II.—ROMAN GLASS IN NORTHERN BRITAIN.

By Dorothy Charlesworth.

Acknowledgments.

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Glass vessels seem to have been unknown in Britain before the Roman occupation, and there is no conclusive evidence to support Strabo's statement[1] that the Britons were importing glass vessels early in the first century A.D. In the north the earliest glass is found on Roman military sites and throughout the period of occupation it is the forts or the partly military and partly civil site of Corbridge that produce the bulk of the glass ware. A few pieces have been found in the civil settlements attached to the forts and occasionally pieces are found on widely scattered native sites.

This is in no way surprising. Although glass vessels had been made in the Near East, Egypt and Mesopotamia since the second millennium B.C., they had scarcely travelled beyond the Mediterranean area until the beginning of the Christian era, when the discovery of the art of blowing glass

[1] *Geography*, iv, 5, 3.

revolutionized the industry by making it possible to produce glass vessels more easily and cheaply. The glasshouses were able to take advantage of the new markets opened up by the expanding Roman Empire and, alongside the houses specializing in high-quality table and ornamental ware, a vast bottle glass industry for the production of cheap containers grew up. The older centres of the industry, particularly the houses on the Syrian coastline and round Alexandria, continued to flourish, but in the first century A.D., first in Italy and in southern Gaul and later in Belgic Gaul and the middle Rhineland, centring on Cologne, new glasshouses were established to supply the western markets. Many glass workers migrated from the eastern centres to the western and throughout the Roman period a close connection was maintained, with the result that it is often impossible to distinguish the *millefiori* of Alexandria from that of Italy or the cut glass of Alexandria from that of northern Italy or the Rhineland. Glass from the western houses naturally predominated in the western provinces, but import from the Near East never wholly ceased. After about A.D. 70, however, the main source of supply for Britain was the Rhineland.

Some of the glass used in Britain was apparently made locally, on a small scale, at Wilderspool[2] near Warrington, at Colchester and at Caistor by Norwich,[3] but little is yet known of the industry in Britain and it is not so far possible to identify its products. Probably much of the window glass was made locally. One word of warning may not be out of place here. Occasionally in the past fragments of misshapen, twisted vessels have been found and quoted as evidence of glass-making on a site, as at Croy Hill. Such pieces, however, are not wasters but merely vessels or fragments which have been subjected to intense heat, probably in a burning building, and so have partially fused.

As yet very little positive dating evidence is available on which the glass historian can build up a picture of the glass

[2] T. May, *Warrington's Roman remains* (1904), pp. 37-53.
[3] *Norfolk Archæology* 24, pp. 109-112.

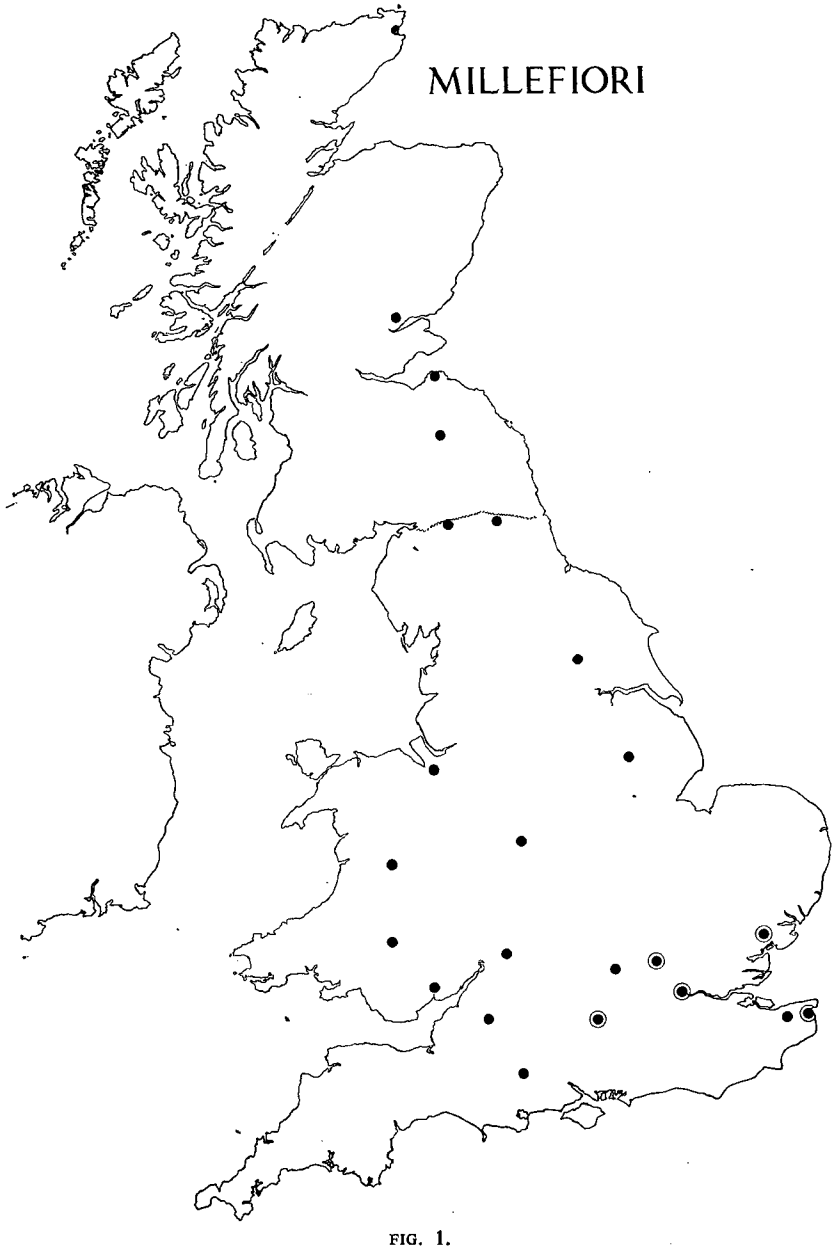


FIG. 1.

industry in Roman times, and the evidence from Northern Britain, particularly in the late first and second centuries, is of the utmost importance, for the well established sequence of events provides the necessary background; the advance of Cerealis to York and over the Stainmore gap to Carlisle, Agricola's rounding off and consolidation of the conquest and its extension far into Scotland, the abandonment of the more northerly bases but continued occupation of southern Scotland until Trajan's reign, the building of the forts on Hadrian's Wall and finally the Antonine advance into and withdrawal from Scotland. The presence or absence of certain types of glass on these northern sites is an important supplement to the meagre dating evidence from sites further south in Britain or in the Rhineland. In particular, the absence of many early types of glass ware from sites initially Hadrianic provides a useful terminal date.

The most distinctive of the early types of glass to reach the north is the *millefiori* or mosaic glass, originally made at Alexandria in the first century B.C. and copied in Italy in the first century A.D. Probably most of the *millefiori* used in Britain came from Italy, but this cannot be proved as both places were producing similar vessels at the same time.

Few of these *millefiori* plates and bowls reached the north (see fig. 1). The decline in quality had set in before the middle of the first century A.D., and by the Flavian period the popularity of polychrome glass was waning. A single fragment of deep blue, marbled with opaque white, was found at Newstead, and fragments of green, speckled with opaque yellow, at Nether Denton and Corbridge, all sites first occupied by Agricola *c.* A.D. 81. A fragment was found at Tealing in Angus and another at Traprain Law, presumably the result of trading with or looting in the Scottish forts. All these pieces are late examples of their kind. The more elaborate *millefiori* types, complicated floral or spiral designs, are occasionally found in the south at London, Colchester, Silchester and Verulamium; and one piece of strip mosaic, as well as less elaborate pieces, reached York, a site first

