

Tobacco pipemakers in 17th-century Stirling

Dennis B Gallagher* & John Harrison†

ABSTRACT

Recent documentary and artefactual research have shown the existence of a flourishing tobacco pipemaking industry in Stirling during the second half of the 17th century. The industry was established with the support of the Burgh Council and, in the Stirling area, was successful in competing against Edinburgh makers. The pipes show an eclectic range of markings, drawing on Scottish, English and Dutch parallels.

INTRODUCTION

The addiction to pipe-smoking spread to Scotland in the early decades of the 17th century, influenced by the fashion of the London court. The earliest known reference to the actual manufacture of pipes in Scotland dates from 1618 when a William Banks, of the Burgh of Canongate, was described as a pipemaker. Banks held a royal monopoly in pipemaking in Scotland which he appears to have retained during the first half of the century (Gallagher 1987g, 5–8). Finds of pipes of an early 17th-century date in Stirling indicate that Banks' pipes shared the market with Dutch imports. The 1660s witnessed an expansion in the pipemaking industry, with makers working in Edinburgh, Leith, Glasgow and in Stirling. Fostered by a general improvement in the economic climate, the pipemaking industry was further encouraged by a tax introduced in 1661 that imposed heavy duties on imported pipes and limited the price of all pipes to a maximum of 18s Scots per gross (*APS*, vii, 65).

The existence of another Scottish pipemaking centre, in addition to Edinburgh and Glasgow, was identified by Laing (1967) in his report on a group of pipes from Linlithgow Palace. He noted that the bowls with star basal stamps were different from the products of the two recognized centres and attributed them to another pipemaking centre in eastern Scotland, suggesting St Andrews as a possibility. A brief survey of the documentary evidence indicated that pipemakers were working in Stirling (Gallagher 1987c). This has been greatly expanded by recent research, the results of which appear in the present paper. The increased number of pipes from recent excavations, although small in numbers, has expanded the corpus available for study, making possible this preliminary survey of the pipemakers' products.

* 4 Sylvan Place, Edinburgh EH9 1LH

† 14A Abercromby Place, Stirling FK8 2QP

THE PIPEMAKERS

John Harrison

The few records of pipes and tobacco in Stirling prior to the mid 17th century are concerned with taxation and the protection of the merchants' monopoly on the sale of both items (Renwick 1887, 191; Cook & Morris 1916, 52, 55, 61; CRA Guildry Minutes PD 6/1/3, 4 April 1660). However, the Treasurer's Accounts from 1650 onwards show that the use of tobacco and pipes was commonplace at civic functions by that time (CRA Treasurers Accounts B 66/23/1, Discharge 1650–1, 1651–2. SRO Treasurers Accounts E82/55/5, Discharge 1660, fo16). By the 1670s tobacco and pipes were even provided for funerals paid for by the town's merchants' charity, Cowane's Hospital, though similar expenses for poor artisans' funerals were condemned as extravagant (eg CRA Cowane's Hospital Accounts, discharge 1681–2; CRA Council Minutes, 19 July 1699).

Manufacture of tobacco pipes in Stirling can be dated from 1 October 1664 when the town council agreed that John Ferguson, 'wright and maker of tubacco pypes in Shillbrae' could bring his family and live in the town and exercise his 'calling of wright craft and makeing tubacco pypes and cards' for a year to come or longer, till he was prohibited (Renwick 1887, 247). In effect the council were temporarily waiving the heavy burgesse dues usually levied on incoming artisans and so encouraging a desirable new industry. As Ferguson's brother Donald 'in Shielbrae of Touchadam' was cautioner for Ferguson's executor, Shillbrae can be identified as Shielbrae (NS 744905), some 12 km south-east of Stirling (SRO Testaments, John Ferguson).

In 1668 John Cousland, pipemaker, was admitted burgesse without charge on account of his service in the militia. Then, in January 1671, John Ferguson, the original maker, paid £24 Scots for admission as a burgesse and neighbour, perhaps because the industry was now regarded as established (Harrison 1991 31, 39). However, he died two months later, when he was owed £8 Scots by a chapman from Airth for black beer and tobacco pipes. (SRO Testaments, John Ferguson). Findlay Spittal, dead by 1679, was survived by Annapple Anderson, 'relict of Findlay Spittal, pipemaker in Stirling' who died in 1684; his total assets were a substantial £1468 Scots, mainly in bonds (SRO Testaments).

