Archaeological notes on some Scottish early Christian sculptures

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SUMMARY

If it can be assumed that objects on Pictish stones are representations of those in contemporary use in Pictland, then a brief survey suggests that Pictish culture owed a strong debt to Roman Britain and Anglo-Saxon England.

INTRODUCTION

Although Pictish sculptures have been studied intensively from an art historical standpoint, little attention has been paid to the details of Pictish life that some of them furnish, with the notable exception of a study of the animals on Class I stones (Gordon 1966). While Pictish iconography parallels that found elsewhere in the art of contemporary Christian Europe, many of the details are peculiar to Pictland. This was recognized by Joseph Anderson, who wrote

Though details of these diagrammatic human figures are treated in a conventional manner, there can be no doubt that the costume, the weapons and other accessories, are those of the country and the time (Anderson 1880, 122).

CHARIOT

There is a single representation of a chariot in Pictish sculpture, on the lost Meigle No 10 stone (illus 1a). It has high, twelve-spoked wheels, ornamental openwork sides, and an awning of indeterminate type over the figures. It is pulled by two horses or ponies with braided tails, and appears to have a single shaft. The traces pass through what appears to be a ring.

It was suggested that this was a representation of the Ascension of Elijah (Allen & Anderson 1903, 331): this seems unlikely since there are three figures in the chariot and the apparently secular nature of the other carvings on the slab (of an archer hunting a beast, of a hound and of a monster eating a man) is more in keeping with a hunting scene of the type much favoured by Pictish sculptors.

The Meigle chariot is not descended from those of the pre-Roman Iron Age, as might be supposed since the Caledonians, the ancestors of the Picts, are reported as having used chariots at Mons Graupius. Ian Stead has argued that representations are unreliable evidence for what Celtic Iron Age chariots looked like. A possible exception to this is one illustrated on a relief from Chiusi (1965, 265). This shows a rounded side wing, a feature absent from the Pictish

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representation. There is no evidence for awnings or for more than two people in a chariot in the pre-Roman Iron Age.

The Meigle chariot does not appear to be related to the Irish chariot either. The literary evidence for chariots in Ireland has been examined in detail (Greene 1972). The Irish literature describes a vehicle with seats for a charioteer and a warrior: Cu Chulainn and his charioteer were able to turn to face each other to play a board game (Greene 1972, 69). The chariot of literary tradition also had projecting shafts at the rear, which it has been suggested were due to the chariot having an A-frame (Harbison 1971, 172).

Chariots were depicted on Irish High Crosses: the North Cross at Ahenny (Co Tipperary), the Cross of the Scriptures at Clonmacnois (Co Offaly) and the Cross of Patrick and Columba at Kells (Co Meath) (Harbison 1968; 1971, 173). From these representations Harbison concluded that the ninth-century Irish chariot was drawn by two horses and had high, spoked wheels. There were eight of these on the Clonmacnois and Ahenny chariots and Harbison has pointed out that the vehicle is more akin to the Irish agricultural cart than the type of vehicle represented in Iron Age Celtic tradition, for example on a relief from Padua (Harbison 1971).

In his most recent discussion, Harbison has suggested that Anglo-Saxon models comparable to the Franks Casket may lie behind the representations of chariots on Irish crosses (1977, 291, n 18), and Helen Roe has compared the Irish chariots with an ivory carving, probably from Constantinople, in which priests in a chariot display a reliquary casket (Roe 1962, 16–17, 45 & fig on p 48).

The chariot on the Meigle 10 stone differs from the Irish representations in several important respects. It has smaller wheels, open sides constructed with baluster shafts, is shown with more than two people in it and was capable of supporting some kind of awning. It had 12 spokes, compared with the eight on the Clonmacnois and Ahenny chariots.

It has been suggested that the chariot on the Ahenny cross displayed features of a carpentum, a type of vehicle with an awning used in the Roman Empire on ceremonial occasions (Jope 1956). In one Irish text (Lebor na hUidre) there is a reference to pupall cocorda, fortche uanaide – 'a purple awning, green covering'. It has been pointed out that pupall is a loan word from Latin papilio (Greene 1972, 70). Although this has been taken as a late addition to the text, it could have been contemporary.