PLATES

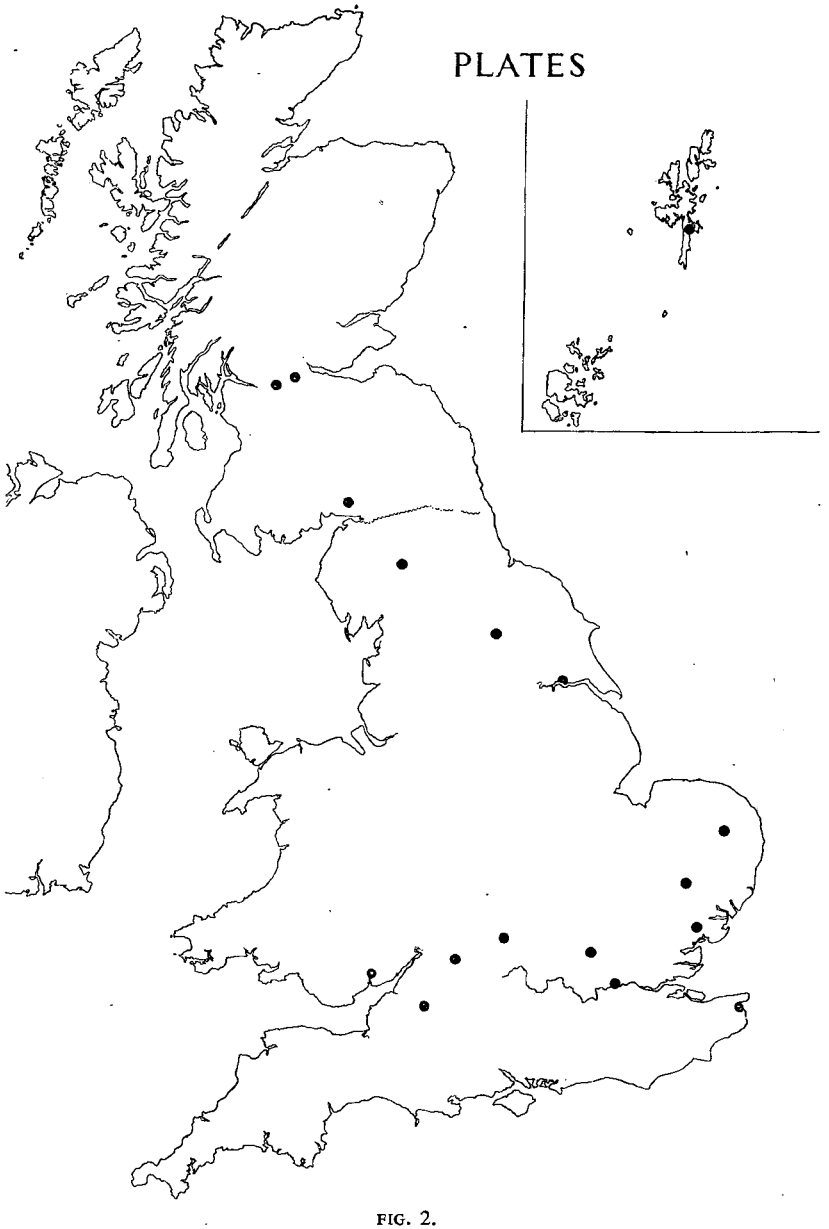


FIG. 2.

occupied by Cerealis, ten years earlier than the three more northerly forts. No pieces have yet come to light on any of the sites first occupied in the Hadrianic period. This confirms the general picture best documented on the German sites, where *millefiori* is recorded in some quantity in early and mid first-century levels but is obviously dying out in the 60s and 70s, and supplements the evidence from Camulodunum.[4] The pillar-moulded bowls seem to continue slightly later than the smooth-surfaced bowls, but this may only be longer survival in use, for the ribs strengthen the vessel.

Monochrome pillar-moulded bowls (pl. I, 1) are far more common than *millefiori* and were probably still being made until a later date; for they turn up with monotonous regularity on Flavian and Trajanic sites, but are so far absent from the sites on Hadrian's Wall, although in Germany occasional mid second-century examples are recorded, e.g., at Pfünz. Most of these bowls are in natural green glass, that is, a metal in which the glass worker has made no attempt to control the colour, but which is coloured by the iron in the silica sand which is the basis of all glass. Some, mainly of early or mid first-century date, are in good coloured glass, a deep blue or amber being the most common; but a fragment of a dark amber bowl turned up at Carlisle, and at Newstead fragments of an amber and a wine coloured bowl were found in the ditches of the early fort.

Another Alexandrian product, also copied in Italy, but not mass produced like the pillar-moulded bowls, is a shallow plate on a high foot-ring (see fig. 2). Those examples, with a carefully finished rim overhanging at the tip (fig. 3, 1), are probably Alexandrian, for they have exact parallels at Karanis.[5] Those with a similar rim but no overhang at the tip, like that from Kirkby Thore (fig. 3, 3), are likely to be western copies. There is no apparent distinction in date between them and both seem to be predominantly a Flavian-

[4] C. F. C. Hawkes and M. R. Hull, *Camulodunum*, The Glass by D. B. Harden, p. 293.

[5] D. B. Harden, *Roman glass from Karanis*, pp. 49-51.

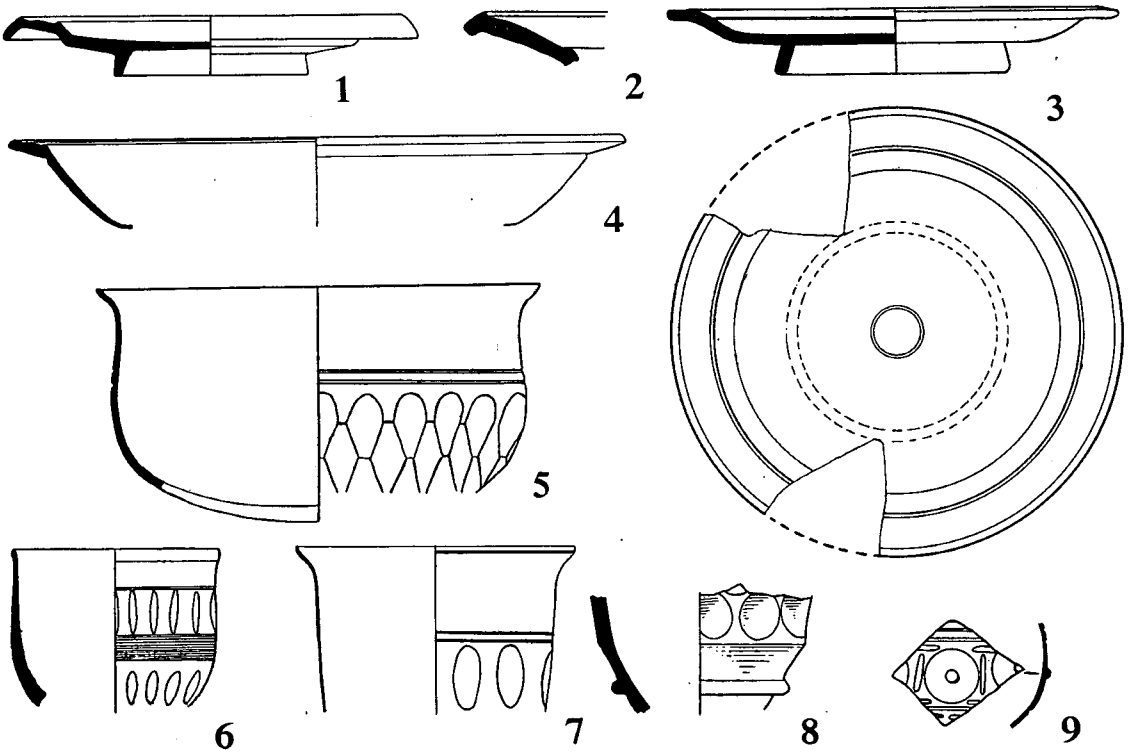


FIG. 3. PLATES AND FACET-CUT VESSELS. $\frac{1}{2}$ *scale.*

Trajanic type. No fragment of this plate type turned up at Camulodunum in levels dated to A.D. 43-65, and they are not recorded on early or mid first-century sites on the Continent. On the other hand, they do not appear on sites first occupied in Hadrian's reign. The stratification of the rim fragment, of Alexandrian type, from Birrens is not recorded, but the 1937 excavations produced some Flavian material and two pre-Hadrianic forts on the site have since been revealed by air photography. At both Cadder and Castlecary some Agricolan occupation material underlies the Antonine. Further arguments in favour of this dating are the metals and techniques used in the making of these plates. Many, the Birrens and Aldborough (fig. 3, 2) fragments for example, are in good colourless glass, which might equally well belong to the later second century as to the Flavian-Trajanic period, but others are in strong-coloured metal which is typical of much first-century glass ware. The Kirkby Thore plate is in good deep emerald green glass and a rim fragment from Ditchley villa is in opaque red, neither of which metals were used for vessels of undoubtedly second century date. The plates are made in a mould, and finished when cold on a polishing wheel; a technique used at least as early as the second century B.C., but one which died out towards the end of the first century A.D., since it was found simpler to blow, into a mould if necessary, all types of vessels. In the later Roman period a free blown plate was produced, somewhat like these examples, but lacking the carefully finished ground mouldings at the angles of the rim.