William Thomson and John Paterson, pipemakers, were admitted burgesses in 1681. Robert Ferguson, son of John, was admitted as merchant burgesse in 1692, dying in 1695; he had been described as a pipemaker when involved in the 'Prentices' Riot as early as 1678 (Harrison 1991, 65, 75, 90). In 1688 Robert had entered into a contract with Dame Lillias Forrester of Torwoodhead to dig clay from any part of the lands of Torwoodhead for a period of seven years; he was to pay £18 Scots per annum, whether clay was dug or not (CRA Deeds).

On 27 October 1685 the names of 124 burgesses and heads of households who had not previously subscribed to the Test were submitted to the Privy Council. James Paterson, John Cousland and John Paterson in the First Quarter, William Thomson in the Second, and Robert Ferguson in the Fourth Quarter, are all listed as pipemakers (RPC XI, 358–60). The Fergusons and Patersons seem to have been the most prosperous of these late 17th-century pipemakers and were the only makers to identify their wares with their initials (see below). Robert Ferguson became a bailie; his substantial and ornate gravestone still survives in the Holy Rude Kirkyard, Stirling. (Harrison 1990, 85). John Paterson's son, James, also became a substantial merchant; he could be the James Paterson listed as a pipemaker in 1685 (Harrison 1991, 65). A Robert Paterson is recorded as a pipemaker in Bannockburn, 7 km south-east of Stirling in 1708 (Gallagher 1987c, 165). John Robertson, pipemaker, and his wife, were owed £49 10s by James Paterson the merchant in 1694. Alexander Napier, pipemaker in Stirling, owed £1 1s to William Gilfillan when

Gilfillan died in 1690. Napier was not a burges, and Robertson was probably not one either (CRA, Deeds B66/9/10 f34; SRO, Testaments William Gilfillan).

The last of the recorded pipemakers is William Lorne. He had been a merchant burges since 1676 and was appointed Guildry Officer in 1694, a post carrying a small salary and one that was traditionally assigned to someone in financial difficulties. In 1700 he was given £36 Scots by the Guildry to assist him to start a pipemaking business. Payments for his official duties continued, however, and in July 1706 the Guild gave him a further £12 towards the cost of carrying home his pipeclay (CRA, Guildry Minutes PD/1/4, 222, 244). Between 1717 and 1718 he leased some property in Mary Wynd to 'Keir' and his partner, including 'a little laigh house where William Lorne wrought his clay'. As the tenants stored some lime in it, Lorne can no longer have used it; it must be assumed that his kiln had been nearby (CRA, Court Book B66/16/27, *Lorne v Keir*). He continued as Guildry Officer till his death in 1725.

It seems clear that the local industry expanded steadily from the 1660s to the 1680s. The five men listed in 1685 and the total of 10 names prior to 1720 may, indeed, underestimate the total. But it is surely significant that no other pipemakers are recorded in Stirling after William Lorne's subsidized start-up in 1700. Socially, the pipemakers were a diverse group, including representatives of two wealthy and prestigious burges families, one wealthy non-burges (Finlay Spittal), and a cluster of less prestigious men, burgesses and non-burgesses, some of whom may well have been employees. William Lorne's entry to the trade came as pipe-smoking passed out of fashion. He could have been in business for 17 years, or a little more, but was twice subsidized and it was only ever a part-time occupation.

There is, so far, no evidence for kiln sites. Even Lorne's kiln on Mary Wynd could have been near the street or at the end of a long burgage plot. Pipemakers assenting to the Test in 1685 lived in three of the four Quarters and though Lorne's workshop was on his own property, this may not be true of others; indeed all the Quarters had rural as well as urban areas. In spite of Ferguson's contract to dig clay at Torwoodhead it has been questioned whether clay from this area would be suitable for pipemaking (D H Caldwell, pers comm).

John Paterson, sometime of Glenhead of Sauchie, later indweller in Stirling, died in 1707 and seems to be the John Paterson, pipemaker, mentioned above (SRO, Testaments). Glenhead of Sauchie is in the same area of the middle Bannock Burn as Shielbrae, from which John Ferguson came. The Thomsons and Couslands are also connected with this upland area. Such a coincidence, taken with the ambiguous wording of the 1664 resolution which describes Ferguson as 'wright and maker of tubacco pyps in Shillbrae', suggests that the possibility of a rural industry cannot be ignored. On the other hand, an extensive search of testaments has, so far, failed to reveal any firmer evidence.