Several types of covered vehicle apart from the *carpentum* were known in the Roman world. The Picts could have taken up the use of such vehicles through contacts with the Romans during their incursions south of Hadrian's Wall.

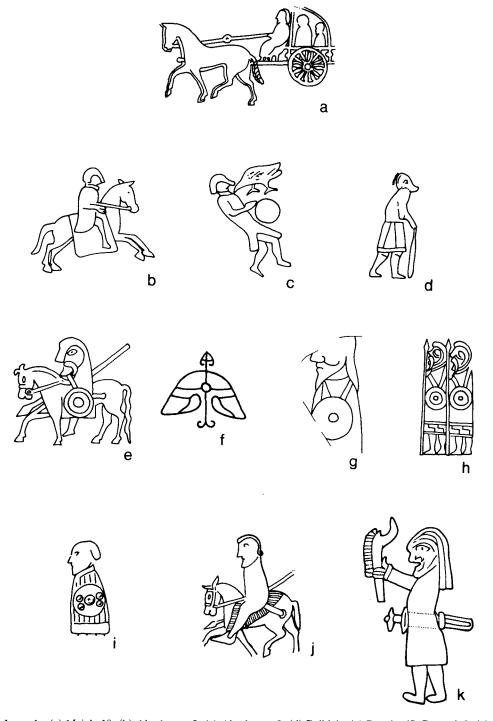
Although of course an imported ivory might have inspired the Meigle chariot, no possible prototype is known to us, and its essential difference from the Irish examples suggests to us a native source.

ARMOUR

(a) CHAIN MAIL

Warriors are frequently depicted on Pictish sculptures. On Aberlemno 2 ('Aberlemno churchyard') some of the figures seem to be wearing long 'tunics' with a slit from the knee to the hip. This feature is clearly seen on the warrior at the bottom right, who is being devoured by a raven (illus 1, b & c). These garments differ from the standard short tunic worn by most secular figures on Pictish stones (eg Golspie 1). Presumably the thin material of which it was made was either leather or, more probably, chain mail.

Alcock has plausibly suggested that both Britons and Saxons in the post-Roman period



Illus 1 (a) Meigle 10; (b) Aberlemno 2; (c) Aberlemno 2; (d) Balblair; (e) Benvie; (f) Congash 2; (g) Burghead 8; (h) Dupplin; (i) Dull; (j) Meigle 3; (k) Inchbrayock. Numbers as in Allen & Anderson 1903 (various scales)

wore clothes in battle that 'aped Roman parade dress' and has suggested that 'high-ranking officers were chainmail' and that 'most warriors had their bodies protected by tough leather cuirasses' (1971, 360).

Parallels can be found from Anglo-Saxon England, from the Sutton Hoo ship burial (Bruce-Mitford 1978, 232-9; Green 1968, 77) and from the burial at Benty Grange, Derbyshire (Green 1968, 77), as well as from references in Anglo-Saxon literature. Chain mail is also worn by figures on the Franks Casket.

(b) HELMETS

Representations of helmets are more common: examples with nose guards appear on Aberlemno 2, Aberlemno 3, on a stone from Balblair (Inverness), at Benvie (Angus) and on the Dupplin (Perth) cross (illus 1d-f). The Balblair helmet also appears to have a crest.

What may be a helmet with crest and nose guard appears on a unique Class I stone from Congash (Inverness), where it is associated with a double disc and Z-rod (Congash 2 – illus 1f). This has also been interpreted as a bow and arrow.

Anglo-Saxon England provides parallels for helmets in Pictish sculpture. The Benty Grange burial produced a cap-shaped helmet with nose guard, iron frame and boar's crest. It has been pointed out that the Benty Grange helmet belongs to the family of spangenhelmen introduced to Europe by the Ostrogoths that were current from the fifth to seventh centuries (Cramp 1957, 60-1). Fragments from a helmet decorated in spangenhelme technique have been found in Dumfriesshire, though the absence of the frame construction shows it to be of another type, albeit related (de Paor 1961).