A shallow bowl with a grooved, outplayed rim (fig. 3, 4), made in the same way as these early plates and probably dating to the same period, was found at Corbridge. It is perhaps Alexandrian, and its parallel, also in good colourless glass, is a rim fragment found in the Commandant's House at Caerhun and dated there to the period A.D. 90-110. A similar piece, in good emerald green glass, was found in London.

Another important type of vessel, also belonging to this

FIG. 4.

period, is the facet-cut beaker (pl. I, 2), which is well represented by fragmentary examples on the Scottish sites of Newstead, Lyne, Birrens (the 1895 excavations), Castlecary and Cadder (see fig. 4). In no case has the dating evidence for these pieces been recorded, but all are sites either known to have been first occupied in the Flavian-Trajanic period or at least producing other material of that period. Dated examples have been published from Caerleon, where one piece underlay the rampart of the Trajanic fortress[6] and another was found in the amphitheatre in a context dated *c.* A.D. 100.[7] Other dated examples occurred at Pompeii before A.D. 79, and Niederbieber, *c.* A.D. 100.[8] These beakers are widely scattered and quite common. All are very similar, with a moulded rim and ground rib above and below a panel of interleaved facets, but slight differences, in the details of rim finish and in the size and spacing of the facets, suggest that they were made in more than one place. One centre was certainly North Italy.

Two fragments of beakers from Corbridge, which belong to this general class, are of a rather different and less common type. The first (fig. 3, 7), with an open diaper of shallow facets and grooves in place of ribs, is closely paralleled by a complete example in a grave at Muralto,[9] in southern Switzerland, which dates to the middle or later first century; and it bears a general resemblance to a beaker from second-century context in London (pl. I, 3), although the London beaker has the normal ribs bordering the facet panel. The other Corbridge fragment (fig. 3, 8) is less easily placed. Circular facets are more often used on third- and fourth-century beakers, but those are much coarser in execution and poorer in metal than this Corbridge piece, which in everything except the shape of its facets obviously belongs with the early beakers.

[6] *Arch. Camb.*, 84, p. 257.
[7] *Archæologia*, 79, p. 170, pl. 34, 5 & 6.
[8] F. Hettner, *Provincialmuseum in Trier* (1903), p. 108.
[9] C. Simonett, *Tessiner Gräberfelder* (Monographien zur Ur-und Fruhgeschichte der Schweiz, Band iii) 1941, p. 81, pl. 12, 3.

FIG. 5. TOP: DISTRIBUTION OF BOWLS WITH PAINTED ARENA SCENES. BELOW: LEFT, CHESTERS, HEAD BLUE WITH RED MANE AND BLACK SPOTS. CENTRE, CORBRIDGE, HINDQUARTERS BLUE WITH BLACK SPOTS, WHITE UNDER BELLY, THIGHS AND TAIL. RIGHT: HOUSESTEADS, PAW BLUE, LINE PINK.

Facet cutting remained a very common form of decoration until late in the third century, and one good example of a small, third-century facet-cut bowl was found at Corbridge (fig. 3, 6), another in the 1937 Birrens excavations (fig. 3, 5).[10] A shallower bowl, with interleaved facets like those on the Birrens bowl, was found at Ospringe in Kent.[11] Cologne was by this time the great centre for all manner of cut glass. The most common fashion was to combine facet and linear cutting in geometric designs. Numerous fragmentary examples of these vessels are known from southern sites and York, but the only examples which I have come across further north are pieces from Ilkley and Piercebridge (fig. 3, 9). Their absence is inexplicable, for the import of Rhenish glass into the north at that time was considerable and the quality of the glass high.

Two other important decorated groups, however, are represented. In both cases the same type of cylindrical bowl with a double coil base ring was used. Undecorated examples are well known in the period *c.* A.D. 160-250 in all parts of England, and there are a few examples in Scotland, such as those from Airlie in Angus (pl. I, 4), Westray in Orkney and Castlecary on the Antonine Wall; but decorated pieces are rare. The first group (see fig. 5), with painted arena scenes, is represented by fragments at Chesters (fig. 5, 1), Corbridge (fig. 5, 2), Housesteads (fig. 5, 3), Traprain Law[12] and Clickhimmin Broch. Complete examples are known from early third-century graves on the island of Seeland (Denmark). All are very similar in style and are undoubtedly the product of a single workshop, but, although probably all contemporaneous, it is unlikely that they are the work of one man, for there are some differences in treatment. The Nordrup leopard,[13] for example, has a dark out-

[10] *PSAS* 72 (1937-8), p. 335.

[11] W. Whiting, W. Hawley and T. May, *Excavation of the Roman Cemetery at Ospringe, Kent* (1931), pl. 32, No. 340.

[12] *PSAS* 66 (1931-2), p. 294, fig. 5, coloured reproductions of the fragments from Traprain and Housesteads *vicus*.

[13] A. Kisa, *Das Glas im Altertume*, fig. 348.

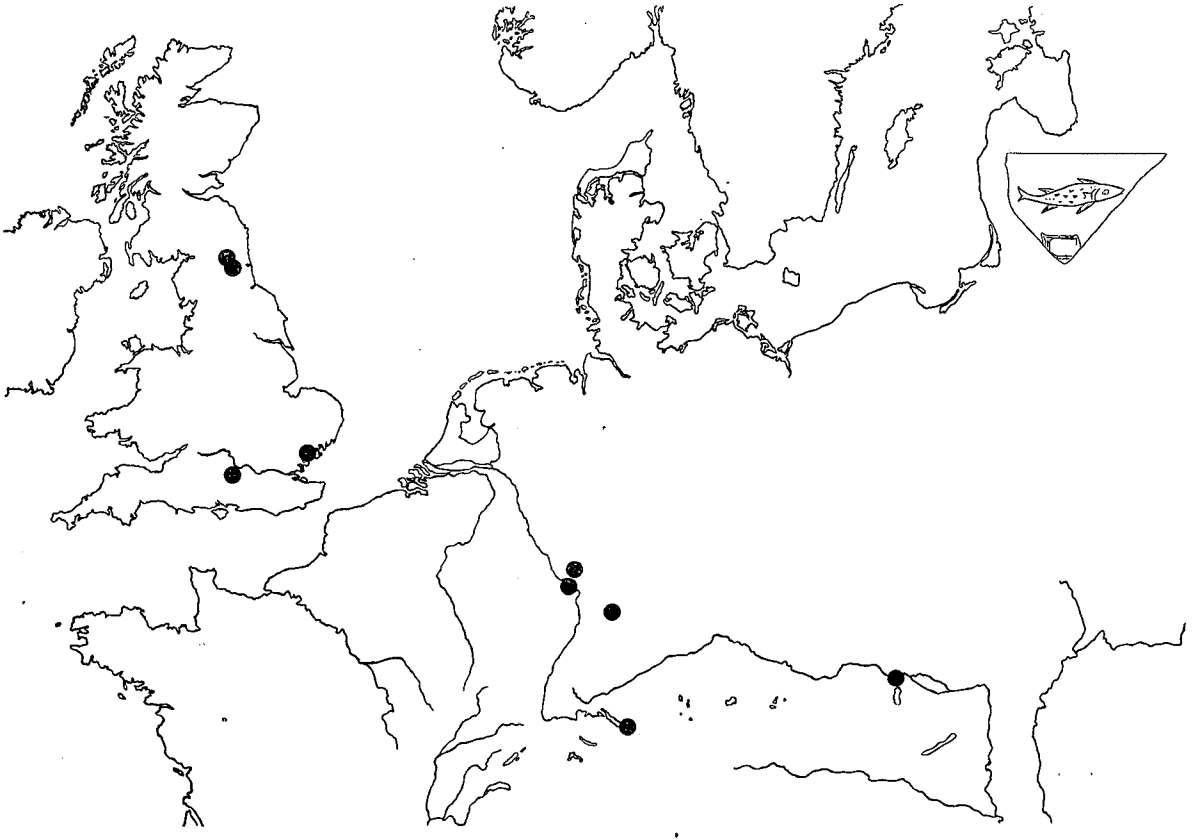


FIG. 6. DISTRIBUTION OF BOWLS WITH ENGRAVED FISH.

line but otherwise is obviously very similar to what is left of the Corbridge and Housesteads leopards. They were probably made in one of the workshops in the Cologne area and travelled northwards from there, mainly beyond the frontiers of the Empire. A fragment found at Zugmantel is the only piece known in Roman Germany. In Britain the exclusively northern distribution of this type suggests the possibility that these bowls were part of a cargo coming from the Rhine direct to the Tyne.

