
Balmuildy		Mars	Circular	601
"	(Tribune)	Fortuna	"	49
Bar Hill	<u>Legio II</u>	Mars Camulus	"	6
"	<u>I Baetasiorum</u>		"	80
Beckfoot			"	641
Bewcastle	(Centurion)	Cocidius	"	412
Binchester	(Prefect)	Fortuna	"	123
Birdoswald		Mars, Victoria	Rect.	620
"		Latis	"	646
Birrens	<u>I Nerv. Germ.</u>	Fortuna	"	319
Brougham			Circular	612
"			"	611
Burgh-by-Sands		Belatucadrus	"	363
Camelon			"	666
Carlisle		<u>Parcae</u>	Lozenge	667
Carrawburgh		Coventina	Rect.	344
"			"	346
"			Elliptical	581
"			Rect.	682
"			Circular	677
"			"	347
"	<u>I Batavorum</u>	Mithras	"	265
Carvoran		<u>I. Heliopol.</u>	"	472
"			Rect.	104
"		Vitiris	Circular	604
Castlecary			"	447
"	<u>Legio VI</u>	Mercury	"	35
Castlesteads			Elliptical	692
"			Rect.	689
"			"	691
"			Circular	164
"			"	151

Castlesteads			Circular	428
Chesterholm		<u>I.O.M.</u>	"	19
Chester-le-Street			Horse-shoe	377
"			Circular	613
Chesters			"	179
"			"	463
"		Fortuna	"	56
Corbridge			Rect.	721
Croy Hill		Mars	Circular	434
Duntocher		<u>I.O.M.</u>	"	182
Ebchester		Vitiris	Horse-shoe	184
Housesteads		Mars, Victoria	Elliptical	186
"		<u>Num. Aug.</u>		
"		<u>I.O.M.</u> , Mithras	Rect.	244
"		Mars. Victoria	Circular	740
"	<u>I Tungrorum</u>	Hercules	"	215
"	"	<u>I.O.M.</u>	"	217
"	(Prefect)	<u>I.O.M.</u>	"	220
Ilkley	<u>II Lingonum</u>	Verbeia	"	324
"		Jupiter	"	20
"			"	748
Lanchester	(Prefect)	Fortuna	"	208
"			"	382
"	<u>I Vardullorum</u>	<u>Num. Aug.</u>	"	115
Longwood, Huddersfield		Bregans	Rect.	756
Maryport	<u>I Baetasiorum</u>	<u>Vict. Aug.</u>	Circular	81
"	"	Mars	"	82
"	<u>I Hispanorum</u>	<u>I.O.M.</u>	"	312
"		Setlocenia	Horse-shoe	549
Milecastle 19	<u>I Vardullorum</u>	<u>Matres</u>	Rect.	118
Milecastle 52	<u>Legio II</u>	Cocidius	Circular	1
Netherby		<u>I.O.M.</u>	Rect.	570
Newcastle	<u>Legio VI</u>	Neptune	Rect.	23
"	"	Ocean	"	24
Newstead	<u>Ala Vocont.</u>	<u>Matres Camp.</u>	Circular	205
Ribchester	<u>Ala II Asturum</u>		"	261
"			"	193
Rudchester	(Prefect)	Mithras	"	391
"	"	"	"	392

Rudchester		Apollo-Mithras	Circular	390
South Shields			"	784
"		Aesculapius	"	389
Stanwix	(<u>Signifer</u>)	<u>Matres</u>	"	501
Wallsend	<u>IV Lingonum</u>	<u>I.O.M.</u>	"	239
York		Mars	Rect.	593
?			Circular	822
?			"	800
?			"	813

Type 6b: two concentric rims

Castlecary			Circular	54
Corbridge			"	181

Type 7a: rim and pointed umbo

Maryport	<u>I Hispanorum</u>	<u>I.O.M.</u>	Circular	308
" (See A2a)	"	"	"	311
"	"	"	"	95

Type 7b: rim and umbo

Auchendavy	<u>Legio II</u>	<u>I.O.M. Victoria</u>	Circular	3
Birrens		Harimella	"	146
Chester-le-Street		Vitiris	Rect.	376
Chesters		Regina	Octagonal	485

Type 7c: rim and umbo with central depression

Brough under Stainmore				654
High Rochester	<u>I Vardullorum</u>	<u>Genius D.N. et.</u> <u>Sig.</u>	Circular	122
South Shields.		Mars Alator	"	405

Type 7d: double rim and inner concentric rim

Bar Hill		Apollo	Circular	100
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C. GroovedType 8: single groove

Carvoran	<u>II Delmataeum</u>	Vitiris	Rect.	238
Foldsteads		Latis	Circular	527
Lancaster		Talonus	"	389
?			Rect.	544

Type 9a: single groove with central depression

Carrawburgh		Belleticaurus	Circular	540
Lanchester		Mars	"	513
?			"	537

Type 9b: With groove and umbo

Bowes			Circular	543
Wilderspool			"	531

Type 9c: with groove and umbo with sunken centre

Lanchester		Vitiris	Circular	511
?			"	535

Type 10: With groove and raised rim

Bewcastle		Cocidius	Circular	321
Great Chesters		Vitiris	"	528
Housesteads		"	"	505

Type 11: two concentric grooves

Chester-le-Street		Apollo	Circular	523
Lanchester			"	515
?			"	536

D. RaisedType 12: raised panel

Bewcastle			Rect.	322
Birdoswald	<u>I Dacorun</u>	<u>I.O.M.</u>	"	275
"	"	"	Elliptical	271
Carrawburgh			Rect.	675

Chesterholm	<u>IV Gallorum</u>	<u>I.O.M.</u>	Rect.	159
Corbridge	<u>Legio VI</u>	Apollo Maponus	Circular	32
"			"	719
Hadrian's Wall	(Prefect)		"	361
Housesteads, nr.			Rect.	746
Lanchester			Elliptical	755
Netherby		Mogons Vitiris	Rect.	398
Old Carlisle		<u>Terra Batavorum</u>	Lozenge	771
Risingham			Rect.	237
Watercrock			Circular	362

Type 13: focus on raised panel

Chester-le-Street			Circular on rect. panel	380
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Focus in the shape of a dish

Benwell	<u>Legio XX</u>	Antenociticus		168
Birdoswald		Mars		620
Birrens	<u>II Tungrorum</u>	<u>Discip. Aug.</u>		136
Bollihope	<u>Ala Sebosiana</u>	Silvanus		254
Bowes nr.	<u>I Thracum</u>	Vinotonus		106
Carvoran	<u>I Hamiorum</u>	Fortuna		97
Great Chesters	<u>Vex. Raet.</u>	Fortuna		248
Newcastle		<u>I.O.M.</u>		66
Risingham	<u>I Vangionum</u>			228
?York				596

Focus in shape of fluted Bowl

Carrawburgh		Coventina		368
Housesteads	<u>Legio II</u>	<u>I.O.M.</u>		7
Westerwood	<u>Legio VI</u>	<u>Silvanae</u>		375

Inverted bowl

Birrens	<u>II Tungrorum</u>	Ricagambda		140
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Appendix D: Types of Bolster, excluding those of type Ala.

only extant examples are included.

<u>Site</u>	<u>Unit mentioned</u>	<u>Cat. No.</u>
<u>type A2a</u>		
Castlesteads		691
Hesterholm		19
Great Chesters		496
Hadrian's Wall		222
Manchester		208
<u>type A2b</u>		
Camelon		666
Carlisle		667
Barraburgh		459
"		15
Castlecary	<u>Legio VI</u>	35
Castlesteads		692
Hesterholm	<u>Legio II (B.F.Cos.)</u>	371
Hester-le-Street		523
Hesters		462
"		463
"		55
Corbridge		709
Concater		725
Conchester, near		182
Cousesteads	<u>I Tungrorum</u>	214
Lancaster		354
Laryport		92
Ludchester		392
Stanwix		501
York		594
		800
<u>type A2c</u>		
Cousesteads	<u>I Tungrorum</u>	212
Clewstead		190
Old Penrith		192
York		73

Type A2d

Carrawburgh	<u>I Cugernorum</u>	365
Clifton, West.	<u>I V.....</u>	229
Ebchester, near		183
Housesteads	<u>Cuneus Frisiorum</u>	243
"	<u>I Tungrorum</u>	220
South Shields		405
York		399

Type A2e

Benwell (Bay leaf in relief)	<u>Legio XX</u>	168
Melandra Castle		439
Newcastle (Bay leaf incised)	<u>Legio VI</u>	23
"	"	24

Type A3a

Bar Hill	<u>Legio II</u>	6
Housesteads	<u>I Tungrorum</u>	217
Maryport	(Tribune)	438
Risingham	<u>I Vangionum</u>	224

Type A3b

Auchendavy	<u>Legio II</u>	3
Ebchester	(Prefect)	61

Type A3c

Chesterholm	<u>IV Gallorum</u>	160
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Type A3d

South Shields		401
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Type A4a

Bar Hill		100
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Type A4b

Housesteads	<u>I Tungrorum</u>	211
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<u>Type A4c</u>		
Ilkley	<u>II Lingonum</u>	324
<u>Type A5a</u>		
Burgh-by-Sands		363
Carrawburgh		366
"		370
Corbridge		373
Kirkby Thore, near		187
<u>Type A5b</u>		
Chesterholm		372
<u>Type A6a</u>		
Milecastle 52	<u>Legio XX</u>	175
<u>Type A6b</u>		
Carrawburgh		367
<u>Type A6c</u>		
Netherby		374
<u>Type B1</u>		
Benwell		50
Birrens	<u>II Tungrorum</u>	139
Carrawburgh		345
"		346
Maryport	<u>I Baetasiorum</u>	83
"	"	84
"	"	85
York		74
<u>Type B2a</u>		
Croy Hill	<u>Legio VI</u>	28
Lanchester	<u>I Vardullorum</u>	115
Newcastle		66

Type B2b

Birrens		148
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Type C1

Chester-le-Street		378
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Type C2

Aldborough		618
Carlisle		622
Haddon Hall	<u>I Aquitanorum</u>	206

Type C3a

Chester (Bay leaf)	<u>Legio XX</u>	<u>RIB</u> 445
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Type C3b

Birdoswald		620
South Shields	<u>Legio VI</u>	46
Whitley Castle	<u>II Nerviorum</u>	329

Type D

Newstead	<u>Legio XX</u>	173
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Type E

Ebchester		184
Newcastle		189
? (Double strap)		195
<u>NB.</u> Chester (Military)		<u>RIB</u> 446

Type F

Bowes		579
Carvoran (Military)		425
Chester-le-Street		377
Croy Hill		434
Great Chesters		435
South Shields (Double strap), See A3d		401
York		70

<u>Type G</u>		
Benwell		452
"		450
Carrawburgh	<u>I Batavorum</u>	266
<u>Half Bolsters</u>		
Brougham		657
Carrawburgh		539
"		541
Carvoran		542
Chester-le-Street		524
Eastgate, Co. Durham.	<u>I Lingonum</u>	207
Lanchester		520
"		521
Old Penrith	(Military)	464
?		532
<u>Bolsters with angular straps</u>		
Carrawburgh		367
"	<u>I Cugernorum</u>	365
Castlesteads		152
Chesterholm		372
Clifton, West.	<u>I V.....</u>	229
Ebchester		183
Housesteads		220
"	<u>Cuneus Frisiorum</u>	243
Netherby		374
Old Penrith	(Military)	464
South Shields		401
"		405
York		399

Appendix E: Datable Altars with Capitals left Uncarved Between the Bolsters

<u>Site</u>	<u>Unit</u>	<u>Date</u>	<u>Cat. No.</u>
<u>A. Pre-Severan</u>			
Old Carlisle	<u>Ala Augusta</u>	188	197
<u>B. Severan or Later</u>			
Birdoswald	<u>I Dacorum</u>	3rd. C.	285
"	"	"	287
"	"	276-282	288
Chesterholm	<u>IV Gallorum</u>	3rd. C.	160
"	"	"	159
Eastgate, Co. Durham	<u>I Lingonum</u>	238-244	207
High Rochester	<u>I Vardullorum</u>	"	122
Old Carlisle		198-211	203
"	<u>Ala Augusta</u>	242	200
"		238-244	530

Possibly Severan or Later

Carrowburgh	<u>I Batavorum</u>		268
Castleford			548
Castlesteads	(Prefect)		150

Undated Stones

Thirty-nine other stones.

Appendix F.

Types of Fascia on Datable Stones.