Some 'Pictish' helmets seem to be of a different type from that of Benty Grange. Helmets shown on the Aberlemno 2 stone and less certainly on the Balblair stone appear to encase the head, and in this respect are much closer to the visor helmets of Sutton Hoo (Suffolk) and Vendel in Sweden. This type of helmet has been seen as derived from late Roman prototypes (Cramp 1957, 60).

A third Anglo-Saxon helmet was found in May 1981 in Coppergate, York, and at the time of writing (March 1983) still awaits full publication. Dated to around 700 AD, it consists of iron plates riveted to a headband at the bottom and ridge plate at the top, with copper bands from ear to ear and nape to nose as reinforcement. It has hinged cheek pieces, a spatulate nose guard and a chain mail neckguard (Tweddle 1984). Its composite construction and high profile show it to be related to the spangenhelme tradition, though lacking the characteristic ornament, and the construction in which the ribs run from the central point on the crest. The use of noseguard and eyeguards, however, show close affinities to some late Roman helmets, and it is comparable in some respects to a helmet found at Deir-el-Medineh in Egypt (for discussion: Johnson 1980, 309-10, fig 3e).

The Pictish helmets do not appear to have a central dome either, but to have a profile similar to that of the Coppergate helmet lacking, however, the cheek-guards and, in some instances at least, the mail neck-guard. The Congash symbol, if it is a helmet, would seem to have eye guards which relate it to the York helmet. The ancestry of both the Pictish and York helmets could be seen to lie in the types produced in the late Roman Empire, of which the recently recognized Burgh Castle helmet is an interesting example for comparison (Johnson 1980).

Details of the ornament on the York helmet compare closely with some in the St Ninian's Isle treasure (eg the creatures on the nose guard are comparable with those on the 'pepperpots' in St Ninian's Isle). It is not impossible that the York helmet was made by a Pictish craftsman for an Anglo-Saxon patron.

(c) SHIELDS

The shields that appear in Pictish sculpture have been briefly discussed in print (Ritchie 1969), where it was suggested that the North Britons adopted the square shape from the Roman scutum, and developed smaller, less convex versions of their own. Ritchie also suggested that some appear to be fist-shields, perhaps indicating a change in battle tactics to hand-to-hand fighting between champions (1969, 39). Ritchie was of the view that Pictish sculptures were of limited value for illustrating shields, on account of the copying from manuscripts. It has already been argued above that the details of Pictish sculptures are native to Pictland. This is particularly apparent in the representations of certain types of shield, which are found nowhere else in Early Christian art.

Two basic types are represented, a square or oblong shield of the form discussed by Ritchie, and a round, targe-like one. All seem to have a central umbo. Ritchie provided illustrations of several examples of the rectangular shields (1969, figs 1–2), including two examples of a distinctive type of notched shield from Ardchattan and St Andrews. Round shields appear on the Hilton of Cadboll stone, on the Edderton slab, on Burghead 8, Drainie 8, on a slab from Aldbar, on the Benvie stone, Menmuir 1, Meigle 6, a stone from Dull, and one or two others. A few stones show round shields being carried round the neck, suspended on a cord. This is the case with the warriors on the right side of the Dupplin cross (illus 1h), the Benvie horseman (illus 1e), Burghead 8 (illus 1g). Some of the round shields carry additional bosses apart from the central umbo, for example those on the slab from Dull (Anderson & Allen 1903, fig 329) (illus 1i). These presumably were the rivet bosses for the arm straps: two arm straps would have been needed instead of the one on a larger shield (such as that from Sutton Hoo), for the first would not have held a grip behind the umbo. A bifid shield appears to be carried by a few warriors, for example by one on the reverse of Aberlemno 3.

WEAPONS

BOWS

It has been suggested that sculptures indicate that long bows were used in war (Anderson 1880, 123). However, we have seen no evidence that long bows were used at all, or that bows were used in warfare. Cross-bows were used in hunting: these have recently been discussed (Gilbert 1976; Macgregor, 1976). The only weapons probably used in combat were the sword, spear and possibly the axe.