The other group (see fig. 6) also belongs to the early third century, and the pieces found in the German frontier forts give a terminal date of A.D. 250. Unfortunately, no complete example has yet been found, but every fragment has a fish, swimming either to left or right; some also have traces of lettering and the Silchester piece has a palm branch. It is quite plain that this is a group of Christian objects, made and distributed more than half a century before Christianity became the official religion of the Empire. Unlike the painted bowls, they do not occur outside the frontiers but along them, at Zugmantel, Osterburken and Deutsch-Altenburg, also at Weisenau bei Mainz and Bregenz. The British examples are from Corbridge, Chesters, Colchester and Silchester. All the pieces are clearly from the same workshop, again most probably in the Cologne area.

Three other pieces of engraved glass in the north are also most probably Rhenish. One Chesters fragment (fig. 7, 1), exhibiting part of the figure of a man on horseback with a spear in his right hand, belongs to the same group as the fine bowl with a hunting scene found at Winthill in Somerset.[14] The other Chesters fragment (fig. 7, 2) and a piece from Traprain Law (pl. I, 5) are probably fourth-century. The delineation of the head, with straight hair *en brosse*, and of the large diamond-shaped eye with a double outline, is comparable with that of the figures on the bowl with a Bacchic scene from Dorchester,[15] and another late engraved beaker

[14] *JRS* 47 (1957), pl. 14.
[15] *JRS* 29 (1939), pl. xxxii.

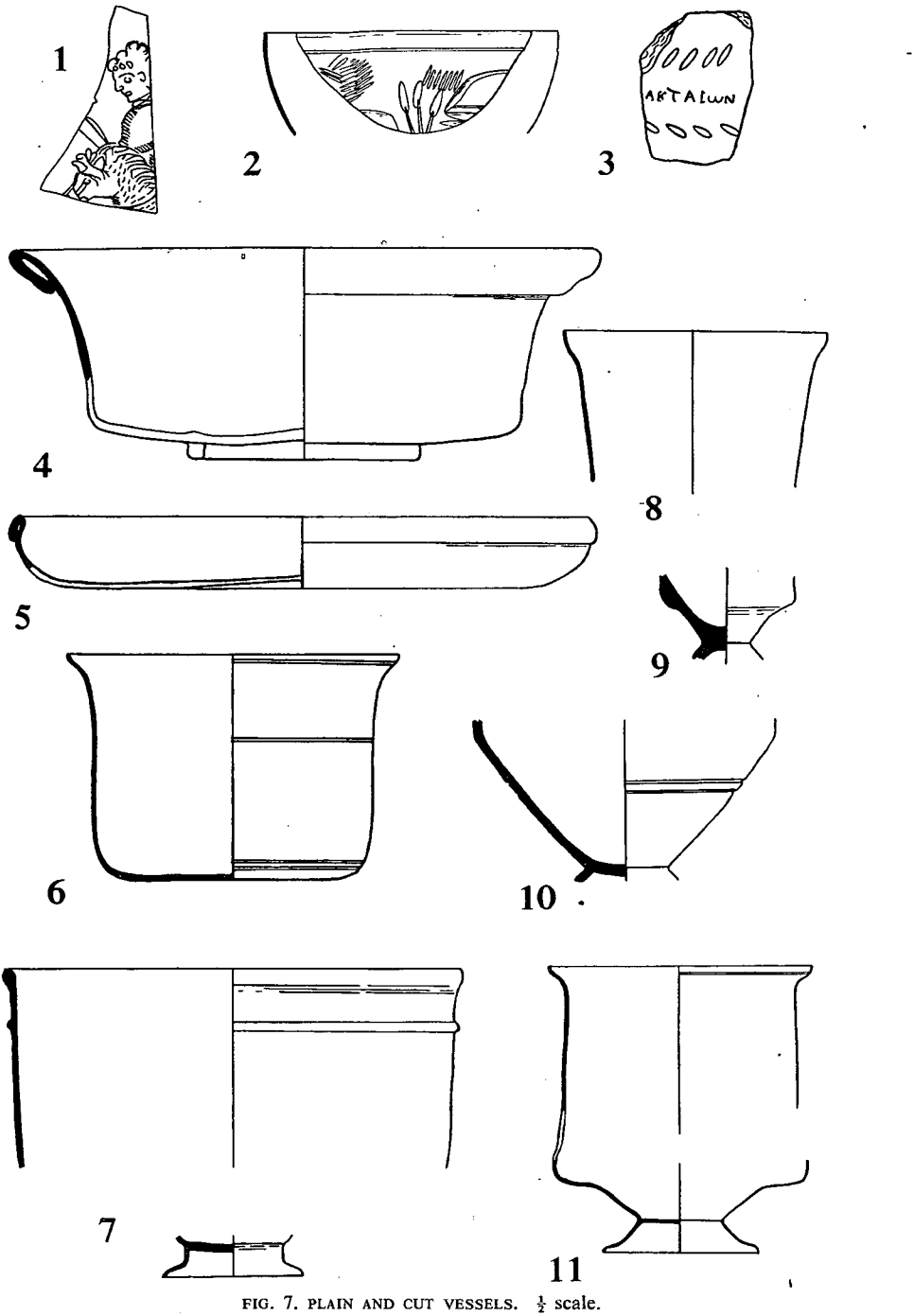


FIG. 7. PLAIN AND CUT VESSELS. ½ scale.

from the Rhineland, formerly in the von Rath collection, with a series of dancing figures.[16]

The fourth figured piece (fig. 7, 3), published by Bruce,[17] is part of a bowl from Castlesteads which illustrated the encounter of Actaeon with Artemis, who changed him into a stag. The Castlesteads fragment obviously belongs to a bowl the same as, or very similar to, that in the British Museum from Leuna.[18] Fremersdorf claims that these bowls are part of a group from a single Cologne workshop, but there are obvious difficulties in the way of his theory.[19] The use of Greek suggests an eastern rather than a western origin, although of course Greek was used to a limited extent in the western Empire and glass workers from the east migrated to the Rhineland from time to time. Also, while other similar bowls illustrating legends, with facet-cut figures touched up with linear shading and detail and the figures labelled in Greek, have been found in the western provinces, they have also been found in the Near East. There is as yet no good evidence to suggest the export of western glass to the east; but the trade from east to west is well established, and it is difficult to believe that these particular bowls (but not all those which Fremersdorf groups with them—there is no reason why some of the others should not be Rhenish) are not all from one Alexandrian workshop.

The Corbridge museum, which contains by far the richest site collection of glass in northern Britain, includes fragments of many bowls which are not easily placed. Most of the types represented there turn up on other northern sites. One of the most common, which occurs on native sites such as Torwoodlee Broch[20] as well as Roman military sites, is the hollow tubular rimmed bowl. Generally only the rim and part of the side survive and there are considerable variations

[16] Kisa, *op. cit.*, fig. 258.
[17] J. C. Bruce, *Roman Wall*, 3rd ed., p. 438.
[18] F. Fremersdorf, *Figürlich geschliffene Gläser* (Römisch-Germanisch Forschungen Band XIX), pl. 3.
[19] Fremersdorf, *op. cit.*, and Harden's review in *JRS* 43 (1953), p. 201.
[20] *PSAS* 26, p. 68, and 66, p. 368, fig. 52.

in the depth of the vessels. The bowls with a broad rim are usually deep and have a base ring, while those with a smaller rim are shallow with a flat base, as is suggested in the reconstructions (fig. 7, 4 and 5). In date these bowls range from the mid-first until at least the end of the second century and they are found throughout the western provinces and in Italy, where wall-paintings at Pompeii and the Boscoreale villa show them in use as fruit bowls. They were certainly made in Italy—probably also in the Seine-Rhine area—as well as in Egypt.