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
A. <u>Pre-Severan</u>		
1. <u>Rectangular</u>		
a <u>Narrow</u> (Width:depth = 6 or more:1)		
Balmuildy		49
Birrens	<u>I Nervana Germ.</u>	319
"	<u>II Tungrorum</u>	138
"	"	139
Castlecary	<u>Legs. II, VI.</u>	16
Castlesteads	<u>IV Gallorum</u>	157
Croy Hill	<u>Legio VI</u>	28
Maryport	<u>I Hispanorum</u>	311
"	"	309
"	"	314
"	<u>I Baetasiorum</u>	85
Old Carlisle	<u>Ala Aug. ob Virt.</u>	197
"	"	198
Westerwood		375
b. <u>Medium</u> (Width:depth=more than 3:1)		
Auchendavy	<u>Legio II</u>	3
"	"	5
Carrawburgh	<u>I Cugernorum</u>	365
Castlehill	<u>IV Gallorum</u>	156
Castlesteads	"	157
Croy Hill		434
Haddon Hall	<u>I Aquitanorum</u>	206
Newcastle	<u>Legio VI</u>	23
"	"	24
Newstead	<u>Legio XX</u>	170
"	"	172
"	"	171
York	<u>Legio IX</u>	167
c. <u>Deep</u> (Width:depth=3:1)		
Auchendavy	<u>Legio II</u>	4
"		12

Benwell	<u>Legio XX</u>	168
Birrens	<u>II Tungrorum</u>	137
Castlecary		54
Cramond	<u>I Tungrorum</u>	210
Ilkley	<u>II Lingonum</u>	324
Maryport	<u>I Dalmatarum</u>	89
"	<u>I Hispanorum</u>	312
"	"	313
"	"	310
Newstead	<u>Legio XX</u>	173

N.B. Two altars, now damaged, may belong to this group:

Carvoran	<u>I Hamiorum</u>	99
Lanchester	<u>I Vardullorum</u>	117

2. Moulded

Auchendavy	<u>Legio II</u>	2
Bar Hill	"	6
"		100
"		101
Birrens	<u>II Tungrorum</u>	140
Bollihope	<u>Ala Sebosiana</u>	254
Carvoran	<u>I Hamiorum</u>	103
"	"	97
Castlecary		17
Housesteads	<u>Legio II</u>	7
Maryport	<u>I Hispanorum</u>	304
"	"	308
"	"	306
"	"	299
"	"	303
"	"	302
"	"	300
"	"	301
Ribchester	<u>Ala II Asturum</u>	261
Scotland		22

3. "Enlarged" (Fascia begins above the graduated mouldings and extends to the top of the capital).

Bar Hill	<u>I Baetasiorum</u>	80
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Birrens	<u>II Tungrorum</u>	136
"	"	141
Carriden		396
Castle Cary	<u>I Vardullorum</u>	114
"	<u>Legio VI</u>	27
Castlesteads	<u>IV Gallorum</u>	158
Cramond	<u>V Gallorum</u>	332
Duntocher, near		182
Great Chesters	<u>Legio XX</u>	174
Lanchester	<u>I Vardullorum</u>	115
Maryport	<u>I Hispanorum</u>	305
"	<u>I Delmatarum</u>	91
"	"	88
Milecastle 19	<u>I Vardullorum</u>	118
Mumrills	<u>Ala Tungrorum</u>	79
"		65
Newstead	<u>Ala Vocontiorum</u>	205

No Fascia

Castle Cary	<u>Legio VI</u>	35
Maryport	<u>I Baetasiorum</u>	83
"	"	84
"	"	82
"	"	81
"	<u>I Hispanorum</u>	307

Type Unknown

Bar Hill	<u>I Hamiorum</u>	98
Corbridge	<u>Legio VI</u>	32
Newstead		190

B. Severan or Later1. Rectangulara. Narrow

Birdoswald	<u>I Dacorum</u>	271
"	"	280
Bowes	<u>I Thracum</u>	105
Castlesteads	<u>II Tungrorum</u>	143
High Rochester	<u>I Vardullorum</u>	119
Rudchester	(Prefect)	392
South Shields		401
Wallsend	<u>IV Lingonum</u>	239

b. Medium

Birdoswald	<u>I Dacorum</u>	277
"	"	278
Carrawburgh	(Prefect)	269
Castlesteads	<u>II Tungrorum</u>	142
"	(Prefect)	153
Chesterholm	<u>IV Gallorum</u>	162
Eastgate, Co. Durham.	(Prefect, <u>I Lingonum</u>)	207
Greetland		407
Housesteads	<u>I Tungrorum</u>	211
"	"	213
"	<u>Cuneus Frisiorum</u>	243
"	(Prefect)	245
"	(Centurion)	244
Lancaster, near	<u>Numerus Barcariorum</u>	336
Risingham	<u>I Vangionum</u>	249
Rudchester	(Prefect)	391

c. Deep

Bowes	<u>I Thracum</u>	107
"	"	106
Housesteads	<u>I Tungrorum</u>	212
"	"	219
"	(<u>B.F.Cos.</u>)	218

Damaged but may belong to this group:

Birdoswald	<u>I Dacorum</u>	283
"	"	282
Burgh-by-Sands	<u>Numerus Maurorum</u>	340

2. Moulded

Carrawburgh	<u>I Batavorum</u>	265
Cardewlees		202
Great Chesters	<u>Vex. Raetorum</u>	248
High Rochester	<u>I Vardullorum</u>	119
Netherby	<u>I Nervana Germ.</u>	320

3. "Enlarged"

Birdoswald	<u>I Dacorum</u>	285
"	"	289
"	"	275
"	"	284
"	"	279

Birdoswald	<u>I Dacorum</u>	276
"	"	287
"	"	274
"	"	281
"	"	286
"	"	291
"	"	288
Carrawburgh	<u>I Batavorum</u>	266
"	"	267
Castlesteads	<u>II Tungrorum</u>	144
"	(Military)	149
"	(Prefect; Mithraic)	150
"	(Mithraic)	154
Chesterholm	<u>IV Gallorum</u>	159
"	"	161
"	(<u>B.F. Cos</u>)	371
Greta Bridge	"	732
High Rochester	<u>I Vardullorum</u>	121
"	"	122
"	<u>Numerus Exploratorum</u>	120
Housesteads	<u>I Tungrorum</u>	215
"	"	217
"	"	214
"	"	220
"	<u>Numerus Hnaudifridi</u>	247
"	(Mithraic)	504
Lanchester	<u>Vex. Sueborum</u>	251
Milecastle 52	<u>Legio XX</u>	175
Netherby	<u>I Aelia Hispanorum</u>	315
Old Carlisle		203
"	<u>Ala Augusta ob Virt.</u>	200
"		530
Old Penrith	<u>II Gallorum</u>	134
"	"	133
Risingham	<u>I Vangionum</u>	224
"	"	253
"	"	228
"	"	225
"	"	226
Rudchester	<u>Legio VI</u>	41
"	(Mithraic)	390
Wallsend	<u>IV Lingonum</u>	241

Whitley Castle	<u>II Nerviorum</u>	329
N.B. <u>May belong to this group</u>		
Birdoswald	<u>I Dacorum</u>	273
<u>No Fascia</u>		
Bowness		419
Carrawburgh	<u>I Batavorum</u>	264
"	"	268
Carvoran	<u>II Delmatarum</u>	238
Chesterholm	<u>IV Gallorum</u>	160
<u>Type not known</u>		
Housesteads	<u>I Tungrorum</u>	216
Moresby	<u>II Thracum</u>	331
Ribchester		68
Risingham	<u>I Vangionum</u>	250
Corbridge		57

N.B. No. 411 is not included as it may belong to the second century.

The following Mithraic altars are included in the group of Severan or later stones. Their exclusion would not affect the conclusions:

Carrawburgh	Medium	269
Castlesteads	"	153
"	"Enlarged"	150
"	"	154
Housesteads	Deep	218
"	"Enlarged"	504
Rudchester	Narrow	392
"	Medium	391
"	"Enlarged"	390
"	"	41

Appendix G.

Types of "Enlarged" Fasciae on Datable Stones: See
Fig. V and Histogram B.

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>A. Pre-Severan</u>		
<u>Type 3</u>		
Birrens	<u>II Tungrorum</u>	136
Maryport	<u>I Hispanorum</u>	305
"	<u>I Delmatarum</u>	88
<u>Type 4</u>		
Lanchester	<u>I Vardullorum</u>	115
<u>Type 5</u>		
Birrens	<u>II Tungrorum</u>	141
Carriden		396
Castlecary	<u>Legio VI</u>	27
"	<u>I Vardullorum</u>	114
Duntocher, near		182
Maryport	<u>I Delmatarum</u>	91
Milecastle 19	<u>I Vardullorum</u>	118
<u>Type 6</u>		
Bar Hill	<u>I Baetasiorum</u>	80
Cramond	<u>V Gallorum</u>	332
Mumrills		65
Newstead	<u>Ala Vocontiorum</u>	205
<u>Type 7</u>		
Castlesteads	<u>IV Gallorum</u>	158
Great Chesters	<u>Legio XX</u>	174
<u>Damaged</u>		
Mumrills	<u>Ala Tungrorum</u>	79
<u>B. Severan or Later</u>		
<u>Type 3</u>		
Birdoswald	<u>I Dacorum</u>	279
Rudchester		390

Whitley Castle II Nerviorum 329

Type 4

Carrawburgh I Batavorum 266

Castlesteads 149

Housesteads I Tungrorum 217

Milecastle 52 Legio XX 175

Type 5

Birdoswald I Dacorum 285

" " 275

" " 276

" " 274

Castlesteads 150

Chesterholm IV Gallorum 161

High Rochester I Vardullorum 122

Housesteads I Tungrorum 215

" " 214

" ? " 220

" Numerus Hnaudifridi 247

Old Carlisle Ala Augusta ob Virt. 200

" 530

Risingham I Vangionum 226

" " 225

Type 6

Birdoswald 291

Carrawburgh I Batavorum 267

Chesterholm 371

Housesteads 504

Type 7

Birdoswald I Dacorum 289

" " 284

" " 287

" " 281

" " 286

" " 288

Castlesteads II Tungrorum 144

" 154

Chesterholm	<u>IV Gallorum</u>	159
Greta Bridge	(<u>B.F.Cos.</u>)	732
High Rochester	<u>I Vardullorum</u>	121
"	<u>Numerus Exploratorum</u>	120
Lanchester	<u>Vex. Sueborum</u>	251
Netherby	<u>I Aelia Hispanorum</u>	315
Old Penrith	<u>II Gallorum</u>	134
"	"	133
Risingham	<u>I Vangionum</u>	253
"	"	228
Wallsend	<u>IV Lingonum</u>	241
 <u>Damaged</u>		
Old Carlisle		203
Risingham	<u>I Vangionum</u>	224
Rudchester	<u>Legio VI</u>	41

Appendix H.Datable Altars with "Enlarged" Fasciae and Bolsters Resting
on Curved Grooves

<u>Site</u>	<u>Unit</u>	<u>Date</u>	<u>Cat. No.</u>
Bar Hill		2nd C.	100
Birdoswald	<u>I Dacorum</u>	3rd C.	285
"	"	"	287
"	"	"	274
"	"	276-282	288
Carriden		2nd C.	396
Chesterholm	<u>IV Gallorum</u>	3rd C.	161
Housesteads	<u>I Tungrorum</u>	"	214
Netherby	<u>I Ael. Hisp.</u>	222	315
Old Carlisle	<u>Ala Augusta</u>	242	200
"		238-244	530
Risingham	Tribune?	?3rd C.	226

Other Altars

Benwell	395
Burrow in Lonsdale	53
Carvoran	397
Hadrian's Wall	356
Lanchester	381
Netherby	398
Wallsend	591
York	70

N.B. The altars from Bar Hill and Carriden, on this evidence, may belong to the Severan Period.

Appendix I.Datable Altars with Inscribed Fasciae.