SPEARS

Spears on Pictish sculpture call for little comment. They had long shafts and apparently no ferrule or butt, with leaf-shaped heads. They can readily be matched by the spearheads that survive from the period, for example from Dunadd (Craw 1930, fig 5, 37–40) or Buston (for a convenient photograph, Laing 1979, pl 72, top right).

SWORDS

Swords are shown in scabbards with two types of chape, one expanded and crescentic, for example on the Benvie slab (illus 1e), the other contoured to the scabbard, for example on the Inchbrayock stone (illus 1k). The latter type is widespread: in pagan Saxon England it appears on the Brighthampton, Oxon, scabbard (Evison 1965, fig 11c), which may be an import from the Meuse (Laing & Laing 1979, pl 26). The same type is also found on the undoubtedly Anglo-Saxon scabbard from Selmeston, Sussex, grave 1 (Evison 1967, fig 3a). It is conceivable that the

inverted U-shaped symbol on Pictish Class I stones represents just such a scabbard chape, which is not found on Iron Age scabbards (Piggott 1950, passim). Although there are parallels for the shape among Iron Age scabbard chapes, the expanded crescentic chapes of Pictish sculpture differ from them in that they are seemingly solid as opposed to openwork (cf Piggott 1950, pl 1). They are in fact of the same form as the chapes from the St Ninian's Isle treasure, and presumably represent the St Ninian's Isle type of chape (Small et al 1973, pl xxix). In sculpture the type is best represented in Meigle 3 or more clearly on the Benvie slab.

Sword pommels seem to belong to three types. The first is exemplified by the sword carried by Samson on the Inchbrayock stone (illus 1k). This is a simple type impaled on the tang. It could easily represent a type of pommel current around 400, with incurved sides, known from Richborough (Bushe-Fox 1949, 107, pl 1/1). Such pommels occur in the Nydam ship deposit from Jutland, and on some Anglo-Saxon swords and daggers, notably one from Winchester (dated to c 600) and the Selmeston sword (Evison 1967, fig 3a). Indeed, the Selmeston sword could be the type represented in stylized fashion on the Inchbrayock stone.

The second type is represented on the sword carried by the warrior on the back of the Kirriemuir 2 slab (illus 2f). This has a domical pommel, which closely resembles the trilobate pommels fashionable in late Saxon England, for example on the sword from the Witham at Lincoln (Wilson 1964, 32). The St Ninian's Isle pommel is probably of this type, as it imitates the profile of the Saxon pommels (Small et al, 1973, pl xxvi).

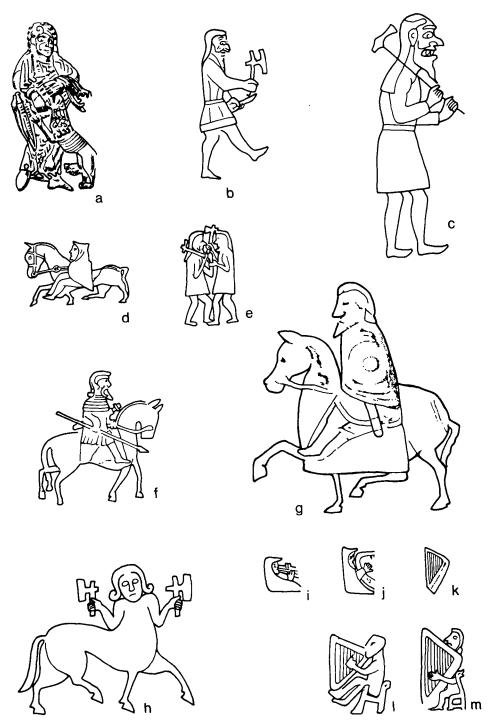
The third type may be a variation of the second, and is represented on the St Andrews Shrine, in an ornate scabbard (illus 2a). It has a simple, domical pommel which is no larger than the grip, and a rondel instead of the quillons found on late Saxon swords, or on the Kirriemuir slab. It is fairly close to the hilt from Cumberland, figured by Smith (1923, pl vii), which dates from the seventh century.

The pommels represented on the 'swords' on Class I stones are of quite a different type, related to Iron Age or Roman antecedents. These have been discussed by Thomas (1963, 52). It is, however, far from certain that these symbols represent swords.