The fragment of a rounded, thickened rim, with a horizontal trail below, is a problem. The actual rim type is found at Caerleon amphitheatre,[21] Lechlade and on a complete bowl from the Baldock cemetery[22] (pl. II), but a small pad base obviously belongs with the Corbridge rim (fig. 7, 7) and precludes the possibility of its belonging to the same type as the Baldock bowl, which has a double concentric coil base ring like that of the Airlie bowl. A bowl from Castlecary (fig. 7, 6) is generally similar in shape to the Baldock bowl but it has a polished rim and is decorated with groups of wheel cut lines. Its technique links it more closely with a fragmentary bowl from Wroxeter, also finished on the polishing wheel, than with these others.

The three carinated beakers from Corbridge (figs. 7, 9, 10 and 11) have no known close parallels, but that class of vessel is widely scattered throughout the country. There is an almost complete example from Crundale in Kent (pl. II), which bears a strong resemblance to the Hardnott example now in Tullie House Museum and is somewhat similar to one of the Corbridge pieces. A fragment from Jewry Wall, Leicester, is dated by its context to *c.* A.D. 180.[23] All these have either a true ring or a pad base. Another example from Richborough has an open pushed-in base ring.

[21] *Archæologia* 79, p. 170, pl. 34, 3.
[22] *Arch. J.* 88, p. 276, fig. 6, grave 104.
[23] I am indebted to Mr. T.-D. Clarke of the Leicester City Museum for this information.

There are few pieces of fourth-century beakers in the north, but one of the most common types of the middle and later fourth century, a funnel-shaped beaker (pl. III, 1), is represented by rim fragments at Corbridge (fig. 7, 8) in the poor thin metal, with bubbles and striations, which is typical of much of the glass of that period. An even later fragment of a similar shaped beaker with trailed decoration was found at Traprain Law.[24] There is a similar piece in the Silchester collection, and parallels can be found in grave groups after A.D. 370 in the middle Rhineland. Bowls and beakers decorated with marvered blobs of contrasting colour have also been found; at Carrawburgh a colourless bowl fragment, with a group of three deep blue blobs, and at Corbridge a rim fragment of an olive green bowl, with dark green blobs (fig. 8, 2). These are among the most common types of fourth-century Rhenish glass.

Fragments of glass jars are quite common on all sites. Most of them are utilitarian vessels in natural green glass, varying greatly in size. Unfortunately, they are generally found in such fragmentary condition that it is impossible to identify the exact type of vessel, except where part of the rim remains; and for this reason they tend to get overlooked. In the Corbridge collection, however, there are two identifiable fragments of vessels of this kind (fig. 8, 3 and 4). The larger jar is often thought of solely as a cinerary urn, since the only complete examples are those recovered from graves, in which they were protected by a stone or wooden cist; but like the pottery vessels which often contain cremations, their original use was domestic. These large jars (pl. IV, top), probably made in Italy and southern Gaul, belong to the first and second centuries. The smaller jars (pl. IV), which seem to be unguent pots, occur throughout the Roman period. One more elaborate type of jar, a globular ribbed jar with a hollow tubular rim (fig. 8, 1), is well represented on northern sites. It was made in the glasshouses of the Seine-Rhine area and first occurs on Flavian sites, generally in coloured glass,

[24] *PSAS* 66, p. 359, fig. 43.

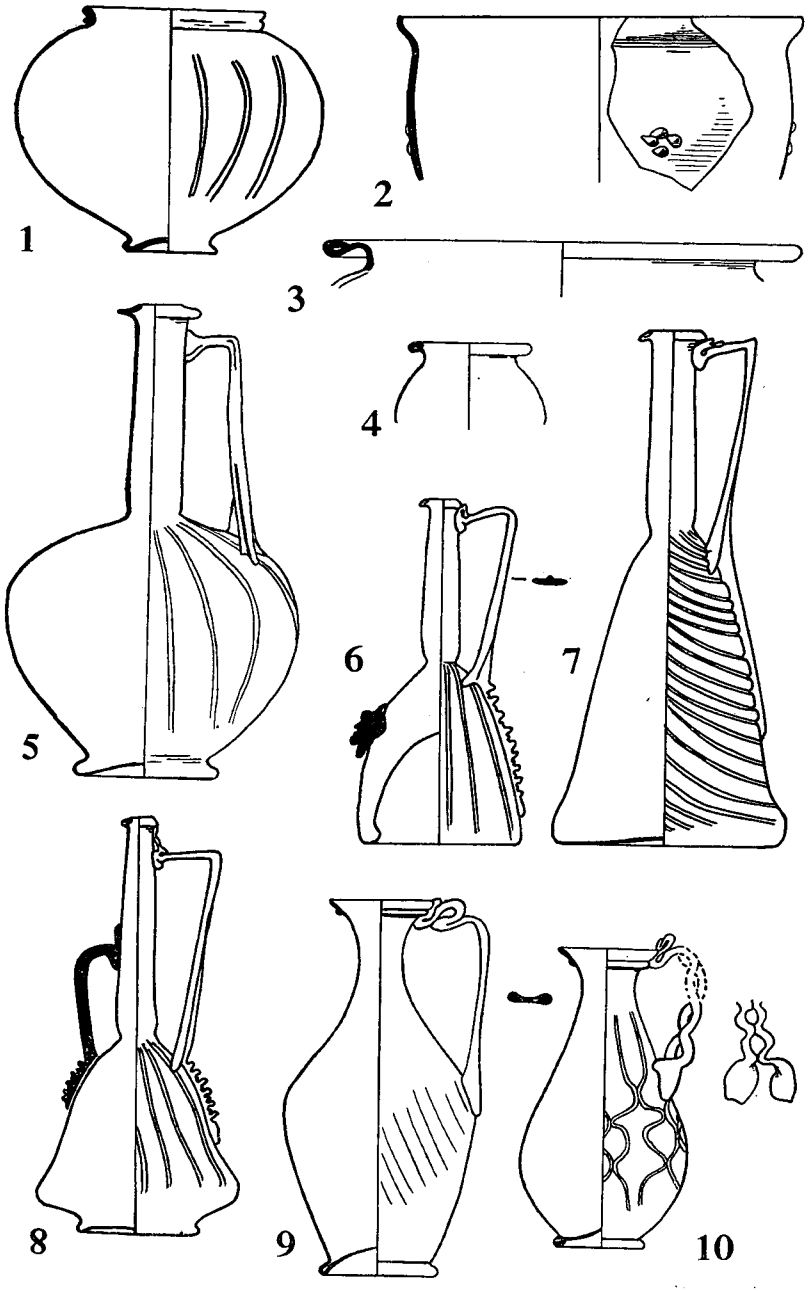


FIG. 8. BOWL, JARS AND FLAGONS. 2-4, $\frac{1}{2}$ scale; 1, 5-10, $\frac{1}{4}$ scale.

amber, blue and a yellowish green being the most common. It dies out in the late Antonine period.

A variety of flagons was also produced in that area at the same period, *c.* A.D. 70-180 (fig. 8, 5-8). The metals used are the same as for the jars, and fragments from the body of the vessel cannot always be assigned to one or other type. At Newstead, two necks, one in blue, the other in olive green, were found. In Aberdeenshire a very fine complete flagon was dug up near Turriff (pl. III, 3). There are many fragments from other sites. The distinguishing characteristics of these flagons are the tall neck, constricted at its base, and an angular handle. The conical-bodied flagons have a single ribbed handle, the rib ending in a long tail down the body. The globular flagons generally have a three- or four-ribbed handle, attached like a claw to the shoulder, and in many cases a Medusa-head medallion is added. One of these medallions, the only surviving bit of the flagon, was found at Piercebridge. Towards the end of the second century the types change (fig. 8, 9 and 10). The neck broadens and thickens, the handle usually has a looped or crested top and is more curved and the body is generally ovoid. Some of them had a double-strand handle, nipped together to form a chain. Handles of this type have been found at Birrens, Corbridge and Piercebridge.