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>A. Pre-Severan (including all Antonine Wall altars).</u>		
Auchendavy	<u>Legio II</u>	3
"	"	5
Cramond	<u>V Gallorum</u>	332
Croy Hill	<u>Legio VI</u>	28
Newcastle	"	23
"	"	24
 <u>B. Severan or Later</u>		
Bowes	<u>I Thracum</u>	105
Chesterholm	<u>IV Gallorum</u>	159
"	"	371
High Rochester	<u>I Vardullorum</u>	121
"	<u>Numerus Exploratorum</u>	120
Housesteads	<u>I Tungrorum</u>	212
"	"	217
"	"	214
"	"	245
"	<u>Cuneus Frisiorum</u>	243
"	<u>Numerus Hnaudifridi</u>	247
"		244
Old Carlisle	<u>Ala Augusta Ob. Virt.</u>	200
Old Penrith	<u>II Gallorum</u>	134
South Shields		401
 <u>Probably Severan or Later</u>		
Bowes		109
"		108
Housesteads		220
"		219
"		218
Lancaster		389
 <u>Other Altars with Inscribed Fasciae</u>		
Bowes		650
Brougham		424
Carvoran		472

Chesterholm		328
Chesters		56
Clifton, West.	<u>I V.....</u>	229
Corbridge		709
Ebchester		183
Great Chesters		606
"		435
Hadrian's Wall		603
"		356
High Rochester		350
Housesteads		186
"		505
Kirkby Thore		252
Maryport		94
Milecastle 60 near		89
Newcastle		602
Old Penrith		135
Piercebridge		131
Risingham		234
York	<u>Legio VI</u>	34
"		593
"		399

Appendix J.Datable Altars with Freestanding FocusMounts

<u>Site</u>	<u>Unit</u>	<u>Date</u>	<u>Cat. No.</u>
Birdoswald	<u>I Dacorum</u>	3rd C.	271
Castle Cary	(<u>Milites</u>)	2nd C.	17
Chesterholm	<u>II Nerviorum</u>		328
Maryport	<u>I Hispanorum</u>	2nd C.	299
"	<u>I Baetasiorum</u>	"	83
"	"	"	84
"	"	"	85

Appendix K.Types of Focus Mount on Datable Altars

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>A. Pre-Severan</u>		
<u>Type 1 "Between the bolsters"</u>		
Bar Hill		101
Bollihope Common	<u>Ala Sabosiana</u>	254
Carrowburgh	<u>I Cugernorum</u>	365
Castlecary	(<u>Milites</u>)	17
Cramond	<u>I Tungrorum</u>	210
Croy Hill		434
Haddon Hall	<u>I Aquitanorum</u>	206
Ilkley	<u>II Lingonum</u>	324
Maryport	<u>I Hispanorum</u>	303
"	"	302
"	"	300
"	"	301
"	"	309
"	"	304
"	"	307
"	"	306
"	"	299
"	<u>I Baetasiorum</u>	83
"	"	84
"	"	85
"	"	81
Newstead	<u>Legio XX</u>	173
Ribchester	<u>Ala II Asturum</u>	261
Westerwood		375
 <u>Type 2 "From the bolsters"</u>		
Auchendavy	<u>Legio II</u>	2
"	"	4
"	"	5
"		12
Balmuildy	(<u>Tribune</u>)	49
Birrens	<u>II Tungrorum</u>	138
"	"	137
"	"	140

Birrens	<u>II Tungrorum</u>	139
Castlecary	<u>Legs. II et VI</u>	16
"	<u>Legio VI</u>	35
"		54
Croy Hill	<u>Legio VI</u>	28
Housesteads	<u>Legio II</u>	7
Maryport	<u>I Hispanorum</u>	312
"	"	313
"	"	308
"	"	310
"	"	311
"	<u>I Baetasiorum</u>	82
Newcastle	<u>Legio VI</u>	23
"	"	24
Old Carlisle	<u>Ala Augusta ob Virt.</u>	198
 <u>Type 3</u> "Filled-in"		
Old Carlisle	<u>Ala Augusta ob Virt.</u>	197
 <u>Type 5a</u> "Extended"		
Bar Hill		100
 <u>Type 5b</u>		
Bar Hill	<u>Legio II</u>	6
 <u>Type 5c</u>		
Auchendavy	<u>Legio II</u>	3
Castlecary	<u>Legio VI</u>	27
Castlehill	<u>IV Gallorum</u>	156
Newstead	<u>Legio XX</u>	172
 <u>Type 5d</u>		
Carvoran	<u>I Hamiorum</u>	97
 <u>Probably Type 5</u>		
Castlesteads	<u>IV Gallorum</u>	157
Newstead	<u>Legio XX</u>	170

Damaged

Carvoran	<u>I Hamiorum</u>	99
Lanchester	<u>I Vardullorum</u>	117
Maryport	<u>I Delmatarum</u>	89
Newstead		190
Old Carlisle	<u>Ala Augusta</u>	199
Scotland		22
Stanwix		786

B. Severan or LaterType 1 "Between the Bolsters"

Birdoswald	<u>I Dacorum</u>	277
"	"	271
"	"	280
Carrawburgh	<u>I Batavorum</u>	264
"	"	265
Housesteads	<u>Cuneus Frisiorum</u>	243
"	(Centurion)	244
"	<u>I Tungrorum</u>	212
"	(Prefect)	245
"		219
Rudchester	(Prefect)	391
"	"	392
South Shields		401

Type 2 "From the Bolsters"

Bowness on Solway	(Tribune)	419
Chesterholm	<u>IV Gallorum</u>	162
Housesteads	<u>I Tungrorum</u>	211
"	"	213
"	(B.F.Cos.)	218
Wallsend	<u>IV Lingonum</u>	239

Possible

Bowes	<u>I Thracum</u>	106
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Type 3 "Filled-in"

Carrawburgh	<u>I Batavorum</u>	268
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Eastgate	(Prefect, <u>I Lingonum</u>)	207
Netherby	<u>I Nervana</u>	320

Type 4 Filled-in, higher than top of bolsters

Chesterholm	<u>IV Gallorum</u>	160
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Type 5a "Extended"

High Rochester	<u>I Vardullorum</u>	119
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Type 5b

Cardewlees	<u>Numerus.....</u>	202
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Type 5c

Castlesteads	<u>II Tungrorum</u>	144
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Appendix L.Types of Central Profile of the Capitals of DatableAltars

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>A. Pre-Severan</u>		
<u>Type 1: in the form of a pediment.</u>		
Auchendavy	<u>Legio II</u>	4
"	"	5
"	"	12
Bar Hill		100
"	<u>Legio II</u>	6
"	<u>I Hamiorum</u>	98
"		101
Bollihope	<u>Ala Sebosiana</u>	254
Carrowburgh	<u>I Cugernorum</u>	365
Carriden		396
Carvoran	<u>I Hamiorum</u>	97
Castlecary	<u>Legiones II</u> VI	16
Cramond	<u>V Gallorum</u>	332
"	<u>I Tungrorum</u>	210
Croy Hill		434
Duntocher		182
Haddon Hall	<u>I Aquitanorum</u>	206
Ilkley	<u>II Lingonum</u>	324
Lanchester	<u>I Vardullorum</u>	115
Maryport	<u>I Hispanorum</u>	305
"	"	299
"	"	303
"	"	302
"	"	300
"	"	301
"	"	309
"	<u>I Delmatarum</u>	88
Milecastle 19	<u>I Vardullorum</u>	118
Ribchester	<u>II Asturum</u>	261
<u>Type 2: semi-circular.</u>		
Auchendavy	<u>Legio II</u>	2 (Variant)
"	"	3 "
Castlecary	(Military)	17 "

Maryport	<u>I Hispanorum</u>	308
"	"	307 (Variant)
"	<u>I Baetasiorum</u>	84

Other Possibles

Maryport	<u>I Baetasiorum</u>	83
"	"	85
"	"	81

Type 3: twin concave arcs linked by a horizontal

Birrens	<u>II Tungrorum</u>	137
"	"	140
Castlecary	<u>I Vardullorum</u>	114
Old Carlisle	<u>Ala Augusta ob Virt.</u>	198
Mumrills	<u>Ala Tungrorum</u>	79

Other Possibles

Bar Hill	<u>I Baetasiorum</u>	80
Croy Hill	<u>Legio VI</u>	28
Maryport	<u>I Delmatarum</u>	91

Type 4: twin concave arcs, wider horizontal

Birrens	<u>II Tungrorum</u>	136
"	"	139
"	"	141
Corbridge	<u>Legio VI</u>	32

Type 5: twin concave arcs, horizontal cut away in an arc.

Birrens	<u>II Tungrorum</u>	138
Maryport	<u>I Hispanorum</u>	312
"	"	313
"	"	310
"	"	311

Type 6: twin convex arcs

Maryport	<u>I Hispanorum</u>	306
Mumrills		65
Newcastle	<u>Legio VI</u>	23
"	"	24

Type 7: small convex arcs at apex of pediment

Newstead	<u>Legio XX</u>	173
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Type 8: triple arcs

Castlecary		54
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Type 9: twin convex arcs linked by concave arc.

Birrens	<u>I Nervana Germanorum</u>	319
Newstead	<u>Legio XX</u>	172

Type 10: flat top

Castlesteads	<u>IV Gallorum</u>	157 (Now flat)
"	"	158
Great Chesters	<u>Legio XX</u>	174
Housesteads	<u>Legio II</u>	7
Maryport	<u>I Delmatarum</u>	89
"	<u>I Baetasiorum</u>	82
Newstead	<u>Legio XX</u>	170 (Now flat)
Old Carlisle	<u>Ala Augusta ob Virt.</u>	197

N.B. No. 411 (RIB 1329) fits in here if it does not date from Severan times.

Damaged

Balmuildy	<u>IV Gallorum</u>	156
"	(Tribune)	49
Benwell	<u>Legio II</u>	177
Carvoran	<u>I Hamiorum</u>	99
Castlecary	<u>Legio VI</u>	35
"	"	27
Lanchester	(Tribune)	116
"	<u>I Vardullorum</u>	117
Maryport	<u>I Delmatarum</u>	90
"	<u>I Hispanorum</u>	304
Newstead	<u>Ala Vocontiorum</u>	205
"		190
Old Carlisle		204
Rough Castle	<u>VI Nerviorum</u>	242
Westerwood		375

?Pedestals

Corbridge	<u>Legio II</u>	10
Newstead	<u>Legio XX</u>	171

Ribchester	<u>Legio VI</u>	43
York	<u>Legio IX</u>	167

B. Severan or LaterType 1

Birdoswald	<u>I Dacorum</u>	277
"	"	275
"	"	280
"	"	274
"		279
"		291
Bowness	(Tribune)	419
Carrawburgh	<u>I Batavorum</u>	264
"	"	265
"	"	267
"	"	266
Chesterholm	(<u>B.F.Cos.</u>)	371
Housesteads	<u>I Tungrorum</u>	212
"	"	215
"	"	217
"	"	214
"	"	220
"		245
"		244
"	<u>Cuneus Frisiorum</u>	243
"	<u>Numerus Hnaudifridi</u>	247
Milecastle 52	<u>Legio XX</u>	175
Old Carlisle		200
Risingham	(Tribune)	226
"	<u>I Vangionum</u>	224
Rudchester	(Prefect)	391
Whitley Castle	<u>II Nerviorum</u>	329

Probably with this group

Birdoswald	<u>I Dacorum</u>	276
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Type 2

Chesterholm	<u>IV Gallorum</u>	162
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Type 6

Chesterholm	<u>IV Gallorum</u>	161
Housesteads	<u>I Tungrorum</u>	211
"		219
Rudchester	(Prefect)	392

Type 7

Housesteads	(B.F.Cos.)	218
"	<u>I Tungrorum</u>	213
Rudchester		390
Wallsend	<u>IV Lingonum</u>	239

Type 8

South Shields		401
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Type 10

Bewcastle	(Tribune)	321
Birdoswald	<u>I Dacorum</u>	285
"	"	289
"	"	284
"	"	287
"	"	278
"	"	286
Bowes	<u>I Thracum</u>	105
Carrawburgh	<u>I Batavorum</u>	268
"	"	269
Carvoran	<u>II Delmatarum</u>	238
Castlesteads	<u>II Tungrorum</u>	144
"		150
"		154
Chesterholm	<u>IV Gallorum</u>	159
Eastgate, Co. Durham	(Prefect, <u>I Lingonum</u>)	207
Greetland		407
Greta Bridge	(B.F.Cos.)	732
High Rochester	<u>I Vardullorum</u>	121
"	"	122
"	"	119
"	<u>Numerus Exploratorum</u>	120
Housesteads	<u>I Tungrorum</u>	216
Lancaster	<u>Numerus Barcariorum</u>	336

Lanchester	<u>Vexillatio Sueborum</u>	251	
Netherby	<u>I Aelia Hispanorum</u>	315	
"	<u>I Nervana</u>	320	
Old Carlisle		530	
Old Penrith	<u>II Gallorum</u>	134	
"	"	133	
Risingham	<u>I Vangionum</u>	249	
"	"	253	
"	"	228	
Wallsend	<u>IV Lingonum</u>	241	
 <u>Probably types 10</u>			
Bowes	<u>I Thracum</u>	107	
Castlesteads		153	
Housesteads		504	
 <u>Now flat</u>			
Birdoswald	<u>I Dacorum</u>	281	
Ribchester		68	
 <u>Type 11</u>			
Chesterholm	<u>IV Gallorum</u>	160	
 <u>Damaged</u>			
Bewcastle	(Tribune)	323	
Birdoswald	<u>I Dacorum</u>	--	<u>RIB 1881</u>
"	"	271	
"	"	282	
"	"	283	
Bowes	<u>I Thracum</u>	106	
Bowness		420	
Cardewlees		202	
Castlesteads	<u>II Tungrorum</u>	143	
"		142	
Corbridge		57	
Moresby	<u>II Thracum</u>	331	
Old Carlisle		199	
"		203	
Papcastle		334	
Piercebridge		62	
Ribchester		43	
Risingham	<u>I Vangionum</u>	250	