THE PIPES

Dennis B Gallagher

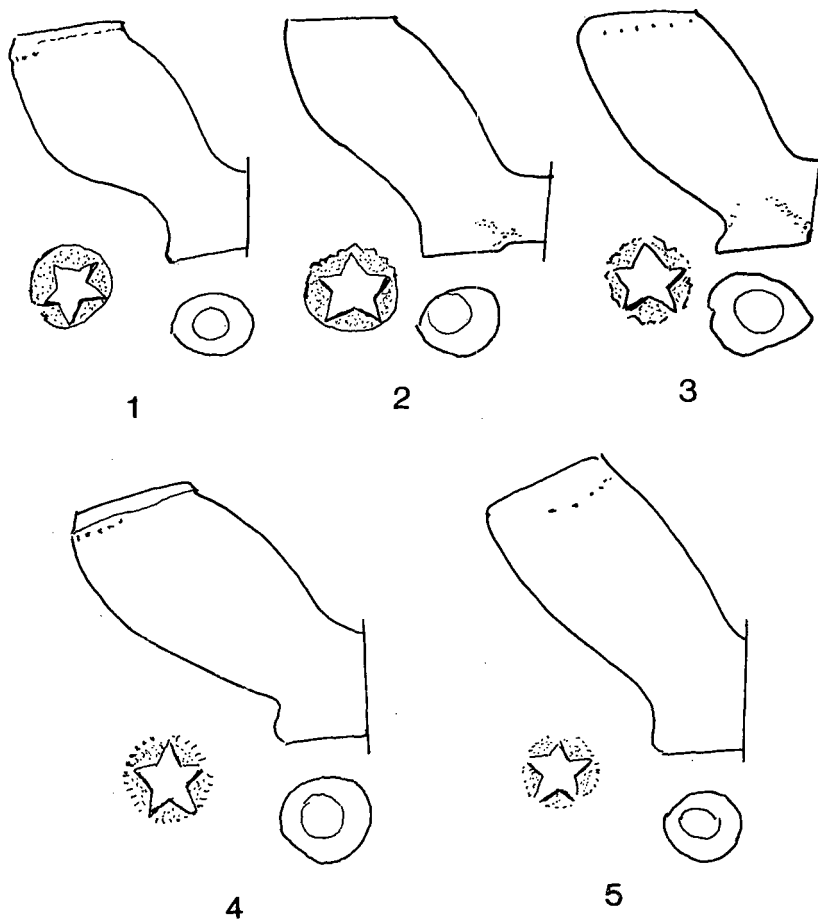
The existence of 17th-century pipes that were products of a manufacturing centre other than Edinburgh and Glasgow was first recognized by Laing (1967, 126), who noted bowls with distinctive 'star stamps' from Linlithgow Palace and suggested St Andrews as a possible source of manufacture. The study of a wider corpus of material indicated that these pipes, along with other pipes that bore stamps atypical of the major Scottish centres of production, were more likely to be Stirling products (Gallagher 1984, 11; 1987f, 305). The following survey builds on this earlier work to present a more complete picture of the pipes that were probably manufactured in Stirling. The methodology adopted has been governed by the recognition of the common practice amongst pipemakers in 17th-century Scotland of marking better-quality pipes with two types of marks: mould-imparted initials low on the side of the bowl, a basal stamp applied with a die after the pipe was moulded. The initials were those of the individual pipemaker, whilst the basal stamp identified the place of manufacture. Hence the distinctive basal

stamps are described, with further comments on the bowl forms on which these are found. Further research is needed before an unmarked bowl can be recognized as a distinctive Stirling product.