The other handled vessels are for the most part more useful than decorative. The main types are the mould-blown, angular and cylindrical bottles, which were mass produced in the first and second centuries. They are designed for the transport and storage of liquids and are made in strong, thick glass. The broad, angular handle is squashed in, so that it will not project beyond the width of the sides of the vessels. Most of these bottles have some sort of moulded base marking, generally a geometric pattern (a selection of those from Corbridge is reproduced in fig. 9) or sometimes three or four letters. These cannot be explained. The CCPC on the tall, narrow square bottle from Carrawburgh (pl. III, 2, and fig. 9) occurs also on a two-

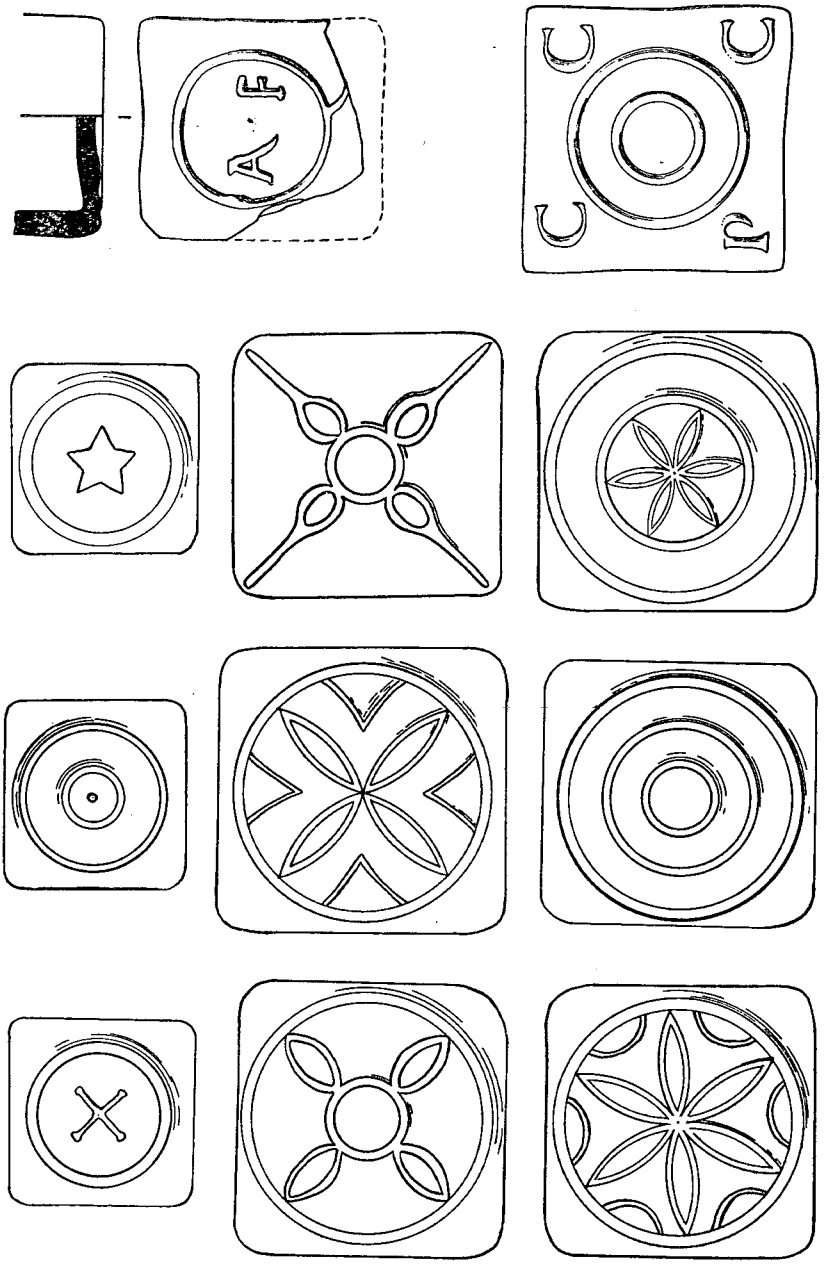


FIG. 9. BASES OF SQUARE BOTTLES WITH MOULDED MARKINGS. $\frac{1}{2}$ scale.

handled rectangular bottle in the London Museum and also on bottles found in the middle Rhineland, e.g. at Köln-Mungersdorf. The AF inside a Q (fig. 9), which occurs twice at Corbridge, is also found at Great Chesterford, London, Mainz and a site in Normandy.

In the late second and third centuries cylindrical bottles are frequently made in good, colourless glass and many of them are decorated, like one from Corbridge (fig. 10, 1), with wheel cut circles. Another offshoot in the third century is the "Frontinus" bottle, with mould-blown horizontal ridges below the shoulder and above the base (pl. V, 1), which is common enough in northern Gaul and is found occasionally in southern Britain, but does not seem to travel north.

Other very common products of the bottle-glass industry are the bulbous-bodied flasks, ranging in size from the small perfume flasks (fig. 10, 2-5, pl. V, 2 and 3), which used to be called "tear bottles", to larger flasks, probably for oil and wine (fig. 10, 6). Fragments of them are abundant on all Roman sites.

Better-quality decorated flasks were also produced. One distinctive class, with so-called "snake thread" decoration, was made in the middle Rhineland in the later second and earlier third century, and has been found occasionally throughout Britain. A few pieces came north to York (fig. 10, 9), Aldborough (pl. III, 4), Piercebridge (fig. 10, 10) and South Shields (fig. 10, 8).[25] One piece was found on the native site at Covesea. The decoration consists of serpentine trails, generally in white, blue or yellow, which have short lines scored across them. Other fragments with plain trails are quite frequent. Part of a thick green flask, with an opaque yellow trail, and another fragment of very thin, greenish glass, with purple and white trails, were found at Carrawburgh (fig. 10. 7).

The base of a more exotic type of flask, or possibly beaker, now in the Black Gate Museum, is said to have come from the fort at South Shields. It is a mould-blown vessel in

[25] W. Thorpe, *English Glass*, p. 34.

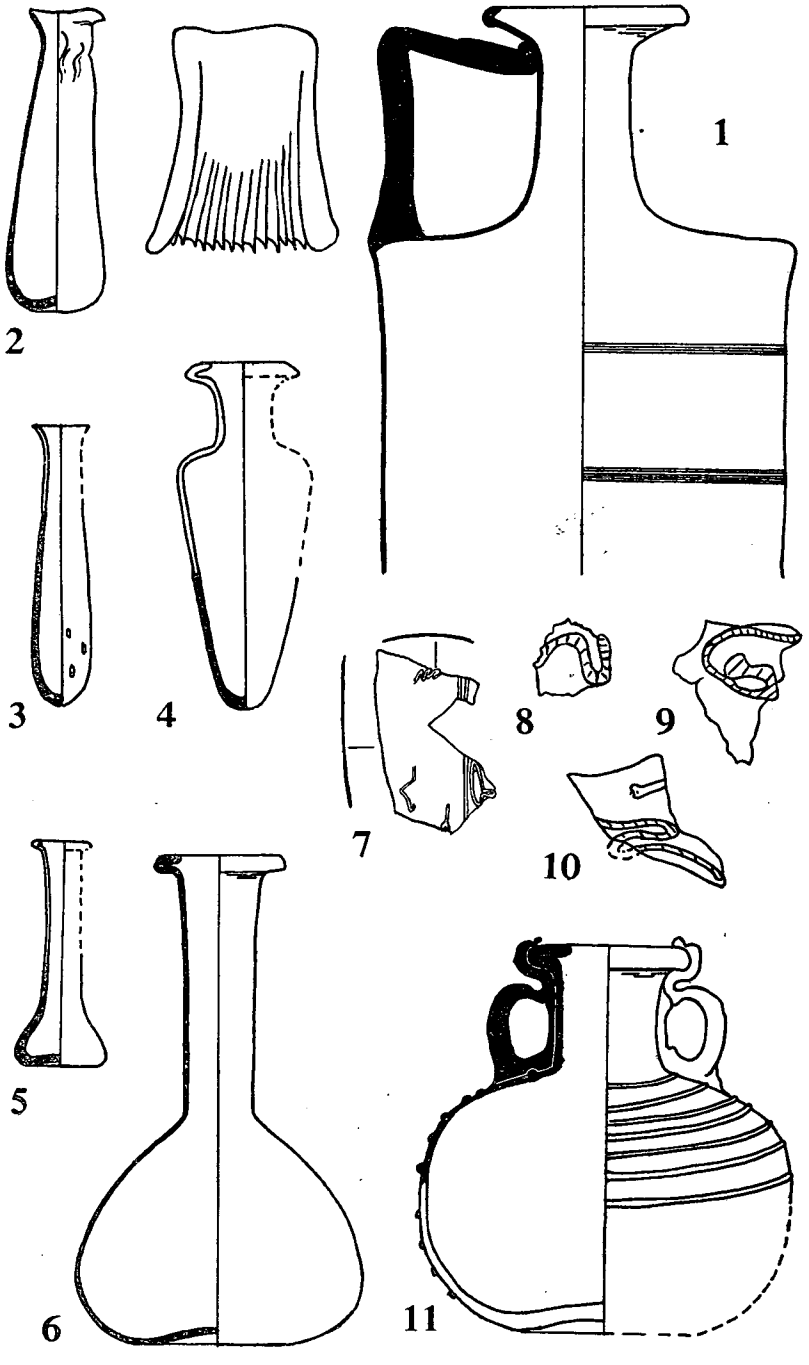


FIG. 10. BOTTLES AND FLASKS. 8-10 SNAKE THREAD FRAGMENTS. $\frac{1}{2}$ scale.