Risingham	<u>I Vangionum</u>	225
"		442
<u>Odd</u>		
Rudchester	<u>Legio VI</u>	41

Appendix M.Mathematical Analysis of Cyma Reversa MouldingsDated Altars

<u>Site</u>	<u>Date</u>	<u>Type</u>	<u>R1:R2</u> <u>cap.</u>	<u>base</u>	<u>c:d</u>	<u>a:b</u>	<u>a:g</u>	<u>e:c</u>	<u>f:d</u>	<u>c:f</u>	<u>Cat.</u>
Benwell	138-61	T	-	.2 .5	.46	5.1	3.0	.33	.37	.8	177
Maryport	"	T	1.0	-	.8	7.2	5.6	.23	.25	1.0	89
"	"	T	.66	-	.75	11.0	3.6	.39	.29	1.1	88
Risingham	161-83	I	-	.39	2.0	6.0	4.3	.01	.3	6.5	442
Carvoran	163-66	I	-	.3	.55	14.0	2.8	.37	.15	1.5	99
Lanchester	175-78	I	-	.5	1.2	15.5	5.6	.25	.09	.3	116
"	"	T	1.15	-	1.0	63.0	7.0	.13	.2	.83	115
South Shields	211-12	T	1.3	.58	.59	0.0	8.3	.15	.16	.5	401
Birdoswald	212-17	T	.9	.5	.96	3.7	3.4	.21	.15	1.2	291
Housesteads	222-35	I	1.5	1.1	1.6	3.1	2.4	.2	.29	1.0	243
High Rochester	238-44	I	.57	.57	1.3	2.8	2.2	.26	.4	.84	121
Eastgate	, "	T	1.0	1.56	.76	25.0	4.8	.2	.26	.59	207
Old Carlisle	"	T	.56	-	1.6	3.7	3.4	.28	.08	6.0	200
Housesteads	252	I	1.4	.69	1.5	4.7	3.5	.27	.25	1.6	244
"	258	I	.48	.48	.66	6.6	4.4	.21	.21	.75	245
M/c 52	262-66	T	1.9	-	2.2	1.7	1.7	.2	.21	2.2	175

N.B. (1) All calculations are based on the formula $\frac{\text{convex}}{\text{Concave}}$ arcs.

(2) T = Tangential Cymas

I = Intersecting Cymas

												<u>Probably Pre-Severan</u>
Arniebog		T	.83	.83	1.1	15.4	6.6	.25	.17	2.16	639	
Auchendavy		T	.28	.29	.9	4.7	3.8	.33	.14	2.0	4	
"		T	.86	.86	.8	5.2	5.7	.21	.21	.83	3	
"		T	.42	.42	.66	7.3	5.1	.27	.14	1.57	5	
"		I	.5	-	1.0	8.0	6.4	.2	.62	3.0	12	
Balmuildy		Sagging										49
Bar Hill		I	.37	.41	1.0	17.5	4.1	.39	.88	4.66	80	
Birrens		T	1.6	1.1	1.25	9.0	4.5	.19	.24	1.0	136	
"		Sagging										319
"		I	.73	.73	.7	6.7	3.8	.13	.22	.42	138	
"		T	.8	.95	.6	5.0	3.8	.13	.18	.44	137	

Analysis of Mouldings cont.

Probably Pre-Severan cont.

<u>Site</u>	<u>Type</u>	<u>R1:R2</u> <u>cap.</u>	<u>base</u>	<u>c:d</u>	<u>a:b</u>	<u>a:g</u>	<u>e:c</u>	<u>f:d</u>	<u>o:f</u>	<u>Cat.</u>
Birrens	I	.4	.4	.83	8.5	5.0	.16	.42	.78	140
"	I	.68	.68	.93	15.5	6.5	.16	.14	1.0	139
Carriden	T	1.4	-	1.5	3.1	2.6	.26	.21	2.29	396
Castlecary	I	.58	.56	1.0	5.6	4.0	.25	.18	1.4	16
"	I	.93	.38	1.1	6.4	4.3	.23	.17	2.3	35
"	T	2.0	-	1.4	40.0	8.0	.14	.22	1.0	114
"	I	2.2	-	1.8	2.45	2.1	.26	.22	1.0	54
Castlehill	I	.24	.38	.78	11.0	5.2	.18	.17	.91	156
Croy Hill	I	.18	.18	.79	17.2	5.2	.21	.17	1.0	28
Corbridge	T	.32	-	.93	3.0	3.0	.25	.1	2.3	32
Haddon Hall	T	1.06	-	1.9	3.0	3.05	.29	.1	5.0	206
Lanchester	I	.8	.3	1.0	0	7.5	.18	.1	2.0	117
Maryport	Sagging									305
"	I	.3	-	.76	0	10.0	.17	.13	.66	82
"	I	.44	.2	.84	24.0	8.0	.2	.13	1.8	81
Mumrills	Sagging									
Newcastle	I	.64	.4	.61	4.0	3.1	.22	.27	1.0	23
"	I	.36	.36	.75	3.9	3.5	.31	.21	2.7	24
Newstead	I	.8	.7	1.2	2.7	2.2	.33	.3	1.4	173
"	T	.9	.52	.47	0	6.0	.8	.24	.46	172
"	T	1.45	-	1.1	3.2	5.8	.19	.15	.83	171
Ribchester	T	1.16	-	.96	5.7	5.3	.15	.09	1.43	261

N.B. Probably pre-Severan:

Benwell	T	-	1.2	2.4	3.0	3.7	.15	.07	6.0	168
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May be pre-Severan:

Corbridge	T	.5	.4	1.2	5.7	4.2	.22	.15	1.8	10
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Analysis of Mouldings cont.Severan or Later

<u>Site</u>	<u>Type</u>	<u>R1:R2</u> <u>cap.</u>	<u>base</u>	<u>c:d</u>	<u>a:b</u>	<u>a:g</u>	<u>e:c</u>	<u>f:d</u>	<u>e:f</u>	<u>Cat.</u>
Birdoswald	T	1.4	1.0	1.27	6.25	3.8	.23	.27	1.1	275
"	T	1.7	1.0	1.27	10.8	6.35	.14	.14	1.17	276
"	T	.25	.25	.36	6.1	5.5	.12	.08	.66	280
Bowes	T	1.1	-	1.2	5.2	3.6	.36	.26	1.5	107
"	I	.26	.51	.6	5.05	3.8	.24	.2	.66	106
Carrawburgh	T	1.4		1.2	17.0	6.25	.15	.28	1.75	266
Castlesteads	T	1.1	.7	1.4	3.7	3.5	.23	.23	2.14	143
Chesterholm	Sagging									161
High Rochester	I	.41	.41	.8	35.0	6.5	.21	.225	1.4	122
"	I	.25	.22	.72	17.5	5.8	.2	.17	.71	120
Housesteads	T	1.0	1.0	1.2	7.0	6.1	.14	.11	2.25	212
"	T	.85	.81	1.06	0	4.9	.28	.17	2.2	217
"	T	1.1	1.4	2.0	6.0	6.0	.16	.07	4.5	211
"	I	1.0	-	.86	1.8	1.7	.17	.14	.5	214
"	Sagging									213
Wallsend	I	1.1	1.1	1.8	1.9	1.8	.66	.45	.86	239

Probably Severan or Later:

High Rochester	I	.7	.67	1.3	4.35	3.7	.23	.22	1.46	126
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Not included

Birdoswald

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Appendix N (a)Table of Sets of Cyma Reversa Mouldings based on Intersecting arcs

<u>Ratio</u> <u>R1:R2</u>	<u>Radius of</u> <u>convex arc</u>	<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
1. .2:1	.96	Croy Hill	<u>Legio VI</u>	28
	1.2	Castlehill	<u>IV Gallorum</u>	156
	1.2	Maryport	<u>I Baetasiorum</u>	81
2. .2:1	.9	High Rochester	<u>Num. Explor.</u>	120
	1.1	Bowes	<u>I Thracum</u>	106
3. .2:1	.9	Binchester		123
	1.3	Lanchester	<u>I Vardullorum</u>	117
4. .3:1	.83	Carvoran	<u>I Hamiorum</u>	99
	1.0	Maryport	<u>I Baetasiorum</u>	82
5. .4:1	.42	Maryport		95
	.44	Castlecary	<u>Legio VI</u>	35
	.5	Newcastle	"	24
	.56	Risingham		442 (upper)
	.8	Bar Hill	<u>I Baetasiorum</u>	80
	.95	Castlehill	<u>IV Gallorum</u>	156 (base)
	1.2	?Brougham		423
	1.6	Birrens	<u>II Tungrorum</u>	140
	1.6	Maryport	<u>I Baetasiorum</u>	81
6. 5:1	1.1	Lanchester	<u>I Vardullorum</u>	116 (base)
	1.4	Bowes	<u>I Thracum</u>	106 (base)
7. .6:1	1.2	High Rochester	<u>I Vardullorum</u>	121
	1.2	"		126
8. .6:1	.63	Newcastle	<u>Legio VI</u>	23

<u>Ratio</u> <u>R1:R2</u>	<u>Radius of</u> <u>convex arc</u>	<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
	1.6	Birrens	<u>II Tungrorum</u>	139
	2.0	"	"	138
9. .7:1	.9	Birrens		148
	.9	Maryport		87
10. .8:1	1.7	Lanchester	<u>I Vardullorum</u>	117 (cap.)
	2.4	Binchester		385
11. 1:1	1.25	Housesteads		244 (base)
	1.25	Birrens	<u>II Tungrorum</u>	146
12. 1.5:1	.85	Housesteads	<u>Cun. Frisiavonum</u>	243
	.9	"	(Centurion)	244 (cap)
Similar to these:				
.8:1	.6	Newstead	<u>Legio XX</u>	173
1:1	.5	Housesteads	<u>I Tungrorum</u>	214
<u>Other Mouldings:</u>				
.4:1	1.1	High Rochester	<u>I Vardullorum</u>	122
.5:1	.7	Housesteads		245
1.1:1	1.5	Wallsend	<u>IV Lingonum</u>	239
2.2:1	1.2	Castlecary		54

Appendix N (b)Tentative sets of Cyma Reversa Mouldings based on Tangential Arcs

<u>Ratio</u> R1:R2	<u>Radius of</u> <u>Convex arc</u>	<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
1. .4:1	.4	Corbridge	<u>Legio II</u>	10
	.7	"	"	10
	.4	Benwell	? "	177
2. .3:1	.3	Auchendavy	<u>Legio II</u>	4
.4:1	.6	"	"	5
3. .3:1	.7	Corbridge	<u>Legio VI</u>	32
.4:1	1.3	Chesterholm	"	26
4. .8:1	.65	Housesteads	<u>I Tungrorum</u>	217
	1.0	"	"	217
5. .9:1	1.2	Birrens	<u>II Tungrorum</u>	136
	1.5	"	"	137
6. .6:1	.95	South Shields		404
	1.3	"		401
	1.4	"		402
7. 1.0:1	1.3	Housesteads	<u>I Tungrorum</u>	212
	1.5	"	"	211
8. 1.5:1	1.3	Housesteads	<u>I Tungrorum</u>	211
Pillar	1.3	"	<u>Germani</u>	<u>RIB 1593</u>
9. 1.4:1	1.1	Carrawburgh	<u>I Batavorum</u>	266
	1.2	Nr. M/c 59	"	263

Cyma Reversa Mouldings based on Tangential Arcs

<u>Ratio</u> <u>R1:R2</u>	<u>Radius of</u> <u>convex arc</u>	<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
.2:1	.2(upper)	Benwell	? <u>Legio II</u>	177
	.3(base)	Lanchester		129
	.85	Birdoswald	<u>I Dacorum</u>	280
.3:1	.3	Auchendavy	<u>Legio II</u>	4
	.3	South Shields		405
	.5(base)	Carvoran	<u>Legs. II, VI, XX</u>	426
	.5	Ribchester	<u>Legio XX</u>	176
	.7	Corbridge	<u>Legio VI</u>	32
	.7(base)	"	<u>Legio II</u>	10
.4:1	.4(upper & middle)	Corbridge	<u>Legio II</u>	10
	.4	Chesters		485
	.5	South Shields		405
	.6	Auchendavy	<u>Legio II</u>	5
	.75	?		815
	.8	Wallsend		330
	.8	Chesterholm	<u>Legio VI</u>	26
	.9	Halton		736
	.5:1	.4(lower)	Corbridge	<u>Legio II</u>
.4(lower)		Benwell	? "	177
.5(base)		Castlesteads	<u>Legio VI</u>	39
1.0		Chesterholm	(<u>Curia Textoverdorum</u>)	400
1.0		Newstead	<u>Legio XX</u>	172
1.2		Benwell		411
.6:1	.4(cap.)	Castlesteads	<u>Legio VI</u>	39
	.65	Halton		497
	.7	Old Carlisle	<u>Ala Augusta</u>	200
	.95	South Shields		404
	1.3(base)	"		401
	1.4	"		402
	1.5	Housesteads		740
.7:1	.6	Maryport	<u>I Delmatarum</u>	88