A sword pommel from Culbin Sands, Moray, has usually been taken (including by the present authors) as Anglo-Saxon (Laing 1975c, 48–9). In our discussion of it, we pointed out that it showed features which were not entirely in keeping with an Anglo-Saxon origin. It is possible, however, that it is in fact Pictish. If so, it is a type not represented in the sculptural tradition.

BATTLE-AXES

Battle-axes do not appear to have been a regular feature of Pictish warfare, but two figures are using them on the Glamis 2 stone (illus 2e). The type of axe represented here is impossible to match exactly among known examples, but appears to be not an axe as such but an axe-hammer, a type of tool of Roman derivation (Laing 1975a, 280 – type 2). Other axes are represented on the stones. On the recently-discovered stone from Barflat, Rhynie the figure carries a distinct axe-hammer (Shepherd & Shepherd 1978, fig 2) (illus 2c). Another type of axe is represented being carried by the figure on the Golspie stone (illus 2b). This is a T-shaped axe, ultimately of Frankish origin, used in woodworking (Laing 1975a, 290 – type 3). The same type is wielded by the centaur on Aberlemno Roadside cross slab (illus 2h). We know of no example from a pagan Saxon context in England, but several examples come from a late Saxon hoard of tools from Hurbuck, Co Durham (Wilson 1976). The only find of an actual axe head of this type from a Celtic context is the one from Lough Faughan crannog, Co Down (Collins 1955, fig 11/68). There is an axe-hammer from the same site (*ibid*, fig 11/78). The dating of Lough Faughan is problematic, but it is probably pre-Viking age, when this type of axe became fashionable.

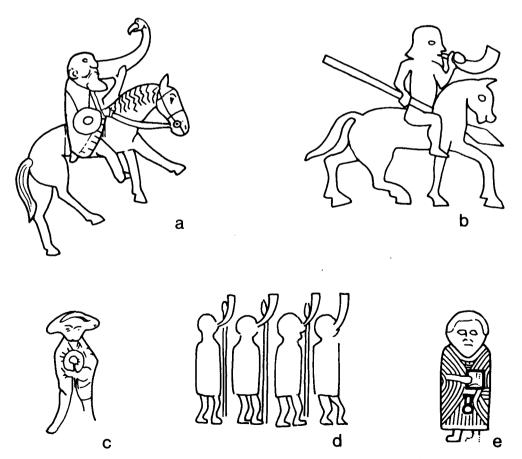


Illus 2 (a) St Andrews shrine; (b) Golspie; (c) Rhynie; (d) St Madoes; (e) Glamis 2; (f) Kirriemuir 2; (g) Meigle 4; (h) Aberlemno Roadside; (i) Ardchattan; (j) Ardchattan; (k) Nigg; (1) Monifieth 4; (m) Dupplin (various scales)

HORSEMEN

The Picts would appear to have employed cavalry, or perhaps one should say riders, for both hunting and warfare. This is quite in keeping with what is known of battle tactics in the Celtic areas of Britain in the post-Roman period. Horsemen figure quite prominently in Y Gododdin, and their use has been discussed by Alcock (1971, 334-5). Representations in sculpture show horses used as on the field of joust as in the later Middle Ages (for examples, see St Madoes, Meigle 4 or Meigle 5). Bridles were used, and the reins appear to have been attached to them through rings (for example on the St Madoes slab). Part of a bit was found at the Mote of Mark, Kirkcudbright, 1913 (unpublished, in NMAS), and bits are known from early Christian Ireland, of the type represented on the Pictish stones (for examples, Laing 1975, 291-2). One rider on the back of the Kirriemuir stone is represented wearing some kind of pectoral (illus 2f) and many wear hooded cloaks reminiscent of the byrrus britannicus worn by genii cuculatii in Romano-British sculptures.