deep blue glass, in the form of a negro's head (pl. V, 4). Only one other head flask has been found so far in this country, at Caerleon, but they are fairly common in the Rhineland. The head is not always negroid and they are not exclusively western products. Both the eastern and western houses produce them throughout the Imperial period, and the eastern workshops also made other flasks decorated with a moulded geometric pattern. Part of the base of one of these is in the museum at Chesters.

The two-handled "dolphin", or bath, flask, which is a direct copy from the small bronze flasks used for carrying the oils used after bathing and is frequently found attached to a set of strigils, is a long-lived and very common type. None was recorded at Colchester in the period A.D. 43-65, but they were certainly being made before A.D. 79, as they turn up at Pompeii. There is an excellent one in Corbridge Museum, found in an Antonine pit on the site, which has already been published.[26] The type continues in production until sometime in the third century and the later examples are frequently decorated with trails, as is one from Carrawburgh (fig. 10, 11), or cutting. The dolphin-like eyelet handles take a bronze handle or chain by which the vessel can be carried, and many of them have a bronze stopper.

The distribution of glass, as of other material of Roman provincial origin, emphasizes the division between "Roman" and "native" in the north. Nearly all the glass vessels are from Roman sites and their presence on native sites (see fig. 11) is exceptional. Glass bangles, which have recently been studied afresh by Mr. Stevenson,[27] are another matter. They were made locally and are mostly found on native sites. So far the only Roman glass vessel to be found on a native site in Northumberland is part of a third-century Rhenish glass jug at Witchy Neuk;[28] and from Cumberland and Westmorland there is nothing. This is in part due to lack of excavation, but even in Scotland, where more sites have been excavated and more glass found, it is exceptional to find

[26] *AA*[4] 30, p. 259, pl. 8. [27] *PSAS* 88 (1954-5). [28] *AA*[4] 16, p. 137.

ROMAN GLASS ON NATIVE SITES

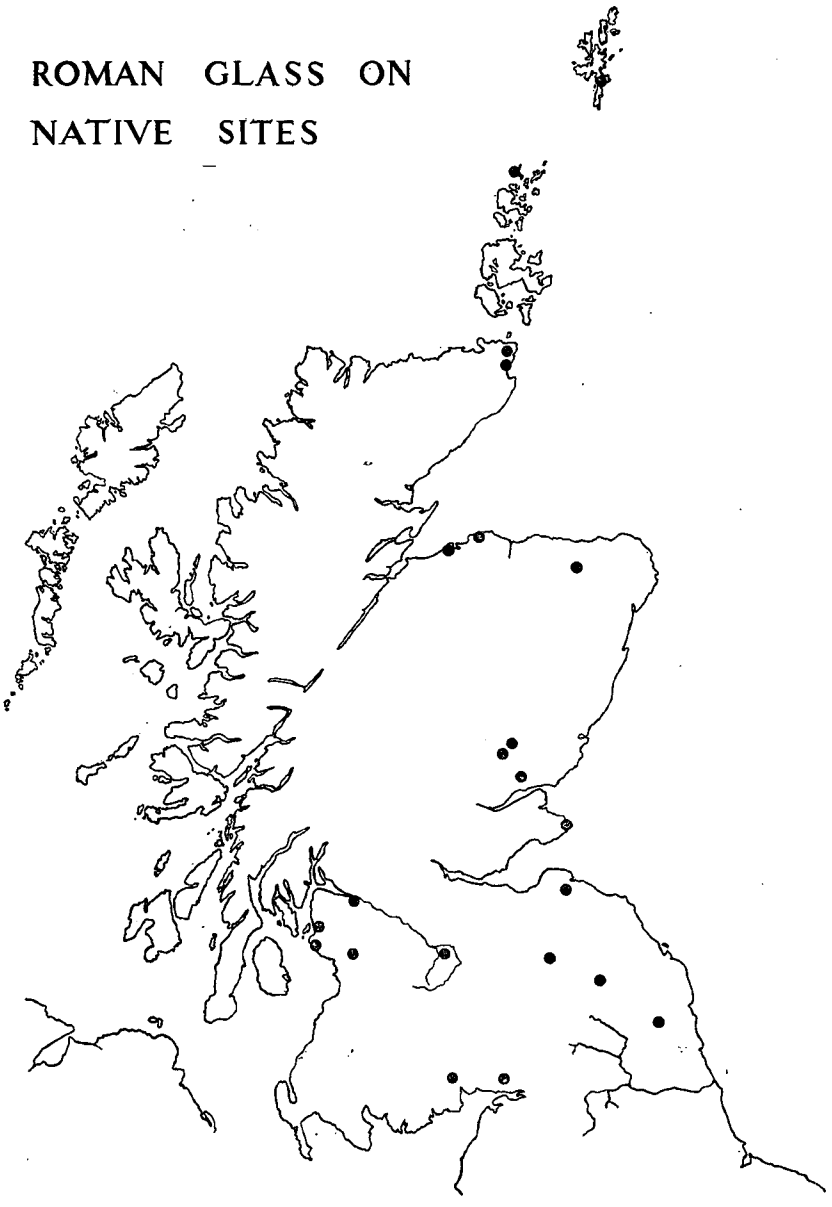
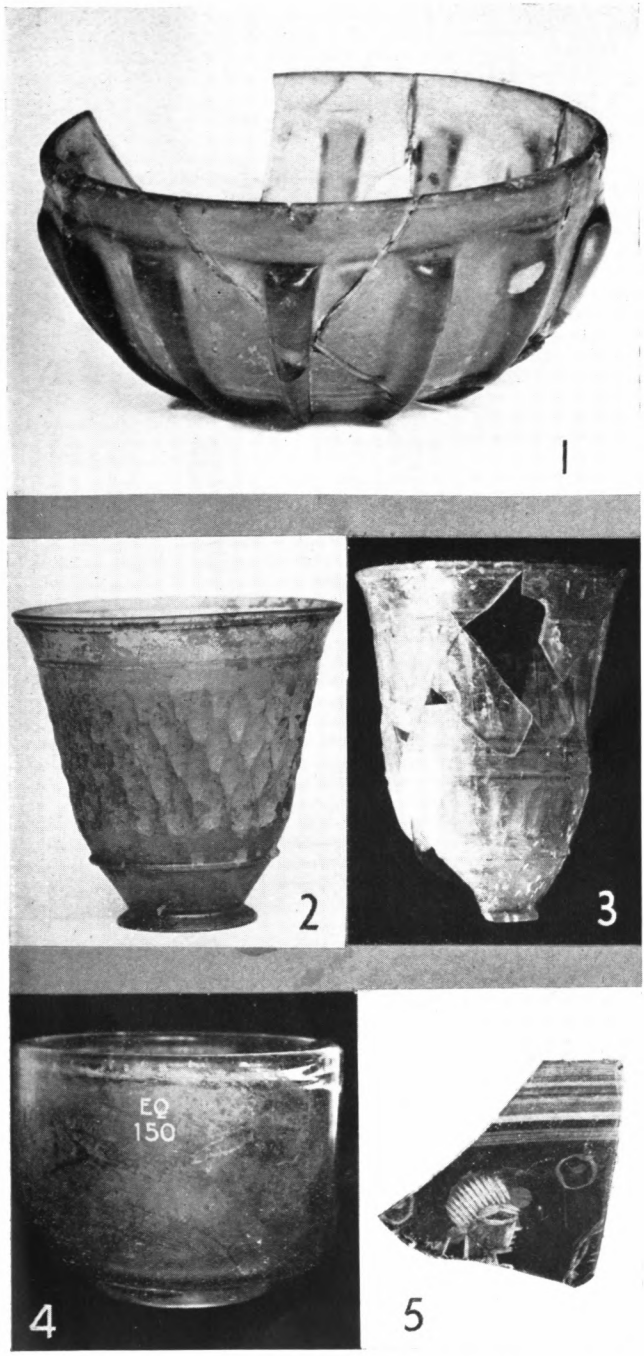


FIG. 11.

fragments of more than one or two vessels on any one site. Those sites producing glass are all near the centres of Roman occupation, or else up the east coast.

