

Traprain Law: native and Roman on the northern frontier

Michael Erdrich,* Kristina M Giannotta[†] & William S Hanson[‡]

ABSTRACT

Focusing on the period when Traprain Law was at the forefront of native relations with Rome in the first and second centuries AD, this paper examines the distribution and potentially significant clustering of the artefactual material derived from the extensive excavations in the early part of the 20th century on the western plateau. While domestic activity is attested across the entire area, providing little support for the suggestion that Traprain Law was primarily a ceremonial centre, there is some suggestion of shifting foci of activity and variable function over time. Particular attention is paid to a detailed examination of the samian pottery, which seems to have been accessible to native communities only during the periods of Roman military occupation. The various means by which this material may have been acquired are considered, with particular stress placed on the importance of diplomatic contacts with favoured native groups. The inventory of the samian was subsidised by a grant from The Netherlands Organisation for Scientific Research (NWO-TALENT).

INTRODUCTION

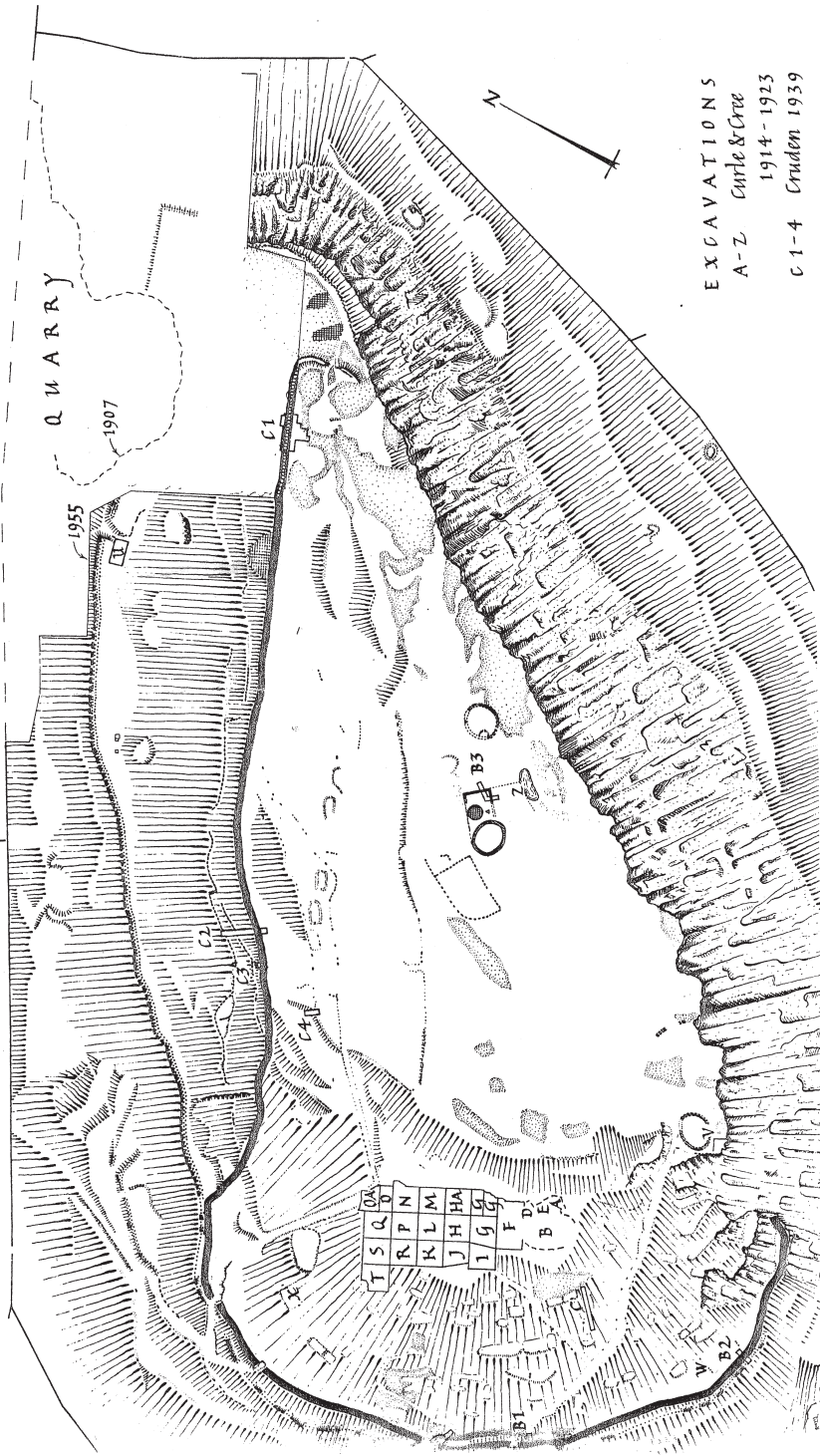
Rising steeply on three sides to a height of over 150 m OD, Traprain Law is a massive, glacially exposed igneous protrusion or laccolith. An outlier of the Lammermuir Hills, it dominates the Lothian plain which surrounds it. Thus nature has blessed it not only with defensive potential and prestigious character, but with a location amid some of the best agricultural land in Lowland Scotland. Not surprisingly, therefore, the Law became a focus for human settlement activity probably as early as the Neolithic, and certainly by the Late Bronze Age, and appears to have continued in use, perhaps intermittently, until the mid fifth century AD (Jobey 1976).

The site has also attracted archaeological attention from the earliest days of the development of the discipline in Scotland. Extensive excavations were undertaken there from 1914 to 1915 and again from 1919 to 1923 by Cree and Curle (Curle 1915; 1920; Curle & Cree 1916; 1921; Cree & Curle 1922; Cree 1923; 1924). The focus of these investigations was mainly on the western plateau, a naturally sheltered shelf below the western crest of the hill (illus 1). This seemed to the

* Institute of Pre- and Protohistory, University of Amsterdam

[†] Department of Classics, Johns Hopkins University, Baltimore, USA

[‡] Department of Archaeology, University of Glasgow



ILLUS 1 Traprain Law: general site plan after Feachem 1956, as amended by Close-Brooks 1983

excavators likely to have offered the most attractive location for settlement and, indeed, produced both structural remains and large quantities of artefactual material on which estimates of the chronological range of use of the site are based. Since that time there has been only limited excavation (Cruden 1940; Close-Brooks 1983) and detailed ground survey, primarily confined to the elucidation of the sequence of defences on the site or problems of erosion, though a new programme of work seems to be underway (Rees & Hunter this vol; *DES* 1999, 30–1). The extent of the area enclosed fluctuates over time from a minimum of 8 ha to a maximum of 16 ha, though Feachem (1956, 86), following Hogg (1951, 212), postulates the existence of an early enclosure of some 4 ha on the summit. It is the combination of the size of Traprain Law, which at its maximum was one of the largest hillforts known in Scotland, and the quality and range of artefacts recovered (cf Burley 1956; Sekulla 1982) which indicates the importance of the site in the later prehistoric and Roman periods.