One point may, however, be noted about the riders. The representations, though not derived from any known manuscript source, may be versions of figures from other sources. Almost identical horsemen can be found in Merovingian art, and Lasko has argued that the ultimate models behind these are eastern, probably Coptic (1971, 82–3). He illustrates a Coptic



ILLUS 3 (a) Bullion; (d) Dunkeld; (c) Monifieth 2; (d) Barochan; (e) Invergowrie (various scales)

textile from Akhmin which may have served as one model (1971, pl 69). In this connection our comments on possible Coptic influence on Celtic interlace may be noted (1975b, 108).

MUSICAL INSTRUMENTS

Harps, of the triangular form that is known today, appear on several stones, notably the free-standing cross at Dupplin (which shows strong Northumbrian influence), the slab from Nigg, at Ardchattan, on Monifieth 4 and on the front of St Martin's Cross at Iona (which like Ardchattan of course is Scottish as opposed to Pictish) (illus 2i-m). In all cases these are large instruments, which stand like their modern counterparts (with the possible exception of the Nigg instrument, which is without a figure to provide scale). Bruce-Mitford, in discussing the occurrence of harps and lyres in early medieval Europe, mentioned the examples at Nigg and Dupplin, and assigned them to the ninth-tenth century (1970, 12). He has pointed out that since the earliest examples of the true harp come from the British Isles they probably originated here, and suggested that they evolved in Northumbria in the ninth-tenth centuries (1970, 11–12). This dating is clearly too late. The Nigg stone is a Class II monument with a 'swimming elephant' symbol on the back, and Dr Henderson has argued cogently that it owes much to Mercian art of the end of eighth century (1967, 154).

The Nigg stone belongs to a group of sculptures (Hilton of Cadboll, Aberlemno Roadside and the St Andrews Shrine) which borrow from David iconography current in the last quarter of the eighth century (Henderson 1967, 151–4). This immediately raises the question as to whether details such as the harps are not also borrowed from contemporary iconography, ultimately of Mediterranean origin. Traditional David iconography however shows David with a lyre not a harp, for example in folio 30v of the *Vespasian Psalter*, a Canterbury manuscript, which Dr Henderson has seen as a model for the Hilton of Cadboll stone (1967, 154). A lyre is similarly played in the representations of David in the Durham Cassiodorus.

Turning to trumpets, most of those depicted are not of great musicological interest. Three figures with blast horns appear on the Barochan Cross, which is an outlier of the Strathclyde Govan School. This is a reminder that the Burghead horn may have been an instrument rather than a drinking horn, as Graham-Campbell has suggested (1973, 50).

A triple pipe, probably a terminal horn, appears on the Ardchattan stone and on a stone from Lethendy, Perthshire (Fisher & Greenhill 1972). This instrument, it has been argued, appears on crosses at Monasterboice and Clonmacnois in Ireland (Baines 1960, 59). The Lethendy stone also shows a harp similar to that on the Monifieth 4 stone, and also depicts what may be a barrel drum (Fisher & Greenhill 1972, 239). Ardchattan also bears a figure with a curious object, possibly some kind of percussion instrument, and the Nigg slab a figure with cymbals.

MISCELLANEOUS

The drinking horn with its bird's head terminal on the stone from Bullion, Invergowrie has been noted by Stevenson (1959, 44). Stevenson rightly observed that the closest parallel for the terminal is to be found in the Anglo-Saxon burial from Taplow (for convenient illustration, Laing & Laing 1979, pl 44). There is, however, another parallel from Celtic lands. This is the somewhat cruder terminal with suspension ring from Carraig Aille II, Co Limerick (O'Riordain 1949, fig 8, 135a and discussion 65–6). O'Riordain listed all the known examples of drinking horn mounts of related type, most of which have been found in Viking graves in Scandinavia. Eight have terminal mountings of animal or bird form (O'Riordain 1949, 66–7), and O'Riordain suggested that as a