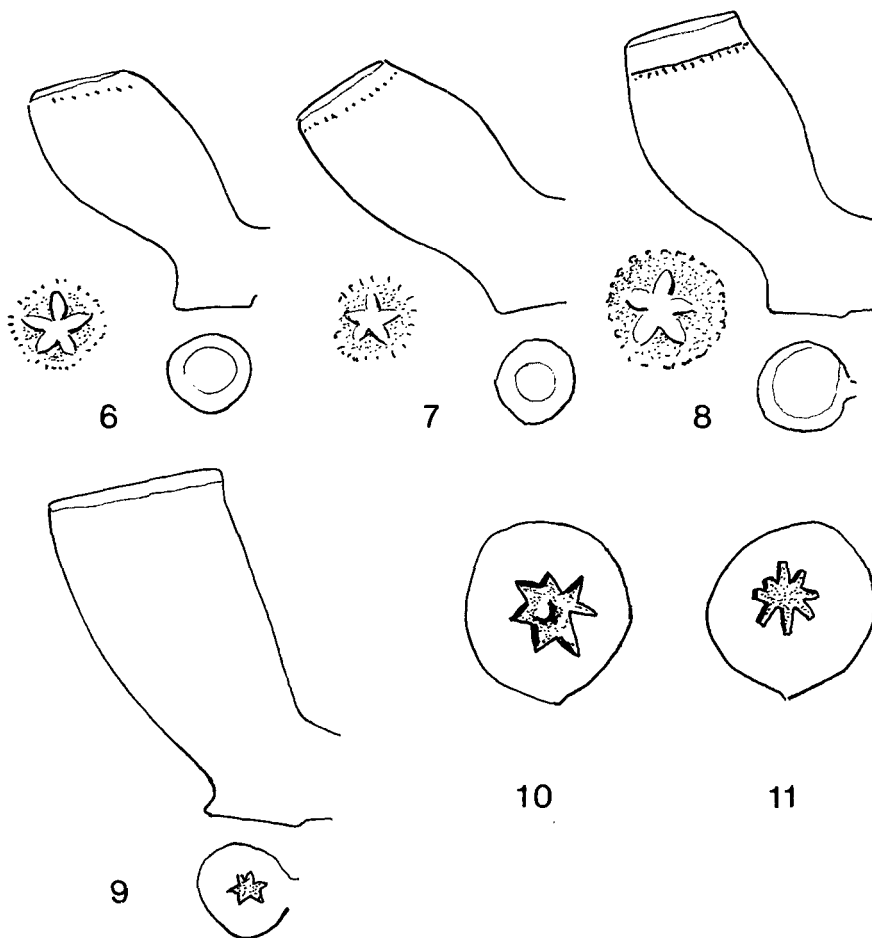
BASAL STAMPS

Circular stamps with a single star

The commonest mark on Stirling pipes is an incuse circular basal stamp having a star of five rays, in relief, within a milled edge. This five-rayed star is depicted in two different ways: some stamps have stars with straight edges (illus 1, nos 1–5) whilst others have rays with rounded edges, similar to petals (illus 2, nos 6–8). Both forms of star are found on a wide variety of bowl forms and there is no evidence that either form of star was confined to a particular maker. The majority of bowls with this type of basal stamp have no other identifying mark. There are, however, a number of examples on the bases of bowls which bear the mould-imparted initials I/F (see below), which suggests that the system of marking was similar to that of contemporary Edinburgh pipes, on which the initials identified the maker whilst the basal stamp indicated the town of manufacture.