Our understanding of the history and development of occupation on Traprain Law is not without considerable problems, however. The sequence of occupation, though now widely accepted, was proposed only tentatively by Feachem, and the very existence of certain phases is far from certain (eg Jobey 1976, 195–7; Close-Brooks 1983, 209). The absolute chronology of occupation remains in dispute, not least as to whether occupation was continuous from the Later Bronze Age to the fifth century AD (eg Burley 1956; Hill 1987, 87). Finally, the nature of that occupation has been debated in recent years, with increasing credence being given to a suggestion made by Hill that during the Roman Iron Age the site was primarily a ceremonial centre rather than a settlement (1987, 88; cf Breeze 1996, 113–14; Armit 1997, 102–3; Armit & Ralston 1997, 180).

Virtually every commentator who has considered the site in any detail bemoans the inadequacy of the evidence and concludes that further excavation work is required. While not disagreeing with this sentiment, the opportunities for excavation on the Law of sufficient scale to answer some of the questions it poses are likely to remain limited, particularly in the present financial climate and against a background of a current ethos which favours preservation rather than excavation. It is the contention of the writers, however, that the full potential of the evidence currently available has not been exhausted. Despite the quality and quantity of material from the site, the only detailed published considerations of it relate to the metalwork, including the late Roman treasure, and the coins, the first of these published over 40 years ago (Burley 1956; Curle 1923; Sekulla 1982). Accordingly, a full reassessment of the material from the site, all now held in the National Museums of Scotland, and in particular a detailed examination of that not so far published, would seem to be both a valuable and an attainable exercise. Moreover, despite the method of digging in arbitrary levels rather than stratigraphic layers employed by Cree and Curle, careful correlation of the area and level recorded for each of the finds does seem to provide some indication of the distribution and potentially significant clustering of the material (Giannotta 1997).

What is presented here is a preliminary statement of the results of a start which has been made to this work, focusing on the period when Traprain Law was at the forefront of native relations with Rome in the first and second centuries AD. The detailed contextual analysis based on the published data was undertaken by Giannotta under the supervision of Hanson. The samian was examined afresh by Erdrich as part of a wider programme of investigating relations between Rome and native societies across the frontiers of the north-west of the Roman empire, which is running under the joint auspices of the Institute of Pre- and Protohistory, University of Amsterdam, and the Department of Archaeology, University of Glasgow.

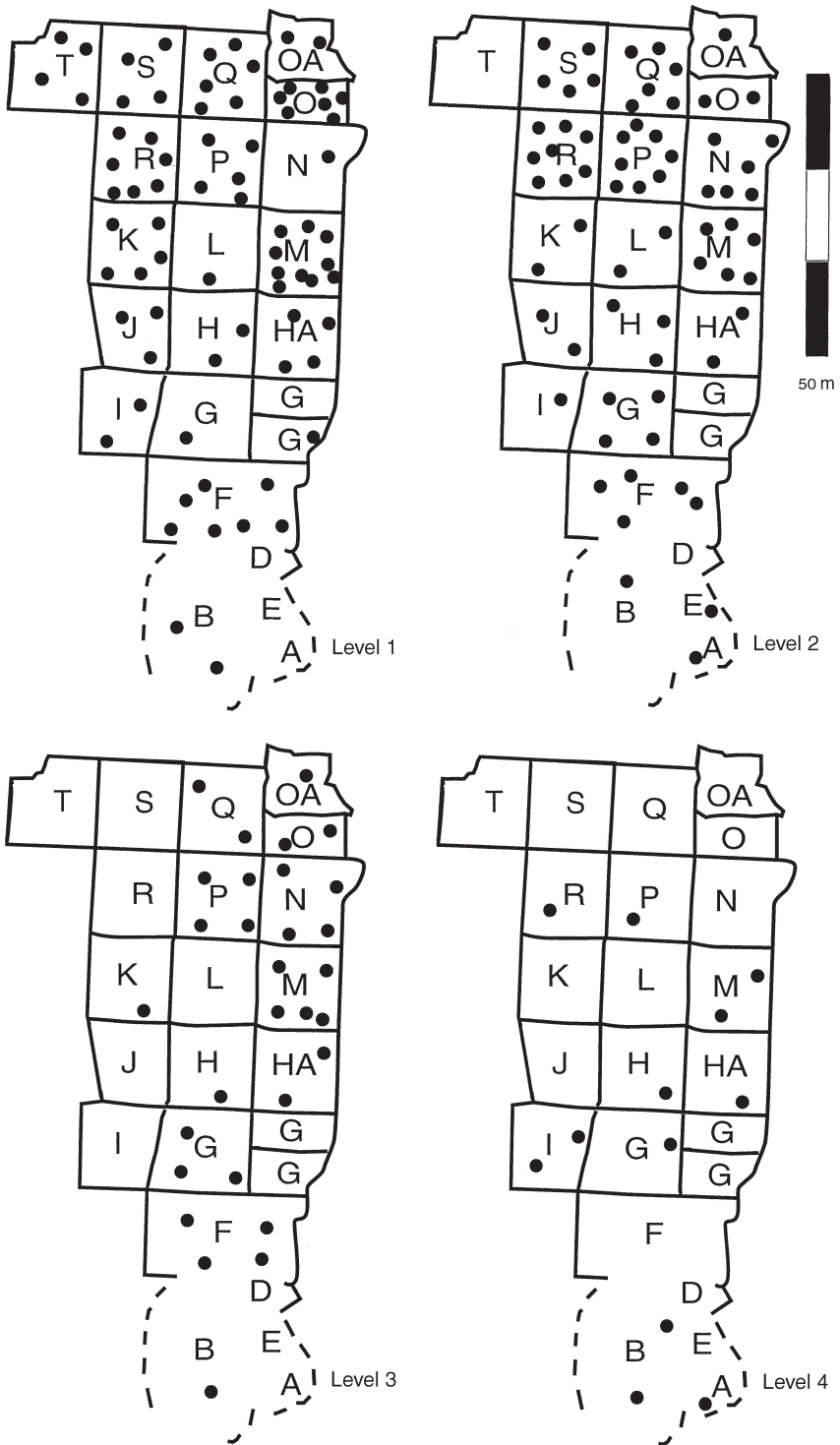
CONTEXTUAL ANALYSIS

The reasons why it has proved impossible to provide a precise context for the large assemblage of finds from Traprain Law was summarized succinctly by Burley (1956, 119–20). Not only did Cree and Curle fail to distinguish any visible strata during their excavations, even when they were aware of them, preferring to impose arbitrary horizontal levels for purposes of recording, but they made no attempt to cross-reference the reports from each season of excavation. That said, however, they did usually record the square (illus 2–7) and the level from which each artefact came.