whole the series begins in the eighth century (1949, 66). It is worth remembering, however, that similar birds' heads were used in the pre-Roman Iron Age, and birds very similar to that on the Pictish relief decorate the drinking-horn terminals from Torrs, Kirkcudbright (Atkinson & Piggott 1955, 226–7). The Torrs horn terminals differ from the known examples of the Early Christian period in one important respect: the heads are turned at an angle to stare at the drinker in the same manner as the bird looks down on him on the Bullion stone (illus 3a). Stevenson has suggested that the angle was altered as a joke on the part of the sculptor (1959, 45). The joke was more probably made by the original manufacturer of the horn mount. Stevenson also suggested a tenth-century date for the stone (1959, 58-9). This is probably too late. The Viking-age drinking horn mounts are very much more stylized, like the Carraig Aille example. The terminal in the sculpture is very close to the birds of the Lindisfarne Gospels, and other manuscript birds of the eighth century, or even to the birds' heads on the eighth-century Hunterston brooch, which Stevenson has published (1974, fig 2, no 27). This is a much more likely date for the stone as it would put it in the mainstream of Pictish sculpture, and its horn would provide a useful link between Taplow and later mounts, where stylistically it lies. In style, the Bullion slab is very close to Meigle 3 or Meigle 5.

In the study Stevenson drew attention to the penannular brooch illustrated on the Hilton of Cadboll stone, and alluded to the possible illustration of penannulars on the stone from Invergowrie (1959, 41-2). A further penannular is depicted on Monifieth 2. Both these have round, expanded terminals and thus conform to Fowler's Class H (1963; Longley 1975, 10), Such penannulars have a long life in the Early Christian period, and are represented in the Croy hoard (Blunt 1950, 217; Small et al 1973, 82). The evolution of the Pictish types has been discussed by one of us elsewhere (1976, 17-19).

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REFERENCES

Alcock, L 1971 Arthur's Britain. London.

Allen, J R & Anderson, J 1903 The Early Christian Monuments of Scotland. Edinburgh.

Anderson, J 1880 Scotland in Early Christian Times, 2 ser. Edinburgh.

Atkinson, R J C & Piggott, S 1955 'The Torrs Chamfrein', Archaeologia, 96 (1955), 197-235.

Baines, A 1960 Bagpipes. Oxford.

Blunt, C E 1950 'The date of the Croy hoard', Proc Soc Antiq Scot, 84 (1949-50), 217.

Bruce-Mitford, R L S 1970 'The Sutton Hoo lyre', Antiquity, 44 (1970), 7-13.

Bruce-Mitford, R L S 1978 The Sutton Hoo Ship Burial, vol 2. Arms, armour and regalia. London.

Bushe-Fox, J P 1949 Richborough IV. London. (Res Rep Soc Antiq Lond, 16).

Collins, A E P 1955 'Excavations at Lough Faughan crannog, Co Down', Ulster J Archaeol, 18 (1955), 45–80.

Cramp, Rosemary 1957 'Beowulf and Archaeology', Medieval Archaeol, 1 (1957), 57-77. Craw, J H 1930 'Excavations at Dunadd and other sites on the Poltalloch Estates', Proc Soc Antiq Scot, 64 (1929-30), 111-47.

de Paor, L 1961 'Some vine scrolls and other patterns in embossed metal from Dumfriesshire', *Proc* Soc Antiq Scot, 94 (1960-1), 184-95.

Evison, Vera 1965 The Fifth Century Invasions South of the Thames. London.

Evison, Vera 1967 'Sword rings and beads', Archaeologia, 105 (1967), 303-16.

Fowler, Elizabeth 1963 'Celtic Metalwork of the Fifth and Sixth Centuries AD', Archaeol J, 120 (1963) 98-160.

Fisher, I & Greenhill, F A 1972 'Two unrecorded carved stones at Tower of Lethendy, Perthshire', Proc Soc Antig Scot, 104 (1971-2), 234-41.

Gilbert, J M 1976 'Crossbows on Pictish stones', Proc Soc Antig Scot, 107 (1975–6), 316–17.

Graham-Campbell, J 1973 'The ninth-century Anglo-Saxon horn-mount from Burghead, Morayshire, Scotland', Medieval Archaeol, 17 (1973), 43-51.

Gordon, C.A. 1966 'The Pictish animals observed', Proc Soc Antia Scot. 98 (1964–6), 215–24.

Green, C 1968 Sutton Hoo, the Excavation of a Royal Ship Burial, 2 ed. London.

Greene, D 1972 'The Chariot as described in Irish literature', in Thomas, C (ed), The Iron Age in the Irish Sea Province, London, 59-73. (=Counc Brit Archaeol Res Rep. 9).