	1.1	Halton		498
	1.1	Corbridge		493
	1.3(base)	Castlesteads	<u>II Tungrorum</u>	143
<hr/>				
.8:1	.65	Housesteads	<u>I Tungrorum</u>	217
	1.0	"	"	217
	.75	Arniebog		639
	1.4	Maryport		93
	1.6	Birrens	<u>II Tungrorum</u>	137
	1.7	Hadrian's Wall		222
<hr/>				
.9:1	.8	Auchendavy	<u>Legio II</u>	3
	1.2	Birrens	<u>II Tungrorum</u>	136
	1.5(base)	"	"	137
	1.5	Corbridge		430
	1.65	Birdoswald		291
<hr/>				
1.0:1	.5	Maryport	<u>I Delmatarum</u>	89
		"		95
	1.0	Birrens		145
	1.0	Haddon Hall	<u>I Aquitanorum</u>	206
	1.2	Bollihope	(Prefect, <u>I Lingonum</u>)	207
	1.3	Housesteads	<u>I Tungrorum</u>	212
	1.3	South Shields		403
	2.0(base)	Birdoswald	<u>I Dacorum</u>	275
	2.6(base)	"	"	276
<hr/>				
1.1:1	.9	Old Carlisle	<u>Ala Augusta</u>	196
	1.1	Birdoswald	<u>I Dacorum</u>	286
	1.2	Bowes	<u>I Thracum</u>	107
	1.3	Carrawburgh		455
	1.4	Castlesteads	<u>II Tungrorum</u>	143
	1.4	Lanchester	<u>I Vardullorum</u>	115
	1.5	Housesteads	<u>I Tungrorum</u>	211
	11.8	Ribchester	<u>Ala II Asturum</u>	261
<hr/>				
2:1	1.3(cap.)	South Shields		403
	2.5	Benwell	<u>Legio XX</u> Pre 197	168
<hr/>				

1.3:1	1.3(cap.)	South Shields	211-12	401
1.4:1	.7	Carriden	(<u>Vikani</u>)	396
	1.1	Carrawburgh	<u>I Batavorum</u>	266
	1.1	Ebchester		61
	1.2(cap.)	Birrens	<u>II Tungrorum</u>	140
	1.2	Nr. M/c 59	<u>I Batavorum</u>	263
	1.7	Newstead	<u>Legio XX</u>	171
	1.85(cap.)	Birdoswald	<u>I Dacorum</u>	275
1.5:1	1.3	Housesteads	<u>I Tungrorum</u>	211
Pillar	1.3	"	(<u>Germani Tuihanti</u>)	<u>RIB</u> 1593
	2.1	Eastgate	<u>I Lingonum</u>	207
1.6:1	1.65	Birrens	<u>II Tungrorum</u>	136
	2.0	Corbridge		494
1.7:1	3.0(cap.)	Birdoswald	<u>I Dacorum</u>	276
1.9:1	.75	Corbridge	<u>Legio VI</u> (secondary inscription)	709
	1.0	M/c 52	<u>Legio XX</u>	175
2.0:1	2.2	Castlecary	<u>I Vardullorum</u>	114

N.B. The difference between many of these mouldings is very slight even when the ratio of convex:concave arc is not the same. It is possible therefore that the same templet was used for mouldings which appear in different groups, variations in ratio being the result of inequalities in the carving. Miss Shoe found an appreciable lack of uniformity in the carving of mouldings even in work executed in hard marble by skilled craftsmen.

Appendix OThe Decoration of Bolster Fronts

Only stones examined at first hand have
been included

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
1. <u>One incised roundel</u>		
Bar Hill		100
Birdoswald	<u>I Dacorum</u>	275
Birrens	<u>I Nervana Germ.</u>	319
Carrawburgh		345
Castlecary	<u>I Vardullorum</u>	114
Corbridge	<u>Legio VI</u>	709
Duntocher		182
Hadrian's Wall		222
Housesteads	<u>Num. Hnaudifridi</u>	247
Maryport	<u>I Baetasiorum</u>	83
"	<u>I Hispanorum</u>	300
Milecastle 19	<u>I Vardullorum</u>	118
Newcastle		602
York	<u>Legio VI</u>	34
2. <u>Two incised roundels</u>		
Balmuildy		601
Bar Hill	<u>Legio II</u>	6
Maryport	<u>I Hispanorum</u>	302
4. <u>With sunken centres</u>		
Benwell		626
"		395
Binchester	(<u>B.F. Cos.</u>)	385
Birdoswald		645
Brougham		656
Carlisle		621
Carrawburgh		347
Carvoran		483
"		480
Castlesteads		149
Chesterholm		372
Chester-le-Street		379

		<u>Cat. No.</u>
Chester-le-Street		377
"		380
Chesters		461
Haddon Hall	<u>I Aquitanorum</u>	206
Hadrian's Wall		356
High Rochester	(Decurion)	350
Housesteads	<u>I Tungrorum</u>	215
"		633
Kirkby Thore		751
?Kirkstall		634
Lancaster		813
Lanchester		755
"		381
"		520
Maryport	<u>I Hispanorum</u>	306
Moresby		769
Netherby		635
"	<u>I Hispanorum</u>	315
Newcastle		189
South Shields		590
?		534
?		823
?		802
5. <u>With rims</u>		
Castlesteads		150
Cliburn, West.		423
Housesteads		742
"	<u>I Tungrorum</u>	212
Old Carlisle	(Veteran)	67
Skinburness		610
Wyke, nr. Harewood		63
6. <u>With two concentric rims</u>		
Aldborough near		618
Auchendavy	<u>Legio II</u>	2
Carrawburgh	<u>I Batavorum</u>	265
"		541

		<u>Cat. No.</u>
Castleford, near		548
Chesterholm	<u>IV Gallorum</u>	162
High Rochester	<u>I Vardullorum</u>	119
South Shields		785
Whitley Castle	<u>II Nerviorum</u>	329
<u>With three concentric rims</u>		
High Rochester	<u>I Vardullorum</u>	122
7. <u>Rimmed with boss</u>		
Auchendavy	<u>Legio II</u>	3
Benwell	<u>Legio XX</u>	168
Birdoswald		620
Bowes		113
Carlisle		622
Carrawburgh		539
"		344
"		629
"		367
"	<u>I Cugernorum</u>	365
Carvoran		104
Chesterholm	<u>IV Gallorum</u>	161
Chester-le-Street		376
Ebchester		184
Great Chesters		435
Housesteads	(Prefect)	245
" (double rim)		743
Lanchester	"	208
Old Penrith	(Veterans)	464
Risingham	(Tribune)	233
South Shields		402
Whitley Castle	<u>II Nerviorum</u>	329
York		594
8. <u>Dished with boss</u>		
Birrens	<u>II Tungrorum</u>	141

		<u>Cat. No.</u>
Birrens	<u>II Tungrorum</u>	148
Brougham		657
Carrawburgh		343
"	<u>I Frixiavonum</u>	364
"		471
Carvoran		397
Doncaster		725
Eastgate	(Prefect, <u>I Lingonum</u>)	207
South Shields		405

9. With naturalistic rosettes

Birrens	<u>II Tungrorum</u>	136
Corbridge		495
Halton Chesters		498
Maryport	<u>I Hispanorum</u>	308
"	<u>I Delmatarum</u>	91

10. With sunken petals

Chesters		459
"		460
"		463
Housesteads	<u>I Tungrorum</u>	214
Ilkley	<u>II Lingonum</u>	324
Kirkby Thore		188
Maryport		316
"	<u>I Hispanorum</u>	310
Newstead	<u>Legio XX</u>	173
"		190
South Shields		403
York		399

11. With incised petals, the tips linked by incised lines.

Carrawburgh	<u>I Batavorum</u>	266
Clifton, West.	<u>I V.....</u>	299
Maryport	<u>I Hispanorum</u>	303
"	"	301

12. With raised petals

Castlesteads		692
Housesteads	<u>I Tungrorum</u>	211
"	"	213
Maryport		95
"	<u>I Hispanorum</u>	304
Newcastle	<u>Legio VI</u>	23
Newstead	<u>Legio XX</u>	172
Rudchester		390
Wallsend	<u>IV Lingonum</u>	241

13. With wheel-like spokes

Maryport	<u>I Hispanorum</u>	313
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14. With rimmed petals

Birrens	<u>II Tungrorum</u>	140
"	"	139
"	(Military)	146
Chesterholm	<u>Legio VI</u>	26
"	<u>IV Gallorum</u>	160
Hadrian's Wall		603
Newcastle	<u>Legio VI</u>	24
Old Penrith		192
Risingham	(Tribune)	232

15. With rimmed petals, similar petals joining their tips.

Birrens	<u>II Tungrorum</u>	137
"	"	138
Chesters		246
Housesteads	<u>Cun. Frisiorum</u>	243
Rudchester	(Prefect)	392

16. Solar Disks

Bowes near		113
Carrowburgh	<u>I Batavorum</u>	268
Melandra Castle		439
Rudchester	(Prefect)	391

		<u>Cat. No.</u>
17. <u>Unusual rosette</u>		
Bollihope	<u>Ala Sebosiana</u>	254
18. <u>With "bows"</u>		
Netherby		374
19. <u>With scroll design</u>		
Housesteads near		355
?		194
20. <u>With five holes</u>		
York		70
<u>Possible rosettes</u>		
Carrawburgh		457
Housesteads		219
"		742
"		217
"		186
South Shields		589
?Lancaster		812

Appendix PAltars with Figures Carved upon the Shaft, Capital or
Base.

<u>Deity</u>	<u>Site</u>	<u>Cat. No.</u>
Jupiter	Old Penrith	572
Minerva and Hercules	Burrow Walls	665
Mars and Hercules	Maryport	89
Hercules	Castlesteads	691
"	Chesterholm	372
"	Housesteads	745
"	Whitley Castle	42
Mars	Chester-le-Street	380
"	Housesteads	186
"	Old Penrith	573
"	?Ribchester	828
Mars and Victory	Risingham	235
?Mercury	Carlisle	622
Mercury	Corbridge	495
"	Old Penrith	574
Apollo	"	571
" as Sungod	Whitley Castle	329
Apollo and Diana	Corbridge	430
" and females	Ribchester	43
Venus	Old Penrith	575
<u>Matres</u>	Kirkham	64
"	York	74
Verbeia	Ilkley	748
Cocidius	Risingham	231
Mithras	Carrawburgh	269
"	Rudchester	41
Fortuna	Chesters	56
Victory	Halton Chesters	499
?Victory	Corbridge	181
Genius and Female	Carlisle	621
Genius and Cupid	Corbridge	709
Figure sacrificing	Lanchester	516
"	York	443
Female with tuba	?Chesterholm	163

Belted figure	Wallsend	240
Man's head	?Corbridge	60
Horned god	Maryport	556
"	?	724
"	Backfoot	544
Goddess or genius	Carrowburgh	366
Figure	Malton	757
Cupid	?	194

Scenes from the Hercules story	Netherby	374
<u>Anguipes</u>	Wallsend	241

Appendix Q(1)The Incidence of Sacrificial Utensils on the Shafts of Altars.