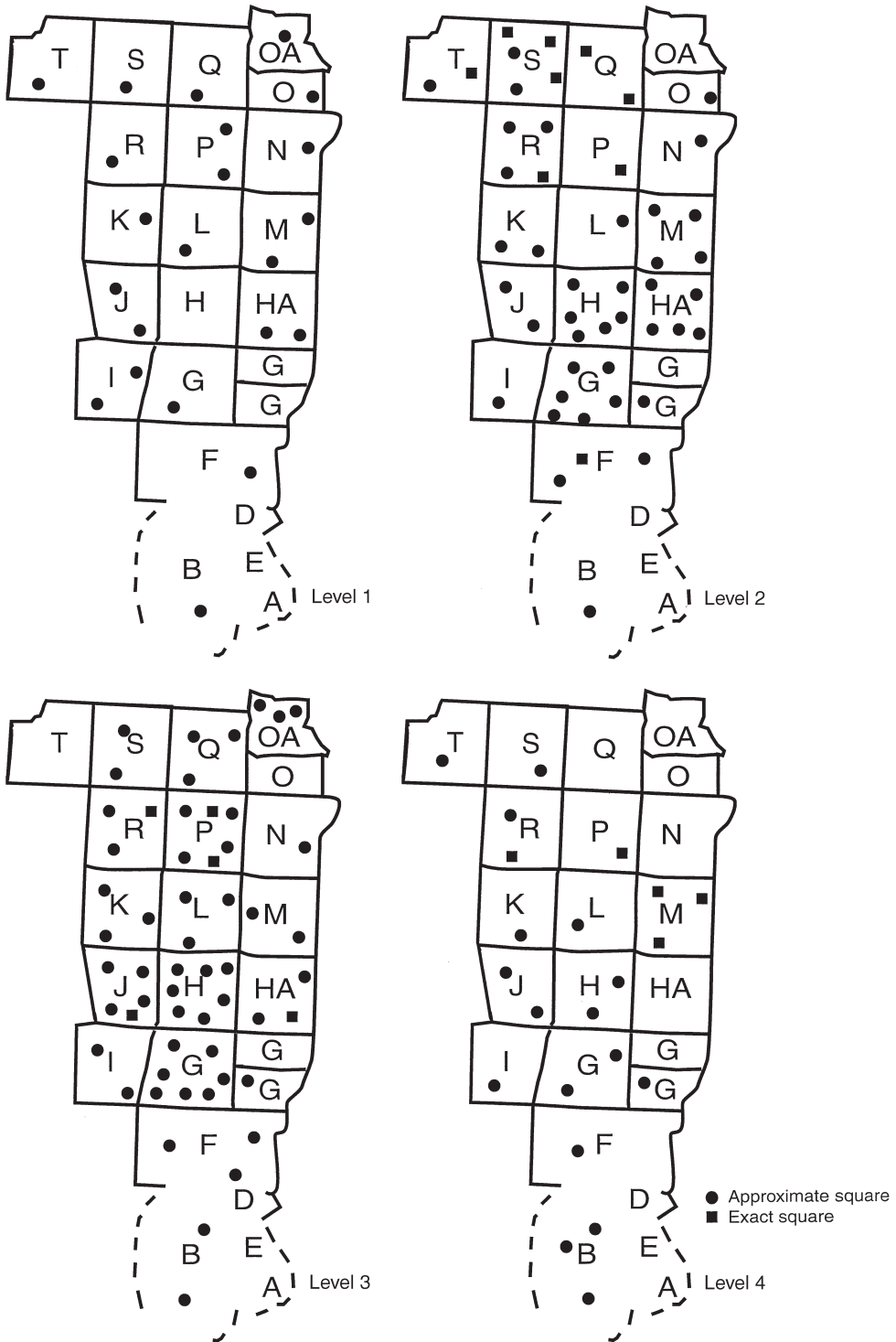
Thus, it is possible to establish general patterns in the distribution of the artefacts, the process speeded up with the aid of computer technology which also facilitates ready comparisons being made between the distributions of various categories of finds and those from different levels. The methodology employed for the present study was to divide all of the artefacts and some of the structures from the site into broad functional categories or general types, and record each find-spot in terms of excavation square and level. The original site plans were scanned into the computer and the location of the artefacts then plotted according to their category, level, and square. The precise location of the finds within each square as depicted in the distribution plots is, however, randomly generated. For the purposes of this exercise the arbitrary levels employed by the excavators were assumed to be broadly consistent across the different seasons of work. Generally four levels were recorded, numbered from one to four starting from the top. Thus Level 4 is the latest in the sequence and Level 1 the earliest. Some of the resulting plots are reproduced here with commentary on their potential significance.

Illustrations 2–4 reveal the distribution of hearths and domestic artefacts, that is spindlewhorls, loomweights, quernstones, and whetstones. In Level 1 the spread of hearths is fairly uniform across the site, with slightly fewer examples in areas A–D. This pattern continues across Level 2, but Level 3 reveals a much lower number of hearths, and a greater concentration to the east. Finally, on Level 4 the spread of hearths is once again fairly consistent across the site, although their general scarcity makes any conclusions more tenuous. The distribution of the domestic artefacts follows a similar pattern. In the Level 1, the distribution is fairly even across the entire site. Level 2 reveals an increase in numbers, although the pattern continues to be fairly even. The exception is areas A–D where hardly any examples are recorded, but the site reports from the relevant season (1914) fail to reveal the level from which several of the domestic artefacts were found. Illustration 4 shows domestic artefacts which were not given a location in the site reports, and most of these objects were in areas A–D. The pattern of distribution in Level 3 is similar to that in Level 2, with a slight concentration to the south and west of the area, while Level 4, though producing less finds, again reveals a fairly even distribution.