Harbison, P 1968 'The Chariot of Celtic funerary tradition', in Frey, O-H (ed), Marburger Beiträge zur Archäologie der Kelten, Festschrift Dehn, Fundberichte aus Hessen, 1, 34–58.

Harbison, P 1971 'The Old Irish Chariot', Antiquity, 45 (1971), 171-7.

Harbison, P 1977 'On some possible sources of Irish high cross decoration', in Festschrift zum 50 jahrigen Bestehen des Vorgescheichtlichen Seminars Marburg, bd 1, Marburg, 283-97.

Henderson, Isobel 1967 The Picts. London.

Johnson, S 1980 'A Late Roman Helmet from Burgh Castle', Britannia, 11 (1980), 303–12.

Jope, E M 1956 'Vehicles and harness', in Singer, C, Holmyard, E J & Hall, A R (eds), A History of Technology, vol II, Oxford, 537-62.

Laing, L 1975a The Archaeology of Late Celtic Britain and Ireland, c 400–1200 AD. London.

Laing, L 1975b 'The Mote of Mark and the Origins of Celtic interlace', Antiquity, 49 (1975), 98-108.

Laing, L 1975c 'The Angles in Scotland and the Mote of Mark', Trans Dumfriesshire Galloway Natur Hist Antia Soc. 50 (1975), 37–52.

Laing, L 1976 'Penannular brooches in Ireland and Scotland', Ulster J Archaeol, 39 (1976), 15–19.

Laing, L 1979 Celtic Britain. London.

Laing, L & Laing, Jennifer 1979 Anglo-Saxon England. London.

Lasko, P 1971 The Kingdom of the Franks. London.

Longley, D 1975 Hanging bowls, penannular brooches and the Anglo-Saxon Connexion. Oxford. (=Brit Archaeol Rep. 22).

Macgregor, A 1976 'Two antler cross-bow nuts and some notes on the early development of the crossbow', Proc Soc Antiq Scot, 107 (1975–6), 317–21.

Megaw, JVS 1968 'Problems and non-problems in palaeo-organology; a musical miscellany', in Coles. J M & Simpson, D D A (eds), Studies in Ancient Europe, Leicester, 333–58.

O'Riordain, S P 1949 'Lough Gur Excavations: Carraig Aille and the "Spectacles"', Proc Royal Irish Acad, 52 (1949), 39-111.

Piggott, S 1950 'Swords and scabbards of the British Early Iron Age', *Proc Prehist Soc*, 16 (1950), 1-28.

Ritchie, J N G 1969 'Shields in North Britain in the Iron Age', Scot Archaeol Forum, 1 (1969), 31–40.

Roe, Helen M 1962 The High Crosses of Western Ossory, 2 ed. Kilkenny.

Shepherd, I A G & Shepherd, Alexandra N 1978 'An incised Pictish figure and a new symbol stone from Barflat, Rhynie, Gordon district', *Proc Soc Antiq Scot*, 109 (1977–8), 211–22.

Small, A, Thomas, C & Wilson, D 1973 St Ninian's Isle and its Treasure. Aberdeen.

Smith, R 1923 Guide to the Anglo-Saxon and Foreign Teutonic Antiquities in the British Museum. London.

Stead, I 1965 'The Celtic chariot', Antiquity, 39 (1965), 259-65.

Stevenson, R B K 1959 'The Inchyra stone and other unpublished Early Christian monuments', Proc Soc Antig Scot, 92 (1958-9), 33-55.

Stevenson, R B K 1974 'The Hunterston brooch and its significance', Medieval Archaeol, 18 (1974). 16-42.

Thomas, A.C. 1963 'The Interpretation of the Pictish symbols', Archaeol J, 120 (1963), 31–97.

Tweddle, D 1984 The Coppergate Helmet. York.

Wilson, D M 1964 Anglo-Saxon Ornamental Metalwork, 700-1100. London.

Wilson, D M 1976 'Craft and Industry', in Wilson, D (ed), The Archaeology of Anglo-Saxon England, London, 253–82.