<u>Site</u>	<u>Unit</u>	<u>Strainer</u>	<u>Guttus</u>	<u>Patera</u>	<u>Knife</u>	<u>Axe</u>	<u>No.</u>
Adel				x		x	47
Bar Hill	<u>Leg. II</u>			x		?x	6
"			x	x			410
"					x		98
Benwell			x	x	x	x	626
"	<u>Leg. XX</u>		x	?x			169
"	"		x		x		168
"	? <u>Leg. II</u>		x	x	x	x	177
"			x	x			395
Binchester	(Prefect)		x	x			123
"	(<u>B.F.Cos.</u>)		x	x	x	x	385
"			x	x			260
"	(Tribune)			x			644
Birdoswald			x	x			646
"			x	x	x	x	291
Birrens	<u>II Tungrorum</u>			x	x	x	136
"			x	x			416
"			x	x			338
Bowes	<u>I Thracum</u>		x	x			106
Bowness			x	x			628
Brougham	<u>Num. Eq. Strat.</u>		x	x	x	x	337
Burrow in Lonsdale			x	x			53
"					x	x	52
Carlisle					x	x	670
Carrawburgh			x	x			629
"				x	x		343
"	<u>I Batavorum</u>	x	x	x	x		266
Carvoran			x		x	x	359
"	<u>Legs. II, VI, XX.</u>		x	x	x		426
"			x	x	x	x	102
"			x	x			478
"					x	x	425
Castlesteads			x	x			164
"					x	x	428
Chesterholm	<u>Leg. VI</u>	x	x	x	x		26
"	<u>IV.Gall.</u>		x	x	x	x	160

<u>Site</u>	<u>Unit</u>	<u>Strainer</u>	<u>Guttus</u>	<u>Patera</u>	<u>Knife</u>	<u>Axe</u>	<u>No.</u>
Chesterholm		x	x	x	x		400
Chester-le-Street			x	x			523
"				x			378
Chesters			x	x			485
"			x				429
"			x				705
? "				x	x		55
Clifton	(Military)		x	x			229
Corbridge			x	x			493
"					x		494
"	<u>Legs.VI,XX</u>		x	x			58
"	(Military)				x	x	57
Doncaster			x				725
Duntocher			x	x	x		182
Ebchester	(Prefect)		x	x			61
Great Chesters	(Military)		x				166
"			x				496
Greta Bridge			x		x		502
"			x	x			731
"	(<u>B.F.Cos.</u>)			x		x	732
Hadrian's Wall				xx		x	77
Halton				xx			497
"				x	x		499
"			x			x	498
"			x	x			737
"			x				736
Housesteads	<u>Leg.VI</u>		x	x			37
"	<u>I Tungrorum</u>		x	x			217
"	<u>Cun. Fris.</u>		x	x	x	x	243
"	(<u>B.F.Cos.</u>)		x	x			218
"				?x			744
"			x	x			221
Ilkley	<u>II Lingonum</u>			x			324
"			x	x			326
"				x			749
Kirkby Thore			x	x	x	x	187
Lancaster	(Ex-dec.)				x	x	389
"	(<u>B.F.Cos.</u>)				x		388
"				x		x	754
Lanchester	<u>Vex. Sueb.</u>		x	x	x		251

<u>Site</u>	<u>Unit</u>	<u>Strainer</u>	<u>Guttus</u>	<u>Patera</u>	<u>Knife</u>	<u>Axe</u>	<u>No.</u>
Lanchester			x	x			512
"			x	x			513
"				x			209
"			x	x			515
"					x	x	521
Manchester	<u>Leg.VI</u>		x	x			31
Maryport	<u>I Hispanorum</u>			xx			310
"	(Tribune)		x	x	x	x	438
"				x			551
"					x	x	553
Milecastle 19	<u>I Vardullorum</u>				x	x	118
Milecastle 45			x	x			617
Milecastle 52	<u>Leg.XX</u>		x	x			175
Milecastle 55, nr.	<u>Leg.VI</u>			x	x		40
Newcastle			x	x			66
Newstead			x	x			190
Old Carlisle			x	x			530
Old Penrith	(Military)			x	x	x	464
"			x	x	x		192
Piercebridge				x			778
Risingham	<u>I Vangionum</u>				x	x	249
"				x	x		228
"	(Tribune)		x	x			232
"			x	x	x	x	233
"			x	x	x	x	231
"			x	x			783
Scarcroft			x	x			500
Slack			x				25
Stanwix			x	x			501
"			x	x			787
South Shields			x	x			589
"			x	x			403
"			x	x	x	x	401
"			x	x			405
"			x	x	x		404
"			x	x			402
"	<u>V Gall.</u>					?	333

<u>Site</u>	<u>Unit</u>	<u>Strainer</u>	<u>Guttus</u>	<u>Patera</u>	<u>Knife</u>	<u>Axe</u>	<u>No.</u>
Wallsend	<u>IV Lingonum</u>		x	x	x	x	241
"	"				x	x	240
Wark			x	x			490
Whitley Castle			x	x			792
Wilderspool			x				531
Wyke				x			63
York	(Prefect)					x	443
"			x	x			593
"						x	73
"			x	x			796
"			?x		x	x	75
?			x		x		821
?			x	x			538
?			x		x	x	76
?		?x				x	78
?			x				800
?			x				444
?				x			432
?					x		433

Type of Axe

<u>Site</u>	<u>Unit mentioned</u>	<u>Cat. No.</u>
<u>Type 1: pick-axe type</u>		
Birrens	<u>II Tungrorum</u>	136
Corbridge	(Military)	57
Hadrian's Wall		77
Housesteads	<u>Cuneus Frisiorum</u>	243
Kirkby Thore		187
Lancaster		389
Maryport	(Tribune)	438
South Shields (Variant)		401
<u>Type 2: curved blade, square end</u>		
Benwell	<u>Legio II</u>	177
Binchester	(<u>B.F.Cos.</u>)	385
Carvoran		425
Chesterholm	<u>IV Gallorum</u>	160
Milecastle 19	<u>I Vardullorum</u>	118
Old Penrith	(Military)	464
York		73
"		75
<u>Type 3: divergent straight blade, square end</u>		
Adel		47
Benwell		626
Birdoswald		291
Brougham	<u>Numerus Eq. Strat.</u>	337
Lanchester		521
Maryport		553
Wallsend	<u>IV Lingonum</u>	241
<u>Possible</u>		
?		78
<u>Type 4: straight-sided blade, no projection beyond the shaft</u>		
Risingham		231
York	(Military)	443

Type 5: blade with divergent, curved arcs

Burrow in Lonsdale		52
Carlisle		670
Castlesteads		428
Risingham	<u>Vex. Gaes. Raet.</u>	249

Type 6: blade square-ended on each side of the haft.

Adel		47
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Broken

Bar Hill	<u>Legio II</u> ?Axe.	6
Benwell	<u>Legio XX</u>	169
Carvoran		102
Halton		498
South Shields	<u>V Gallorum</u> ?Axe	333
Risingham	(Tribune)	233
Wallsend	<u>IV Lingonum</u>	240
?		76

Lost: no fig.

Carvoran		359
Greta Bridge		732
Lancaster		754

Appendix A(3)
Types of Knife

<u>Site</u>	<u>Unit mentioned</u>	<u>Cat. No.</u>
<u>Type 1:</u> broad, cutting edge sharply angled to form the tip.		
Benwell		626
Binchester	(<u>B.F.Cos.</u>)	385
Birdoswald		291
Brougham	<u>Numerus Eq. Strat.</u>	337
Chesterholm	<u>IV Gallorum</u>	160
Corbridge	(Military)	57
Greta Bridge		502
Housesteads	<u>Cuneus Frisiorum</u>	243
Kirkby Thore		187
Lanchester	<u>Vexillatio Sueborum</u>	251
"		521
Maryport	(Tribune)	438
 <u>Type 2:</u> broad, similar to type 1 but without pronounced angle.		
Birrens	<u>II Tungrorum</u>	136
Burrow in Lonsdale		52
Carrawburgh	<u>I Batavorum</u>	266
Corbridge		494
Lancaster		388
Maryport		553
Old Penrith	(Military)	464
Risingham	<u>I Vangionum</u>	249
"	(Tribune)	233
York		75
 <u>Type 3:</u> Similar but with blunt side of blade sloping in to the tip		
Carvoran	<u>Legs. II, VI, XX</u>	426
Chesterholm	<u>Legio VI</u>	26
Milecastle 55	<u>Legio VI</u>	40
South Shields		401
 <u>Type 4:</u> triangular blade		
Bar Hill	<u>I Hamiorum</u>	98
Benwell	<u>Legio II</u>	168

Benwell	<u>Legio II</u> (blade slipping in to tip)	177
Carrawburgh		343
Castlesteads		428
Chesterholm		400
?Chesters		55
Halton		499
Lancaster		389
Milecastle 19	<u>I Vardullorum</u>	118
Old Penrith		192
Risingham	<u>I Vangionum</u>	228
"		231
South Shields		404
Wallsend	<u>IV Lingonum</u>	240
"	"	241
?		76
?		821
<u>Type 5: convex blunt edge</u>		
Carlisle		670
<u>Damaged</u>		
Carvoran		102
"		425
Duntocher		182
<u>Lost, without figure</u>		
Carvoran		359
?Corbridge		433

Appendix Q (4)
Types of Guttus

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>A. Globular Bodies</u>		
<u>Type 1 Long necks with spout</u>		
Benwell		626
Binchester		385
Burrow in Lonsdale		53
?Chesters		429
Corbridge	<u>Legiones VI, XX</u>	58
Greta Bridge		502
Housesteads	<u>Legio VI</u>	37
Kirkby Thore		187
Lanchester		515
Risingham		233
Wallsend	<u>IV Lingonum</u>	241
Wilderspool		531
<u>Type 2 Short, broad neck</u>		
Benwell	<u>Legio II</u>	177
"		395
Bowness		628
Carrawburgh		629
Ebchester		61
Halton		737
Housesteads	<u>Cuneus Frisiorum</u>	243
South Shields		403
Wark		490
York		593
<u>Type 3 No neck</u>		
South Shields		405
<u>Type 4 Round Mouth</u>		
Old Carlisle		530

B. Ovoid BodiesType 1 Long neck, small spouted mouth

Benwell	<u>Legio XX</u>	168
Birdoswald		646
Birrens		338
Bowes	<u>I Thracum</u>	106
Brougham	<u>Numerus Eq. Strat.</u>	337
Carvoran	<u>Legiones II, VI, XX</u>	426
"		102
Chesterholm	<u>Legio VI</u>	26
Chester-le-Street		523
Duntocher		182
Halton		498
Housesteads		221
Maryport		438
?Watchcross		444

Type 2 Wider neck merging gradually into the body

Birdoswald		291
Carvoran		397
Clifton	<u>I V.....</u>	229
Newcastle		66
South Shields		589
"		401

Type 3 Short, broad neck

Binchester	(<u>Praef. Eq.</u>)	123
Carrawburgh	<u>I Batavorum</u>	266
Carvoran		359
Doncaster		725
Housesteads	(<u>B.F. Cos.</u>)	218
Ilkley		326
Lanchester	<u>Vexillatio Sueborum</u>	251
Manchester	<u>Legio VI</u>	31
Risingham	(Tribune)	232
"		231
South Shields		404
"		800

Type 4 Tapering towards the base

Chesterholm		400
Housesteads	<u>I Tungrorum</u>	217

Type 5 Round mouth

Carvoran		478
South Shields		402
Stanwix		501
?		76

Type 6 Elongated body, long neck, spouted mouth

?		821
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C. Bag-shaped

Bar Hill		410
Castlesteads		164
Chesterholm	<u>IV Gallorum</u>	160
Chesters		485
Lanchester		512
"		513
Milecastle 52	<u>Legio XX</u>	175
Newstead		190
Old Penrith		192

D. Shouldered

Corbridge		493
Great Chesters		496

E. Cantharus

Old Penrith	(Military)	464
South Shields		401
? Watchcross		444

Lost, no figure

Binchester	260
Birrens	416
Chesters	705
Greta Bridge	731
Near Milecastle 45	617
Risingham	783
Stanwix	787
Whitley Castle	792

Damaged

Benwell	169
Great Chesters	<u>.....Gallorum</u> 166
Halton	499
Scarcroft, Yorks.	500
York	324
"	75
?	796
?	538

Gutti with Concave Bases

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
Benwell	<u>Legio XX</u>	168
"	? <u>Legio II</u>	177
"	<u>Legio XX</u>	169
Binchester	(Prefect)	123
Bowes	<u>I Thracum</u>	106
Chesterholm	<u>Legio VI</u>	26
Corbridge		493
Duntocher		182
Housesteads	<u>Legio VI</u>	37
Ilkley		326
Milecastle 52	<u>Legio XX</u>	175
South Shields		589
"		401

Gutti without Foot-rings

Lanchester		515
"		512
"		513

Appendix Q (5) aAltars where Guttus and Patera appear together on the side
of the Shaft

<u>Site</u>	<u>Cat. No.</u>	<u>Motifs on other sides of shaft</u>
<u>A. On dexter side</u>		
Benwell	626	Knife, axe
Birdoswald	291	Knife, axe
Brougham	337	knife, axe
Corbridge	58	<u>patera</u>
Ebchester	61	eagle
Maryport	438	medallions, cone; back: knife
South Shields	405	broken.
<u>B. On sinister side</u>		
Benwell	177	knife, axe
Binchester	385	knife, axe
Birrens	338	cock, <u>phalera</u>
Carvoran	102	knife, axe; front: figure
Chesterholm (+cone)	160	knife, axe, ox
Housesteads	243	knife, axe
Kirkby Thore	187	knife, axe
Old Penrith	464	knife, axe
Risingham	231	knife, axe
"	233	knife, axe
South Shields	401	knife, axe; back: <u>cantharus</u>
<u>C. On back of shaft</u>		
Birdoswald	646	
Chesterholm	400	dexter: knife, strainer; sinister; wreath
<u>D. Side unknown</u>		
Risingham	783	garland.

b.Altars on which the Guttus appears with motifs other
than the Patera.