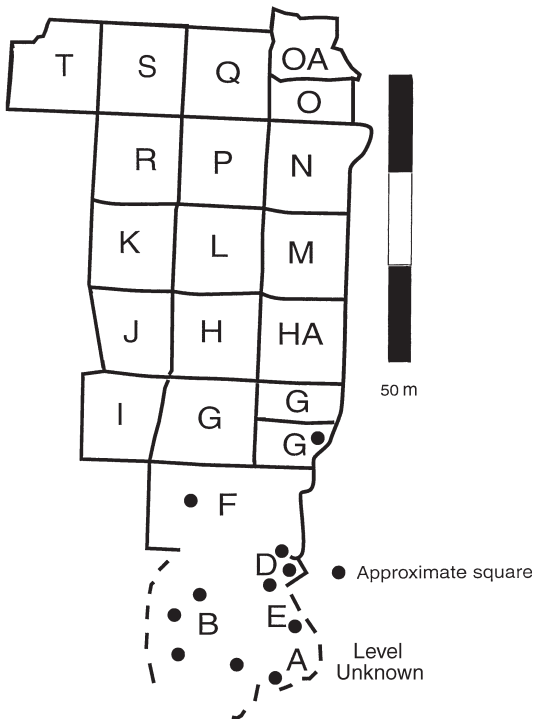
Thus the plans reveal a fairly uniform spread of what may reasonably be categorized as domestic features throughout all four levels. Though the number of any particular category of find varies per level, for example the majority of the hearths were located in the upper two levels, while the greatest number of spindlewhorls, loomweights, quernstones, and whetstones came from Levels 2 and 3, there is an even distribution across the entire site. One interesting pattern can be identified in Level 3 (illus 2 & 3). While the hearths are concentrated to the east of the plateau, the same area revealed only a small number of domestic artefacts, which were more concentrated to the south and west, so that the two distributions complement each other. Overall the distribution of basic domestic features would seem to indicate that habitation occurred fairly consistently across the entire area of the western plateau which was subject to excavation and throughout the periods of its use.



ILLUS 2 Western plateau: distribution of hearths



ILLUS 3 Western plateau: distribution of domestic artefacts, Levels 1-4

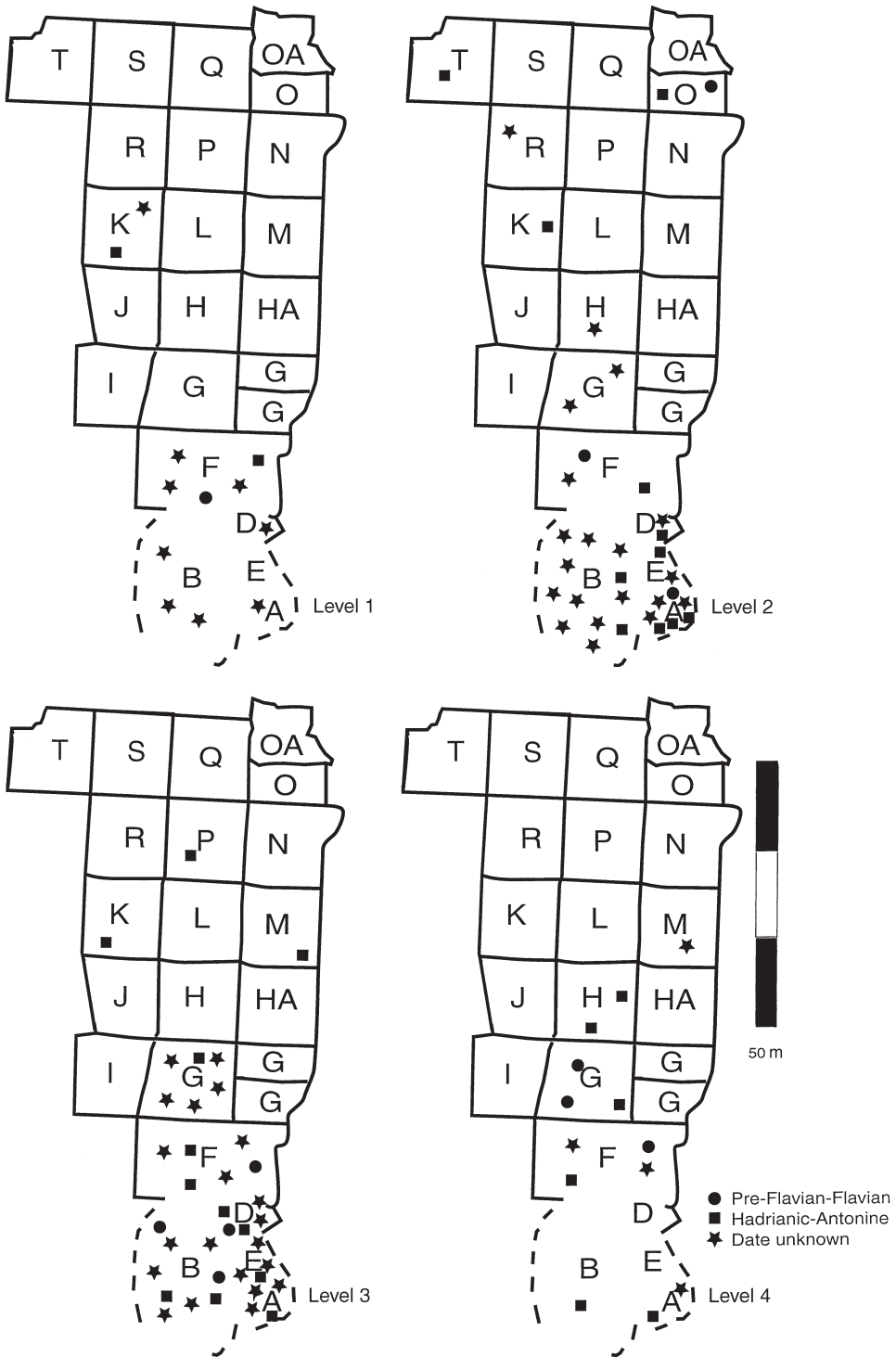


ILLUS 4 Western plateau: distribution of domestic artefacts, Level unknown

The distribution of the samian ware, both decorated and undecorated (illus 5), displays a more clustered pattern showing a concentration to the south of the site (areas A–G). The same pattern is reflected in a number of other categories of artefact not discussed in detail here (eg jewellery, including brooches, horse trappings, knives, and weapons), particularly in the lower levels, though in the upper levels a larger percentage of the artefacts were concentrated to the north-west of the site. This concentrated distribution in the south, combined with the absence of hearths in areas A–D, suggests that this part of the site may have been the focus for rubbish disposal throughout the period when Roman material was current. The bulk of the samian was recovered from the middle levels (2 & 3), but some was recovered from all levels across the site.