Obviously I have not attempted to give a complete catalogue of all the material found in the north, except in those cases where the northern evidence is particularly valuable. For the rest, I have attempted only to indicate the range of material, the variety of types and of decoration, the source of the pieces, where that is known, and the dating, where there is evidence for it. Much work remains to be done and many more securely dated, and preferably complete, vessels are needed before any precision can be attained.



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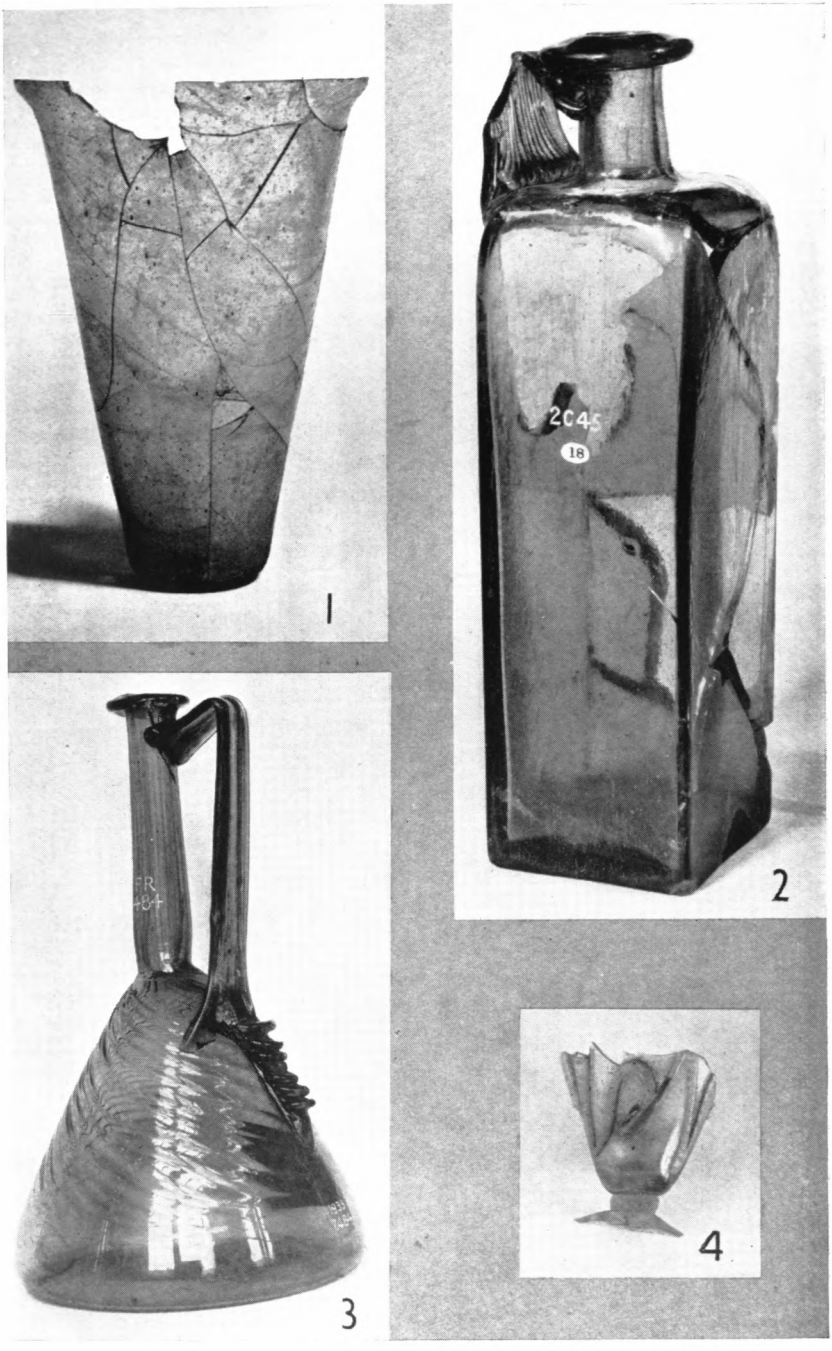
1, Baldock bowl reproduced by courtesy of Letchworth Museum.

2, Crundale beaker by courtesy of the Liverpool Libraries, Museums and Art Gallery Committee.



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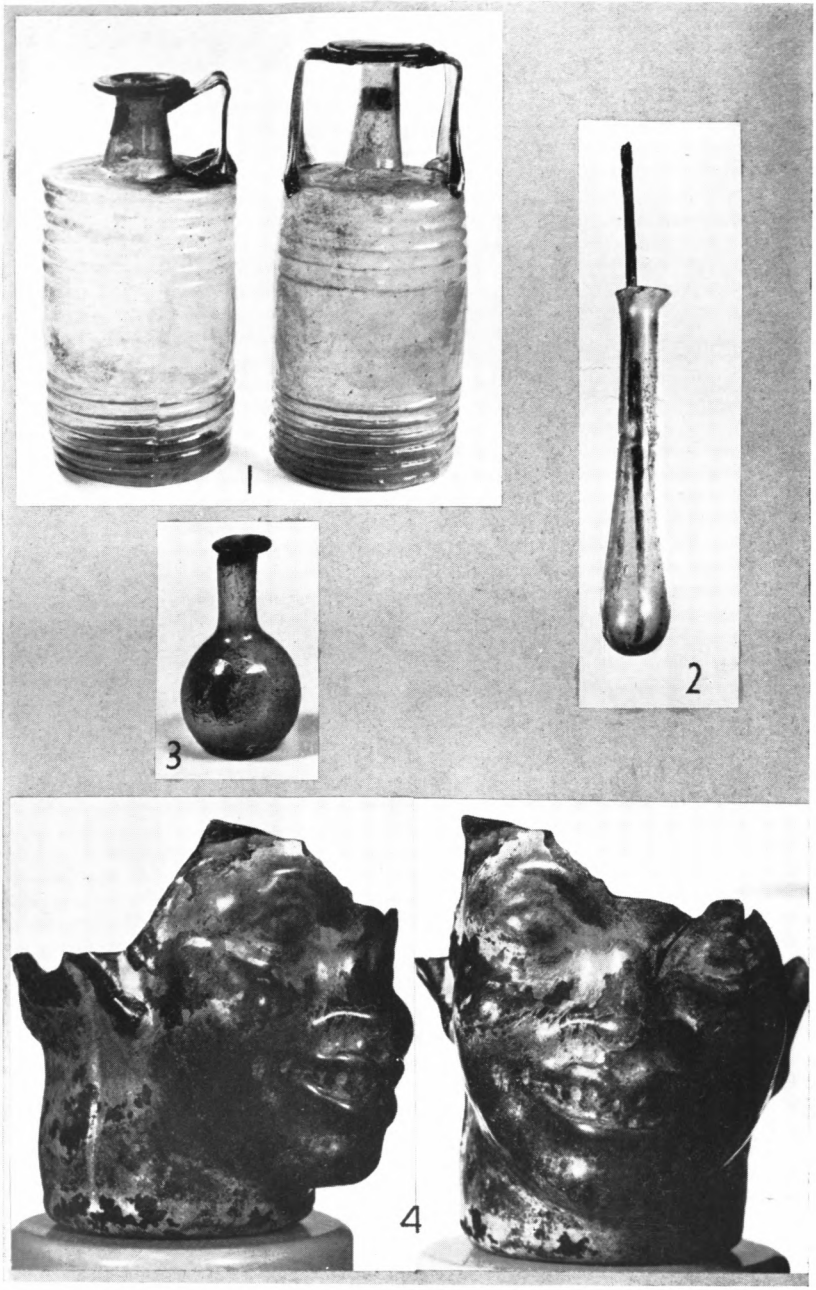

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