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>1. With knife</u>		
Carvoran	<u>Legiones II, VI, XX</u>	426
Duntocher		182
Lanchester	<u>Vexillatio Sueborum</u>	251
<u>2. With snake</u>		
Old Penrith		192
<u>3. With swag or wreath</u>		
Benwell	<u>Legio XX</u>	168
Chesters		429
Housesteads		221
<u>4. With knife, axe, bucranium</u>		
Wallsend	<u>IV Lingonum</u>	241
<u>5. With knife and strainer</u>		
Chesterholm	<u>Legio VI</u>	26

c.

Altars on which the Patera appears with motifs other than
the Guttus

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>1. With knife</u>		
?Chesters		55
Old Penrith		192
<u>2. With snakes</u>		
Wallsend	<u>IV Lingonum</u>	241
<u>3. With wreath</u>		
Housesteads		221
<u>4. With disk</u>		
Lanchester	<u>Vexillatio Sueborum</u>	251
<u>5. With ?key</u>		
Risingham	<u>I Vangionum</u>	228

d.Altars with Decoration on Three Sides of the Shaft

<u>Site</u>	<u>Cat. No.</u>	<u>Dexter</u>	<u>Sinister</u>	<u>Back</u>
Benwell	168	knife swag	<u>guttus</u> swag	wreath
Castlesteads	691	ox	?human	Hercules
Chesterholm	400	knife strainer	wreath	<u>guttus</u>
?Chesters	429	swags	<u>guttus</u>	swags
Hadrian's Wall	77	axe	<u>patera</u>	wreath
Maryport	438	<u>patera</u> <u>guttus</u>	medallions cone	knife axe
South Shields	589	<u>patera</u>	<u>guttus</u>	wreath
"	403	<u>guttus</u>	<u>patera</u>	bird
"	401	knife axe	<u>guttus</u> <u>patera</u>	<u>cantharus</u>
"	404	<u>guttus</u>	<u>patera</u>	knife
?	445	double swag	wreath	swag- (front)
York	593	<u>guttus</u>	<u>patera</u>	wreath

Appendix Q (6)Examples of the Position of the Patera on the Shaft

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>Vertical, bowl towards base of stone</u>		
Bowness		628
Brougham	<u>Numerus Eq. Strat.</u>	337
Carvoran		102
Chesterholm		400
Halton		499
Ilkley	<u>II Lingonum</u>	324
"		326
Lanchester		515
Manchester	<u>Legio VI</u>	31
Maryport	<u>I Hispanorum</u>	310
"	"	551
Milecastle 52	<u>Legio XX</u>	175
Near Milecastle 55	<u>Legio VI</u>	40
Newstead		190
Old Carlisle		530
South Shields		404
"		402
Stanwix		501
"		787
Wallsend	<u>IV Lingonum</u>	241
<u>Vertical bowl towards top of stone</u>		
Bar Hill		410
Benwell		626
"	<u>Legio XX</u>	169
"		395
Birrens		416
"		338
Carrawburgh		343
Castlesteads		104
Chesterholm	<u>IV Gallorum</u>	160
Chesters		485
Clifton	<u>I V.....</u>	229
Housesteads	<u>Legio VI</u>	37

Housesteads	<u>I Tungrorum</u>	217
"		221
Lanchester	<u>Vexillatio Sueborum</u>	251
"		512
"		513
"		209
Maryport		438
South Shields		589
Risingham	<u>I Vangionum</u>	233
?		538

Oblique, bowl towards base and front of stone.

Binchester	Military	123
"		385
Bowes	<u>I Thracum</u>	106
Carrawburgh		629
"	<u>I Batavorum</u>	266
Chesterholm	<u>Legio VI</u>	26
?Chesters		55
Hadrian's Wall		77
Halton		737
Housesteads	<u>Cuneus Frisiorum</u>	243
Newcastle		66
Old Penrith		192
Risingham	<u>I Vangionum</u>	228
South Shields		403
" "		401

Oblique, bowl towards base and back of stone.

Benwell	? <u>Legio II</u>	177
Birrens	<u>II Tungrorum</u>	136
Carvoran	<u>Legiones II, VI, XX</u>	426
"		478
Housesteads		218

Oblique bowl towards top and front of stone.

Burrow-in-Lonsdale		53
Chester-le-Street		523
Corbridge		498
Old Penrith	Military	464
Piercebridge		778
Risingham	<u>I Vangionum</u>	232

Oblique, bowl towards top and back of stone

Bar Hill	<u>Legio II</u>	6
Corbridge	<u>Legiones VI, XX</u>	58

Horizontal, bowl towards front of stone

Risingham		231
South Shields		405

Horizontal, bowl towards back of stone

Chester		<u>RIB</u> 457
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Appendix Q (7)
Handle-less Paterae

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
Adel		47
Birdoswald		646
Chester-le-Street		378
Hadrian's Wall		77
Halton		497
Kirkby Thore		187
Maryport		438
Risingham	<u>I Vangionum</u>	228
York (or Wreath?)		443

Appendix Q (8)
Types of Patera Handle

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>1. With ridged grip</u>		
Benwell	<u>Legio XX</u>	168
Bowes	<u>I Thracum</u>	106
South Shields		403
<u>2. With terminal knob</u>		
Benwell	? <u>Legio II</u>	177
Brougham	<u>Numerus Eq. Strat.</u>	337
Burrow in Lonsdale		53
Carvoran	<u>Legiones II, VI, XX</u>	426
Corbridge		494
Housesteads	<u>I Tungrorum</u>	217
Maryport	<u>I Hispanorum</u>	310
"		438
South Shields		405
" "		401
<u>3. Animal-headed</u>		
Birrens	<u>II Tungrorum</u>	136
"		338
Bowes	<u>I Thracum</u>	106
Chesterholm	<u>Legio VI</u>	26
Corbridge		493
?Clifton	<u>I V.....</u>	229
Housesteads	<u>Legio VI</u>	37
Milecastle 52	<u>Legio XX</u>	175
<u>Type 4 Imitation fluting (vertical grooves)</u>		
Halton		499
Lanchester		515
Maryport	<u>I Hispanorum</u>	310
Near Milecastle 55	<u>Legio VI</u>	40
Risingham	<u>I Vangionum</u>	228

Type 5 V-shaped bar

Chesters		485
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Type 6 With "horns"

Housesteads	(<u>B.F.Cos.</u>)	218
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Type 7 With curved end

Chesterholm	<u>IV Gallorum</u>	160
Ilkley	<u>II Lingonum</u>	324
Lancaster		754
Near Milecastle 45		617
Old Penrith		192
Scarcroft, Yorks.		500
Stanwix		501

Type 8 Flat, widening towards the outer end.

Ilkley		326
Lanchester		513
South Shields		589
Stanwix		787

Type 9 Twin knobs

?		432
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Appendix R.
Altars with Panelled Dies

<u>Site</u>	<u>Unit</u>	<u>Cat. No.</u>
<u>1. Panels indicated by grooves</u>		
Carrawburgh	(Cabled)	369
"		681
"		682
Corbridge	<u>Leg. VI (see.ins.)</u>	709
Lanchester		518
Maryport		554
?		538
?		544
<u>2. Sunken panel with flat border</u>		
Bar Hill		100
Benwell		452
"		450
Binchester	<u>Cuneus Frisiorum</u>	259
Birdoswald	<u>I Dacorum</u>	272
"	"	289
Burgh by Sands		662
Burrow in Lonsdale		664
Castlecary	<u>Legio VI</u>	35
"	<u>I Vardullorum</u>	114
Castlesteads	<u>IV Gallorum</u>	157
Catterick		693
Chesters		526
Corbridge		710
? "		715
"		716
"		718
Doncaster		725
Halton		499
Kirkby Thore		737
Kirksteads		752
Lanchester		521
Manchester	<u>Vex. Raet. et Noric.</u>	341
Maryport	<u>I Hispanorum</u>	314
"		549

Maryport		553
Middleton-by-Youlgreave		768
Milecastle 19	<u>I Vardullorum</u>	118
Moresby	<u>II Thraoum</u>	331
Old Carlisle		775
Piercebridge		131
Risingham	<u>I Vangionum</u>	224
"		779
Rudchester	(Prefect)	392
Stanwix		787
?		358
?		298
?		816

3. Sunken panel with rounded border

Chesterholm	<u>IV Gallorum</u>	371
Ilkley	<u>II Lingonum</u>	324

4. Sunken panel with bead moulding

Brough under Stainmore		654
Castlesteads		428
Chesterholm	<u>II Nerviorum</u>	328
Ilkley		360
Lanchester		516
Old Carlisle		625
Wallsend	<u>IV Lingonum</u>	241

5. Sunken panel with double bead moulding

Benwell	<u>I Vangionum</u>	223
"	<u>Legio XX</u>	169
Birdoswald	<u>I Dacorum</u>	273
Birrens	<u>II Tungrorum</u>	137
Corbridge		495
"	(Tribune)	430
Halton		498
Old Penrith		192
Ribchester	(Military)	68
?		406

<u>6. Sunken panel with triple bead moulding</u>		
South Shields		401
<u>7. Sunken panel with triple bead moulding and ovolo</u>		
Halton		497
<u>8. Sunken panel with double ovolo</u>		
Carvoran		685
<u>9. Sunken panel with cyma moulding</u>		
Benwell	<u>Legio XX</u>	168
"	? <u>Legio II</u>	177
Bowes	<u>I Thracum</u>	106
Ilkley	(Prefect)	325
Maryport	<u>I Hispanorum</u>	312
"	"	313
"	"	310
Newcastle	<u>Legio VI</u> (with fillet)	23
"	" " "	24
Ribchester	"	43
York		71
<u>10. Sunken panel with fillets</u>		
Birdoswald	<u>I Dacorum</u>	271
Carrawburgh	(Prefect)	269
Risingham	(Tribune)	442
<u>11. Sunken panel with cable-moulded border</u>		
Birrens	<u>II Tungrorum</u>	141
Carrawburgh		367
Chester-le-Street		379
Maryport		552
?		384

12. Raised panelA. Rectangular

Carrowburgh	<u>II Nerviorum</u>	327
Ribchester	<u>Ala II Asturum</u>	261

B. Ansate

(?) Chesterholm	<u>IV Gallorum</u>	162
Hadrian's Wall	"	163
?		270

13. Panels flanked by pilasters

Carrowburgh		369
Castlesteads		691
Chesterholm		372
? Chesters		55
Corbridge	<u>Legio VI</u>	30
Great Chesters	<u>... Gallorum</u>	166
Manchester	<u>Legio VI</u>	31
Maryport	(Tribune)	438
South Shields		403
York		72
?		194

14. Panel flanked by rounded attached shafts

?		76
Netherby (Cabled)		374

15. Panel flanked by bulbous attached shafts

Milecastle 55	<u>Legio VI</u>	40
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16. Inscription in Wreath

Brough on Noe		421
Rudchester	<u>Legio VI</u>	41
Watercrock (Swag)		362

17. Sunken panel with dentils

Brough-by-Sands		340
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Appendix S.Altars now lost without illustration.