The distribution of glass shows a rather different pattern. It was concentrated primarily to the north and west of the site (illus 6 & 7) with very little in the main areas of samian deposition. It may have been associated with manufacturing activity, for several of the fragments recovered had been subject to heating, and a number of crucibles were also found (Cree & Curle 1922, 206). This may indicate that some of the hearths referred to above were industrial rather than domestic. The bulk of the glass was recovered from the levels 1–3, particularly Level 2, with only a small amount from Level 4.

Despite the evidence of stratigraphic mixing, as indicated by both the samian and glass, some chronological development is clearly apparent in the finds as one moves up through the levels. Burley (1956, 124 & 131) recorded a similar pattern in terms of the metalwork, noting the predominance of Late Bronze Age material in the lowest levels, though also drawing attention to the slightly contradictory fact that certain Roman objects were found invariably in the lowest levels and the presence of rather less Roman and more native material in Levels 1 and 2. None the less, if a broad chronological development through the levels is accepted, the general spatial



ILLUS 5 Western plateau: distribution of samian, Levels 1–4

patterning suggests a shift of artefact deposition to the north-west of the site in the later stages of occupation. This might also explain the almost complete absence of samian ware in that area, since it ceased arriving at Traprain in the mid/late second century (see below).

SAMIAN FROM TRAPRAIN LAW

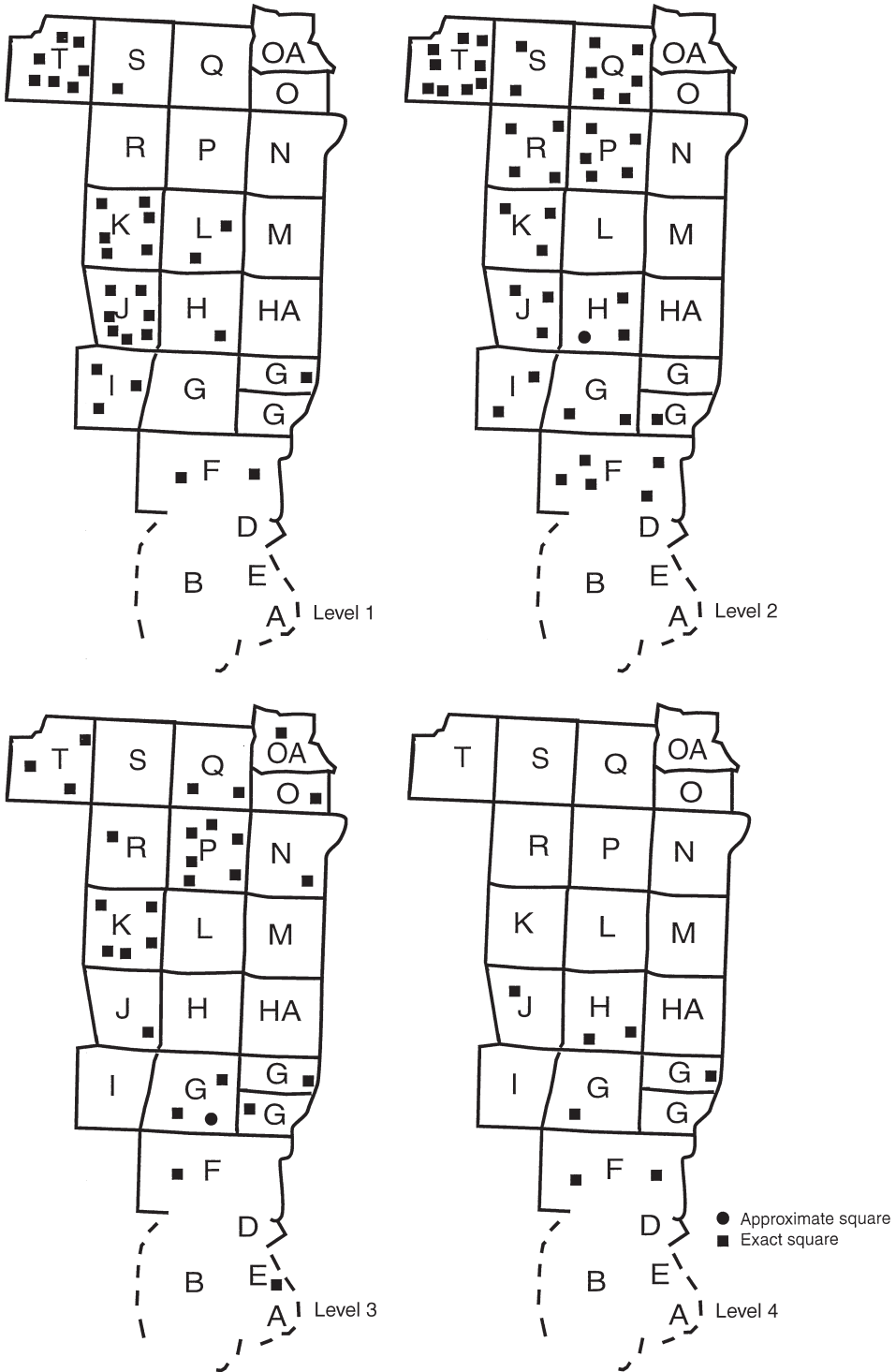
During Cree and Curle's excavations on Traprain Law more than 100 fragments of decorated and undecorated samian vessels were found, representing the largest assemblage of samian from a native site north of Hadrian's Wall. Before the nature and intensity of Roman/native interactions in the area can be discussed, it is necessary both to establish a more precise chronology and to obtain a better overview of the quality of the different categories of Roman material found in native contexts and vice versa. Since the analysis of samian ware can provide such a chronology, this was regarded as the ideal starting point. Later it is intended to compare the samian from Traprain Law with that recovered from other native sites and then compare these data with other categories of Roman finds, such as coins.

Among the samian from Traprain Law were remains of 30 decorated bowls, all dating roughly to the late first and first half of the second centuries AD. Two forms of re-use of some of the material were recorded. A few pieces had been converted into spindlewhorls and circular gaming counters, a practice not uncommon on native sites in northern Britain, The Netherlands, and north Germany, but only rarely attested in Roman forts. In addition, however, approximately 10% of the sherds show forms of intentional secondary cutting to create rectangular pieces, which are not readily paralleled on contemporary native or military sites. The interpretation of this unusual feature is still under discussion. Other forms of intentional damage, such as secondary burning or extreme or unusual wear, were not recorded.

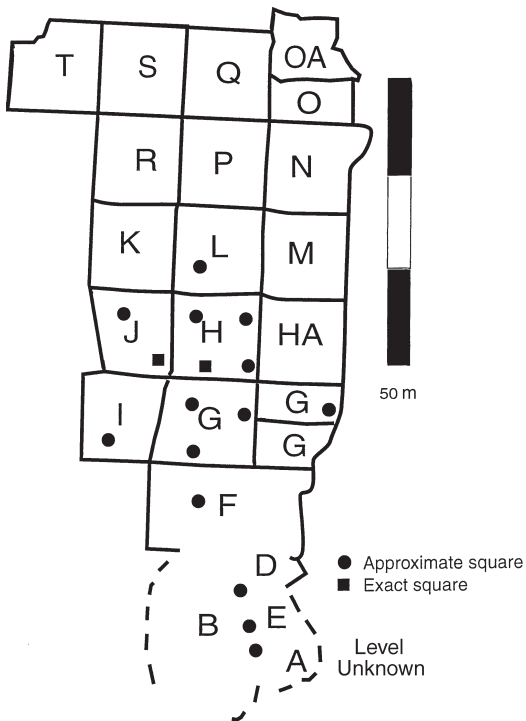
Only seven decorated sherds could be dated in the first century, six of them belonging to a single Drag. 29 bowl probably produced by Germanus of La Graufesenque. His workshop is dated in the Flavian period. A second vessel is represented by a single sherd decorated with unidentified large scrolls.

All other fragments of decorated samian bowls were produced in the second century. As far as the individual potters could be identified, their production dates fell in the Hadrianic and early Antonine periods. There is no reason to assume that the dating range of those sherds still unidentified differs from the evidence of the identified fragments. Except for a single bowl of Satto/Saturninus from Mittelbronn, all the vessels come from Central Gaulish potteries. All the manufacturers represented on Traprain Law are known from military sites in Scotland and are listed below:

Austrus	1
Avitus/Vegetus	1
B. Man	1
Cinnamus	3 (+ one retro stamp JNNI)
Cinnamus or related potters	1
Doecus	1
Paternus	4
Paternus/Iustus	1
Pugni M.	1
Servus II	1
Small 's' Potter	1
Satto/Saturninus (of Mittelbronn)	1



ILLUS 6 Western plateau: distribution of glass, Levels 1–4



ILLUS 7 Western plateau: distribution of glass, Level unknown

The four fragments of stamped plain samian vessels discovered have been listed below. Stamps of Chresimus, a potter from Montans, were also found in the Roman forts at Strageath and Inveresk:

C.RESIMI (Die 4d). Drag. 18/31. Chresimus of Montans. AD 120–145 (cf Frere & Wilkes 1989, 212; fig 104.3).

DAGOM[. Drag. ? Dagomerus of Montans.

Remains of stamp retro INV[]IU[. Probably Drag. 27.

Remains of stamp D[]US. Divixtus of Lezoux (*RIB* 2439.15). Drag. 27.

The analysis of the decorated and stamped plain samian ware from Traprain Law indicates two clearly separated phases of supply. A few sherds can be dated to the Flavian period, but the majority are of early Antonine date. The typology and chronology of the unstamped fragments of plain vessels indicates a similar pattern. A preliminary and rather incomplete survey of the samian from other native sites in Scotland leads to the same conclusion. If, for the moment, the possibility that these sherds may have come from looted Roman military sites is excluded, it seems clear that native access to samian ware (and probably other Roman material) was restricted to the periods of Roman military occupation, that is when Traprain Law and other Lowland native sites lay within the borders of the Roman province. At the moment there is no well-dated evidence for material exchange between Rome and the native peoples in the first and second centuries AD either before or after these two occupation periods.

TABLE 1

Types of Hadrianic and Antonine samian ware counted by individual sherds

Samian form site	Traprain Law	Strageath ¹	Bar Hill ²	Birrens ³
Drag. 18/31 and 31	40 = 37%	56 = 46%	169 = 38%	180 = 51%
Drag. 30/37	35 = 33%	40 = 33%	161 = 36%	61 = 19%
Drag. 33	11 = 10%	8 = 6%	61 = 14%	38 = 12%
Drag. 35/36	3 = 3%	1	–	3 = 1%
Drag. 38	2 = 2%	1	8 = 2%	21 = 7%
Drag. 27	5 = 5%	3 = 2%	14 = 3%	7 = 2%
Drag. 45/46	1	–	1	–
Curle 11	–	–	5 = 1%	1
Curle 15	–	2 = 2%	–	3 = 1%
Curle 21	–	–	–	1
Curle 23	–	–	–	1
indet	10 = 10%	10 = 8%	28 = 6%	not given
Totals	107	121	447	316

References in Table 1: 1 Frere & Wilkes 1989, 204–18; 2 Robertson *et al* 1975, 128–36; 3 Robertson 1975, 152. Finds from excavations of 1962–7 including unstratified material.

The impression of a close relationship between the deposition of samian on native sites and the presence of Roman military forces in Lowland Scotland is supported by a comparison between the Hadrianic and Antonine samian from Traprain Law and that from military sites with comparatively large assemblages of material (Table 1). It is clear that not only is the same range of forms present at all the sites, but they are represented in broadly the same proportions. A similar point has been made recently concerning the assemblages from some of the native sites of architectural complexity in the central lowlands, such as brochs and crannogs (Willis 1998a, 88; 1998b, 328–9).

DISCUSSION

Analysis of the distribution of the finds from Traprain Law suggests that there are three distinct patterns visible in the later prehistoric and Roman material recovered from the western plateau. The first is confined to the domestic features, including the hearths, which show a fairly consistent spread across most of the area examined. This distribution pattern provides little support for the suggestion that Traprain Law functioned primarily as a ceremonial centre in the Iron Age and Roman period, though it is not unreasonable to assume that votive activity would have been embedded within all aspects of occupation on the hilltop during that period. The recent small-scale excavations would seem to support this conclusion, indicating substantial later prehistoric activity on the summit of the hill (Rees & Hunter this vol, *DES* 1999, 30–1). The second pattern, represented by the samian, reveals a concentration to the south of the site, particularly in the lower levels, possibly indicating the location of midden deposits. Thirdly, in the upper levels the focus of depositional activity shifts to the north-west with some signs of industrial activity. Thus, while domestic activity is attested across the entire site, there is some suggestion of shifting foci and variable function over time.