	<u>RIB</u>
Barnsley	622
Beaumont	2041
Bewcastle	991
"	992
Binchester	1035
Birdoswald	1876
"	1893
"	1908
"	1928
"	1929
Brampton	1953
Burgh-by-Sands	2045
Cadder	2187
Carlisle	948
Carvoran	1801
Castlesteads	1989
? "	1999
Catterick	725
Chesterholm	1723
"	1734
Ebchester	1105
Housesteads	1581
Ilkley	<u>EE</u> VII with no. 922
Kirkby Thore	764
Lancaster	607
Lanchester	1090
Milecastle 55	1963
" 59 near	
Moresby	798
Musselburgh	2132
Netherby	970
Ribchester	584
"	585
"	Watkin, 144
Risingham	1209
"	1214
" near	Horsley, 240
Turret 33a-33b	<u>JRS</u> L, 237, no. 9.
Whitley Castle	1201

Appendix T.Altars now undecorated

Birdoswald	1878
Birrens	<u>JRS</u> LIV, 178, no. 6.
"	2099
"	2097
Burgh-by-Sands	2040
Cappuck	2118
Carvoran	1809
Great Chesters	1735
Hadrian's Wall	2072
Haile	796
Maryport	811
"	821
"	835
"	846
Risingham	1220

Concordance of RIB with Catalogue Numbers

<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>
278	206	654	595
281	421	657	399
282	422	659	167
575	31	660	795
576	341	664	72
583	43	708	48
586	261	713	757
588	176	717	Not found
590	68	726	695
600	389	727	694
601	336	730	105
602	387	731	650
603	388	732	107
607	754	733	106
609	664	735	109
610	52	736	108
611	53	737	651
618	725	738	110
623	756	742	614
624	25	743	502
627	407	744	731
628	548	745	732
629	547	752	788
630	545	753	789
634	20	759	616
635	324	760	252
636	325	761	752
640	70	762	188
643	592	763	187
644	794	764	lost
646	599	766	751
649	443	772	339
650	594	773	611
641	593	774	623
652	71	775	657
653	34	776	659

<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>
778	658	842	85
779	424	843	81
780	337	845	92
781	660	847	90
790	423	848	563
792	229	849	562
797	331	881	610
798	769	882	334
806	665	883	335
809	550	887	67
810	89	888	772
812	438	889	625
813	93	890	196
814	312	891	773
815	304	892	775
816	313	893	197
817	308	894	198
818	307	895	199
819	305	896	203
820	306	897	200
821	314	898	201
822	299	899	530
823	303	900	774
824	302	902	771
825	300	903	204
826	301	904	776
827	310	913	202
828	311	914	609
829	309	915	134
830	83	917	135
831	91	918	135
833	88	921	577
834	94	922	576
836	95	925	578
837	84	926	464
838	82	927	192
839	417	941	777
841	547	945	621

<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>
947	668	1048	377
953	667	1052	589
954	669	1053	403
965	569	1054	401
966	320	1055	405
967	635	1057	46
968	315	1058	404
969	570	1059	333
971	398	1072	116
972	634	1073	208
973	374	1074	251
985	412	1076	117
988	321	1078	755
989	323	1079	512
990	13	1080	514
993	470	1081	513
994	643	1082	381
1017	817	1083	115
1021	778	1084	382
1022	62	1086	209
1024	131	1087	511
1029	123	1088	129
1030	385	1089	130
1031	255	1099	61
1032	258	1100	727
1033	257	1102	183
1034	644	1103	184
1035	lost	1104	726
1036	259	1117	728
1037	256	1120	32
1041	254	1121	430
1042	207	1122	33
1043	523	1124	493
1044	378	1126	713
1045	522	1127	10
1046	376	1129	494
1047	379	1130	58
		1131	709

<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>
1132	30	1264	127
1135	495	1266	126
1136	11	1267	125
1138	714	1268	119
1139	373	1269	350
1140	710	1270	120
1141	712	1271	437
1142	431	1273	124
1143	57	1275	128
1145	711	1299	239
1146	181	1300	241
1198	329	1301	240
1199	42	1302	330
1200	791	1314	529
1206	185	1316	66
1207	231	1317	189
1208	226	1319	23
1210	232	1320	24
1211	418	1321	602
1212	233	1327	168
1213	227	1328	223
1215	224	1329	411
1216	249	1330	177
1217	250	1331	50
1218	780	1332	452
1221	235	1333	450
1222	236	1335	626
1223	230	1336	451
1224	253	1338	169
1225	234	1339	642
1226	782	1366	734
1228	779	1395	391
1229	781	1396	392
1230	228	1397	390
1231	225	1398	41
1237	442	1421	118
1262	121	1423	497
1263	122	1424	499

<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>
1425	498	1581	lost
1448	485	1582	8
1449	56	1583	7
1450	429	1584	217
1451	705	1585	211
1454	453	1586	214
1455	460	1587	220
1456	461	1588	219
1457	706	1589	245
1458	462	1591	213
1520	680	1592	487
1521	540	1594	243
1522	457	1595	740
1523	364	1596	186
1524	365	1597	508
1525	367	1598	216
1526	629	1599	218
1528	344	1600	244
1529	366	1601	504
1532	368	1602	351
1533	343	1603	505
1535	267	1604	742
1536	264	1605	509
1537	671	1606	507
1538	327	1607	506
1539	471	1608	743
1540	456	1609	38
1541	673	1610	744
1542	455	1611	741
1543	539	1633	355
1544	265	1665	440
1545	268	1673	746
1546	269	1683	328
1548	672	1684	26
1549	674	1685	160
1576	247	1686	159
1577	377	1687	161
1578	212	1688	162
1580	215	1689	19

<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>
1692	699	1803	479
1694	632	1804	483
1695	400	1805	178
1696	371	1806	476
1697	697	1807	685
1698	700	1870	441
1699	698	1872	290
1700	696	1873	292
1701	701	1874	285
1724	248	1875	277
1725	174	1877	289
1726	730	1880	275
1727	166	1882	284
1728	503	1883	283
1729	606	1885	279
1730	528	1886	282
1732	435	1887	276
1733	436	1889	271
1767	617	1890	287
1775	608	1891	280
1776	397	1892	274
1777	359	1894	281
1778	97	1895	415
1779	426	1896	278
1780	103	1897	646
1782	473	1898	272
1783	472	1899	620
1784	683	1900	647
1785	102	1902	648
1787	478	1903	645
1789	474	1904	273
1792	99	1905	413
1793	425	1906	286
1794	604	1907	44
1795	238	1911	291
1796	477	1923	293
1799	542	1955	1
1800	475	1956	175
1802	684	1961	40

<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>
1976	689	2066	733
1977	631	2068	735
1978	149	2069	484
1979	157	2070	799
1980	158	2071	361
1981	143	2073	77
1982	144	2092	136
1983	142	2093	319
1984	164	2095	649
1985	18	2096	146
1986	152	2098	416
1987	427	2100	138
1988	155	2101	147
1990	690	2102	338
1991	151	2103	145
1992	153	2104	137
1993	150	2105	342
1994	154	2107	140
1996	688	2108	139
2015	263	2109	141
2020	39	2120	173
2024	9	2121	205
2025	501	2122	170
2026	786	2123	172
2034	36	2124	171
2038	662	2125	190
2039	363	2132	lost
2042	340	2134	332
2043	527	2135	210
2044	663	2140	79
2050	29	2141	65
2055	96	2144	242
2056	750	2146	16
2057	419	2147	17
2058	420	2148	35
2062	163	2149	114
2063	603	2150	54
2064	222	2151	27
2065	356	2152	687

<u>RIB</u>	<u>Cat. No.</u>
2153	686
2154	212
2159	434
2160	28
2165	100
2166	6
2167	98
2168	101
2169	80
2174	2
2175	4
2176	3
2177	5
2178	12
2189	49
2190	601
2195	156
2201	182
2214	22
2333	613
2347	618

Altars lost without figures and stones now undecorated are excluded.

Concordance of Catalogue Numbers with RIB

<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>
1	1955	41	1398
2	2174	42	1199
3	2176	43	583
4	2175	44	1907
5	2177	46	1057
6	2166	48	708
7	1583	49	2189
8	1582	50	1331
9	2024	52	610
10	1127	53	611
11	1136	54	2150
12	2178	56	1449
13	990	57	1143
16	2146	58	1130
17	2147	61	1099
18	1985	62	1022
19	1689	65	2141
20	634	66	1316
22	2214	67	887
23	1319	68	590
24	1320	70	640
25	624	71	652
26	1684	72	664
27	2151	77	2073
28	2160	79	2140
29	2050	80	2169
30	1132	81	843
31	575	82	838
32	1120	83	830
33	1122	84	837
34	653	85	842
35	2148	88	833
36	2034	89	810
37	1577	90	847
38	1609	91	831
39	2020	92	845
40	1961	93	813

<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>
94	834	137	2104
95	836	138	2100
96	2055	139	2108
97	1778	140	2107
98	2167	141	2109
99	1792	142	1983
100	2165	143	1981
101	2168	144	1982
102	1785	145	2103
103	1780	146	2096
105	730	147	2101
106	733	149	1978
107	732	150	1993
108	736	151	1991
109	735	152	1986
110	738	153	1992
114	2149	154	1994
115	1083	155	1988
116	1072	156	2195
117	1076	157	1979
118	1421	158	1980
119	1268	159	1686
120	1270	160	1685
121	1262	161	1687
122	1263	162	1688
123	1029	163	2062
124	1273	164	1984
125	1267	166	1727
126	1266	167	659
127	1264	168	1327
128	1275	169	1338
129	1088	170	2122
130	1089	171	2124
131	1024	172	2123
133	917	173	2120
134	915	174	1725
135	918	175	1956
136	2092	176	588

<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>
177	1330	223	1328
178	1805	224	1215
181	1146	225	1231
182	2201	226	1208
183	1102	227	1213
184	1103	228	1230
185	1206	229	792
186	1596	230	1223
187	763	231	1207
188	762	232	1210
189	1317	233	1212
190	2125	234	1225
192	927	235	1221
196	890	236	1222
197	893	238	1795
198	894	239	1299
199	895	240	1301
200	897	241	1300
201	898	242	2144
202	913	243	1594
203	896	244	1600
204	903	245	1589
205	2121	247	1576
206	278	248	1724
207	1042	249	1216
208	1073	250	1217
209	1086	251	1074
210	2135	252	760
211	1585	253	1224
212	1578	254	1041
213	1591	255	1031
214	1586	256	1037
215	1580	257	1033
216	1598	258	1032
217	1584	259	1036
218	1599	261	586
219	1588	262	2154
220	1587	263	2015
222	2064	264	1536

<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>
265	1544	312	814
267	1535	313	816
268	1545	314	821
269	1546	315	968
271	1889	319	2093
272	1898	320	966
273	1904	321	988
274	1892	323	989
275	1880	324	635
276	1887	325	636
277	1875	327	1538
278	1896	328	1683
279	1885	329	1198
280	1891	330	1302
281	1894	331	797
282	1886	332	2134
283	1883	333	1059
284	1882	334	882
285	1874	335	883
286	1906	336	601
287	1890	337	780
289	1877	338	2102
290	1872	339	772
291	1911	340	2042
292	1873	341	576
293	1923	342	2105
299	822	343	1533
300	825	344	1528
301	826	350	1269
302	824	351	1602
303	823	355	1633
304	815	356	2065
305	819	359	1777
306	820	361	2071
307	818	363	2039
308	817	364	1523
309	829	365	1524
310	827	366	1529
311	828	367	1525

<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>
368	1532	425	1793
371	1696	426	1779
373	1139	427	1987
374	973	429	1450
376	1046	430	1121
377	1048	431	1142
378	1044	434	2159
379	1047	435	1732
381	1082	436	1733
382	1084	437	1271
385	1030	438	812
387	602	440	1665
388	603	441	1870
389	600	442	1237
390	1397	443	649
391	1395	450	1333
392	1396	451	1336
397	1776	452	1332
398	971	453	1454
399	657	455	1542
400	1695	456	1540
401	1054	457	1522
403	1053	460	1455
404	1058	461	1456
405	1055	462	1458
407	627	464	926
411	1329	470	993
412	985	471	1539
413	1905	472	1783
415	1895	473	1782
416	2098	474	1789
417	839	475	1800
418	1211	476	1806
419	2057	477	1796
420	2058	478	1787
421	281	479	1803
422	282	483	1804
423	790	484	2069
424	779	485	1448

<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>
487	1592	570	969
493	1124	576	922
494	1129	577	921
495	1135	578	925
497	1423	589	1052
498	1425	592	643
499	1424	593	651
501	2025	594	650
502	743	595	654
503	1728	599	646
504	1601	601	2190
505	1603	602	1321
506	1607	603	2063
507	1606	604	1794
508	1597	606	1729
509	1605	608	1775
511	1087	609	914
512	1079	610	881
513	1081	611	773
514	1080	613	2333
522	1045	614	742
523	1043	616	759
527	2043	617	1767
528	1730	618	2347
529	1314	620	1899
530	899	621	945
539	1543	623	774
540	1521	624	972
542	1799	625	889
545	630	626	1335
547	629	629	1526
548	628	631	1977
549	841	632	1694
550	809	635	967
562	849	642	1339
563	848	643	994
569	965	644	1034

<u>Cat. No.</u>	<u>RIB</u>	<u>Cat. No.</u>	<u>RIB</u>
645	1903	706	1457
646	1897	709	1131
647	1900	710	1140
648	1902	711	1145
649	2095	712	1141
650	731	713	1126
651	737	714	1138
657	775	725	618
658	778	726	1104
659	776	727	1100
660	781	728	1117
662	2038	730	1726
663	2044	731	744
664	609	732	745
665	806	733	2066
667	953	734	1366
668	947	735	2068
669	954	740	1595
671	1537	741	1611
672	1548	742	1604
673	1541	743	1608
674	1549	744	1610
680	1520	746	1673
683	1784	750	2056
684	1802	751	766
685	1807	752	761
686	2153	754	607
687	2152	755	1078
688	1996	756	623
689	1976	757	713
690	1990	771	902
694	727	772	888
695	726	773	891
696	1700	774	900
697	1697	775	892
698	1699	776	904
699	1692	777	941
700	1698	778	1021
701	1701	779	1228
705	1451	780	1218

<u>Cat. No.</u>	<u>RIB</u>
781	1229
782	1226
786	2026
788	752
789	753
791	1200
794	644
795	660
799	2070
817	1017