It has previously been noted that Roman material was most accessible to native communities in the periods of actual occupation (Macinnes 1989, 112). However, the absence of any indication of an influx of samian ware to Traprain Law before or immediately after the periods of Roman occupation of Lowland Scotland in the first and second centuries (*contra* Jobey 1976, 201) is a strong argument against the existence of any well-established, extensive and long-term Roman/native trade relations. More specifically, it militates against the establishment of

regular trading contacts beyond the frontier, an assumption which has long been held (eg Frere 1987, 286), based, as Breeze (1982, 169) noted, as much on faith as any direct evidence. If such contacts were strong, we must ask the question why they appear to have been severed on the withdrawal of the Roman forces from Scotland? A similar pattern, whereby the frontier seems to have acted as a barrier to economic exchange, has been argued by Fulford (1989) in relation to parts of Germany on the basis of an analysis of the distribution patterns of coins (Davies 1983) and certain types of finewares (eg Timby 1982; King 1981) which show a pronounced cut-off at the frontier.

If the presence of quantities of Roman material at Traprain Law cannot easily be explained as the result of independent long-distance trading contacts, what mechanism or mechanisms were involved? Attention has already been drawn to the surprisingly strong correlation between the typological spectra of the samian vessels from Traprain Law and several Roman military sites, and a similar pattern is evident in the types of brooches present (Hunter 1996, 121–3). It is somewhat unexpected that native taste should mirror that of the Roman military so precisely. Given the growing evidence for Roman military use of Iron Age hilltop sites, including the watchtower on Eildon Hill North (eg Steer & Feachem 1952; Frere 1986), it might be suggested that this similarity indicates the presence at Traprain of Roman auxiliary troops, or possibly a contingent of native irregulars. However, the paucity of what may be identified as possible Roman weapons and the absence of other forms of Roman military equipment from Traprain (Burley 1956, 134) makes such an interpretation less likely, and it would not be acceptable as a portmanteau explanation for the Roman material known from other native sites, such as brochs.

Though the acquisition of booty from raiding may be one explanation for the presence of some of the later Roman material, including perhaps the famous Traprain treasure hoard, it offers a far less likely explanation for the material of first and second century date which is of more limited intrinsic value. A related activity, the looting of deserted Roman sites, might be thought to fall into the same category, but recent work in The Netherlands, where sherds from the same samian vessel were recovered from a native site and nearby Roman fort (Vons & Bosman 1988), has confirmed that it did occur. However, greater selectivity is apparent in the range of material recovered which does not, therefore, fully reflect that from military sites. A similar point has been made in respect of the Roman material from the broch at Fairy Knowe, Buchlyvie (Main 1998, 407).

Indeed, the strong congruence in the forms of samian vessels found on Traprain Law and on various military sites (Table 1) demonstrates a short but very close relationship between the two, at least for the early Antonine period. This confirms what Macinnes (1989, 112–14) has previously suggested, that the army played a major role in whatever system of exchange was involved. It is generally assumed that native peoples on the periphery of the Roman empire, not only in Scotland but also in continental north-western Europe, were eager to adopt Roman pottery and other artefacts. Thus, the simplest explanation of the mechanism involved would be to postulate that the inhabitants of Traprain Law were allowed access to Roman material goods which were obtained by them either by commercial exchange or, perhaps more likely, by barter from the *vicus* of the nearest fort, which in the Antonine occupation would have been at Inveresk. Since the primary role of *vici* would have been to supply the needs of the military, and the *vicus* at Inveresk is known to have been both extensive and potentially important in relation to the seaborne supply system of the Antonine Wall (Hanson & Maxwell 1986, 190–1), the similarity in the range of material at Traprain may simply reflect access to the same supply system. Recent examination of the samian from a number of native sites, primarily in England, has concluded

that it was more highly prized and regarded as special in some way by the indigenous population (Willis 1998a, 86).

In this case the material exchange should be seen as one of the various forms of unilateral or bilateral diplomatic contacts with favoured native groups, such as the Brigantes (Hanson & Campbell 1986) or the Batavians (Willems 1981; 1984). Indeed, the importance of such contacts cannot be over-stressed. After the withdrawal of her forces and the abandonment of most of the forts in Scotland, Roman control over the peoples now living beyond the imperial borders once more was largely restricted to such contacts. Success or failure of political instruments, such as the support of carefully chosen factions within the tribal elites by financial, political and military means, or the continuation of one-sided dependency relations, originally based upon defeats by the Roman army and backed up by continued military threat, were of decisive importance for the integrity of Rome's northern frontiers during internal and external crises (cf Erdrich 1996). It is not insignificant in this context that recent analysis has suggested that the presence at native sites of a range of samian forms is indicative of high status (Willis 1998a, 88).

But this interpretation still leaves questions unanswered. If we look closely at the native population within the province of Germania Inferior, we see that it took several decades, if not generations, before these people accepted and integrated Roman pottery or other Roman commodities into their own sphere (cf Bloemers 1978; Willems 1981; 1984). If we further accept the idea that native peoples in Scotland were never integrated into the pre-Roman Celtic perimeter and thus were not accustomed to a market economy or coin use, then it becomes more difficult to believe that the short presence of Roman military forces led to far-reaching changes in the cultural and economic organization of indigenous native tribes. Moreover, if a desire for Roman goods was already well developed, encouraged by preferential diplomatic contact, why was there no obvious attempt to continue this Romanization process by firmly integrating these people into the Roman market economy after the military withdrawals in the first or second centuries?

The importance of Traprain Law to any consideration of Roman/native relations in northern Britain needs no reassertion. Though this project is at an early stage and has largely restricted itself to consideration of the situation in the first and second centuries, it has already demonstrated that a detailed reassessment of some of the basic data derived from older excavations has the potential to generate new insights and stimulate further debate.

ACKNOWLEDGEMENTS

The inventory of the finds was subsidised by a grant from The Netherlands Organisation for Scientific Research (NWO-TALENT). Further research by Erdrich has been made possible by a fellowship of The Royal Netherlands Academy of Arts and Sciences.

REFERENCES

- Armit, I 1997 *Celtic Scotland*. London.
- Armit, I & Ralston, I A 1997 'The Iron Age', in Edwards, K J & Ralston, I B M (eds), *Scotland: environment and archaeology, 8000 BC-AD 1000*, 169-93. London.
- Barrett, J C, Fitzpatrick, A P & Macinnes, L 1989 *Barbarians and Romans in north-west Europe from the later Republic to late Antiquity*. Oxford.
- Bloemers, J H F 1978 *Rijswijk (ZH), 'De Bult': Eine Siedlung der Cananefaten*, vols I-III. Amersfoort.
- Breeze, D J 1982 *The Northern Frontiers of Roman Britain*. London.
- Breeze, D J 1996 *Roman Scotland*. London.

- Burley, E 1956 'A catalogue and survey of the metal-work from Traprain Law', *Proc Soc Antiq Scot*, 89 (1955–6), 118–226.
- Close-Brooks, J 1983 'Dr Bersu's excavations at Traprain Law, 1947', in O'Connor, A & Clarke, D V (eds) *From the Stone age to the 'Forty-five*, 206–23. Edinburgh.
- Cree, J E 1923 'Account of the excavations on Traprain Law during the summer of 1922', *Proc Soc Antiq Scot*, 57 (1922–3), 180–226.
- Cree, J E 1924 'Account of the excavations on Traprain Law during the summer of 1923', *Proc Soc Antiq Scot*, 58 (1923–4), 241–85.
- Cree, J E & Curle, A O 1922 'Account of the excavations on Traprain Law during the summer of 1921', *Proc Soc Antiq Scot*, 56 (1921–2), 189–259.
- Cruden, S H 1940 'The ramparts of Traprain Law: excavations in 1939', *Proc Soc Antiq Scot*, 74 (1939–40), 48–59.
- Curle, A O 1915 'Account of the excavations on Traprain Law in the Parish of Prestonkirk, County of Haddington, in 1914', *Proc Soc Antiq Scot*, 49 (1914–15), 139–202.
- Curle, A O 1920 'Report on the excavation on Traprain Law in the summer of 1919', *Proc Soc Antiq Scot*, 54 (1919–20), 54–124.
- Curle, A O 1923 *The Traprain Treasure*. Glasgow.
- Curle, A O & Cree, J E 1916 'Account of excavations on Traprain Law in the Parish of Prestonkirk, County of Haddington, in 1915', *Proc Soc Antiq Scot*, 50 (1915–16), 64–144.
- Curle, A O & Cree, J E 1921 'Account of the excavations on Traprain Law during the summer of 1920', *Proc Soc Antiq Scot*, 55 (1920–1), 153–206.
- Davies, J A 1983 'A survey of Roman coin distributions on the frontier with Free Germany', *Saalburg Jahrbuch*, 39 (1983), 133–41.
- DES Discovery and Excavation in Scotland*, Council for Scottish Archaeology, Edinburgh.
- Erdrich, M 1996 *Rom und die Barbaren: Das Verhältnis zwischen dem Imperium Romanum und den germanischen Stämmen vor seiner Nordwestgrenze seit der späten römischen Republik bis zum Gallischen Sonderreich*, PhD thesis, Univ Amsterdam (= *Römisch-Germanische Forschungen*, 58, Mainz, 2000).
- Feachem, R W 1956 'The fortifications on Traprain Law', *Proc Soc Antiq Scot*, 89 (1955–6), 284–9.
- Frere, S S 1986 'The use of Iron Age hillforts by the Roman army in Britain', in Unz, C (ed) *Studien zu den Militärgrenzen Roms III*, 42–6. Stuttgart.
- Frere, S S 1987 *Britannia: a history of Roman Britain* (3rd edn). London.
- Frere, S S & Wilkes, J J 1989 *Strageath: excavations within the Roman fort 1973–86*. London.
- Fulford, M G 1989 'Roman and barbarian: the economy of Roman frontier systems', in Barrett *et al* 1989, 81–95.
- Giannotta, K M 1997 *Roman and Native in Scotland: Traprain Law*, unpub MPhil thesis, Univ Glasgow.
- Hanson, W S & Campbell, D B 1986 'The Brigantes: from clientage to conquest', *Britannia*, 17 (1986), 73–89.
- Hanson, W S & Maxwell, G S 1986 *Rome's North-West Frontier: the Antonine Wall*. Edinburgh.
- Hill, P 1987 'Traprain Law: the Votadini and the Romans', *Scott Archaeol Rev* 4(2) (1987), 85–91.
- Hogg, A H A 1951 'The Votadini', in Grimes, W F (ed), *Aspects of Archaeology in Britain and Beyond*, 200–20. London.
- Hunter, F 1996 'Recent Roman Iron age metalwork finds from Fife and Tayside', *Tayside & Fife Archaeol J*, 2, 113–25.
- Jobey, G 1976 'Traprain Law: a summary', in Harding, D W (ed), *Hillforts: later prehistoric earthworks in Britain and Ireland*, 191–204. London.
- King, A C 1981 'The decline of samian ware manufacture in the north-west provinces: problems of chronology and interpretation', in King, A C & Henig, M (eds) *The Roman West in the Third Century*, 55–73. Oxford.
- Macinnes, L 1989 'Baubles, bangles and beads: trade and exchange in Roman Scotland', in Barrett *et al* 1989, 108–16.

- Main, L 1998 'Excavation of a timber round-house and broch at the Fairy Knowe, Buchlyvie, Stirlingshire, 1975–8', *Proc Soc Antiq Scot*, 128 (1998), 293–417.
- Rees, T & Hunter, F 2000 'Archaeological excavations on the summit of Traprain Law, East Lothian, 1996–97', this vol.
- RIB Roman inscriptions in Britain, Vol II, fasc 3, Instrumentum Domesticum*, Frere, S S & Tomlin, R S O (eds). Oxford.
- Robertson, A S 1975 *Birrens (Blatobulgium)*. Edinburgh.
- Robertson, A S, Scott, M & Keppie, L J F 1975 *Bar Hill: a Roman fort and its finds*. Oxford.
- Sekulla, M F 1982 'The Roman coins from Traprain Law', *Proc Soc Antiq Scot*, 112 (1982), 285–94.
- Steer, K A & Feachem, R W 1952 'A Roman signal-station on Eildon Hill north, Roxburghshire', *Proc Soc Antiq Scot*, 86 (1951–2), 202–5.
- Timby, J R 1982 *Gallo-Belgic Fine Wares: a study in characterisation, distribution and development during the first centuries BC and AD*, unpub PhD thesis, Univ Southampton.
- Vons, P & Bosman, A 1988 'Inheemse boeren bezochten de verlaten Romeinse versterkingen Velsen I en II', *Westerheem*, 37 (1988), 1–16.
- Willems, W 1981 'Romans and Batavians: a regional study in the Dutch eastern river area' [part 1], *Berichten Rijksdienst Oudheidkundig Bodemonderzoek*, 31, 5–201.
- Willems, W 1984 'Romans and Batavians: a regional study in the Dutch eastern river area' [part 2], *Berichten Rijksdienst Oudheidkundig Bodemonderzoek*, 32, 42–491.
- Willis, S 1998a 'Samian pottery in Britain: exploring its distribution and archaeological potential', *Archaeol J*, 155 (1998), 82–133.
- Willis, S 1998b 'The Iron Age and Roman pottery', in Main 1998, 321–31.