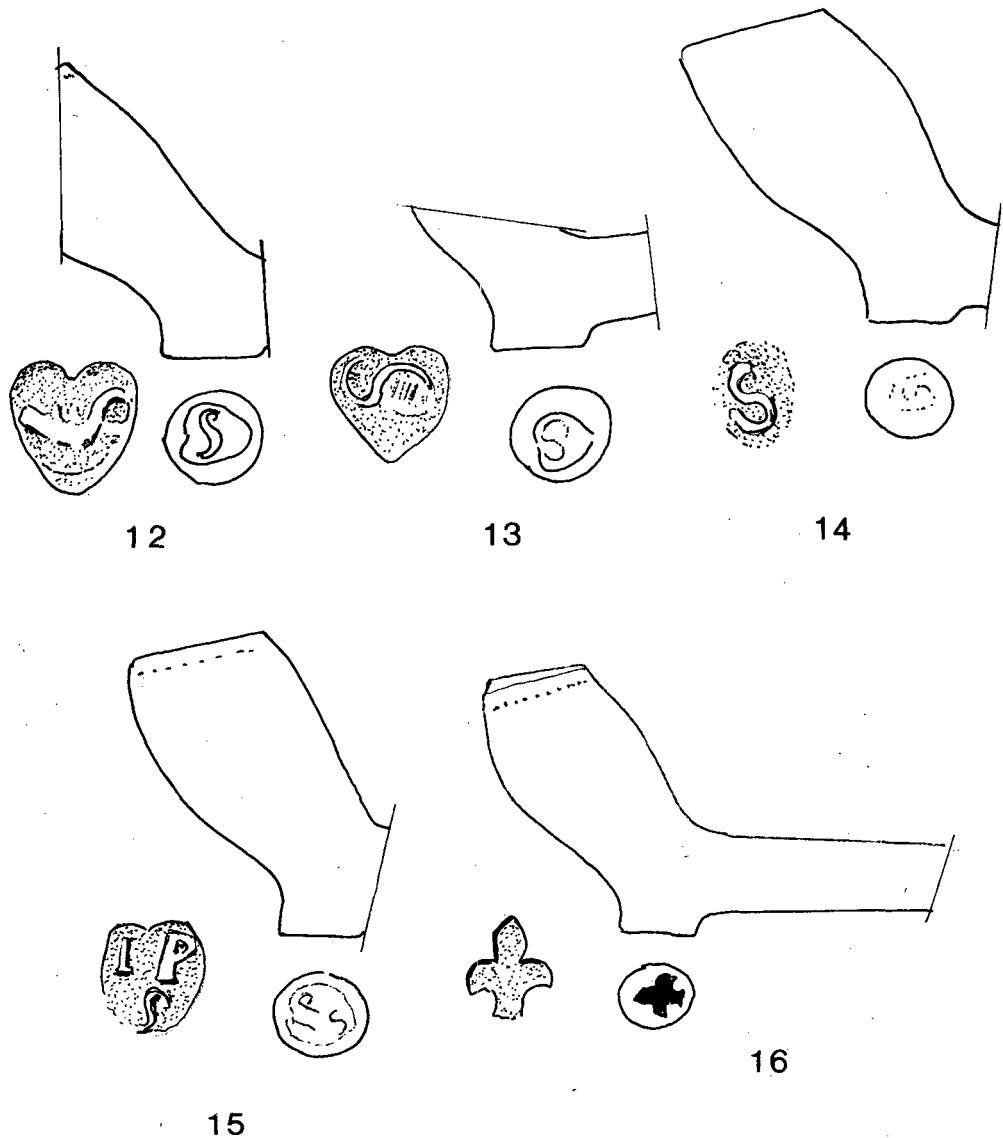
ILLUS 1 Bowls with basal stamps



ILLUS 2 Bowls with basal stamps

Pipes marked with five-ray stars have been found at Stirling (Gallagher 1987a, 332), Lesmahagow (Sharp 1987, 2 95), Linlithgow (Laing 1967, 126; Gallagher 1987f, 302), Glenochar (*Discovery Excav Scot* 1986, 33), Cramond, Perth (Davey 1987b, 307), Niddry Castle (unpub; inf C Kelly), Tantallon Castle (Caldwell 1991, 355) and St Andrews (Davey forthcoming). This distribution of star stamps shows a concentration in the Stirling area. It indicates that town as the likely place of manufacture, agreeing with the documentary evidence for pipemaking in that town in the later 17th century. The bowl forms indicate that this type of stamp was used over the period of c 1660–c 1700, dates which also concord broadly with the documentary evidence.

In addition to these circular stamps with relief stars, there are a number of pipes that are marked on the base with an incuse star of six or more rays (illus 2, nos 9–11). Examples of these have been found at Pittenweem (Martin 1987, 199, fig 11.87 & 11.88), St Andrews (Davey forthcoming), Perth (Davey 1987b, fig 24.7) and Ravenscraig Castle, Kirkcaldy (unpub). The recorded examples of this type of stamp survive only on basal fragments, with the exception of one bowl from St Andrews (illus 2, no 9). This is a thick-sided crudely made late 17th-century form with an expanded mouth. Similar



ILLUS 3 Bowls marked with letters or fleur-de-lis

bowl forms have been found in a context dated to 1697–9 at the Scottish colony of Darien, Panama (Horton, Higgins & Oswald 1987, 243, fig 1.2) and Kelso (Gallagher 1987e, 285–7, nos 37–41). None has been found in the groups examined from Stirling itself and, although recorded numbers are so small, their distribution in Fife may indicate another centre of production, rather than Stirling.

Single-letter marks

This consists of the letter S placed either horizontally within a heart-shaped field (illus 3, nos 12 & 13) or within a subcircular field (illus 3, no 14). The die of the former is poorly executed, with a badly formed

letter. The known examples of both forms of this stamp are on late 17th-century bowl forms. One example (illus 3, no 12) was recovered from the Darien Colony, in a context dated to 1698–1700 (Horton, Higgins & Oswald 1987, 244–5, no. 9), and others came from excavations at Stirling Castle (illus 3, 14; Gallagher, forthcoming a). The heart-shaped stamp is atypical of Scottish pipes; it is likely to have been the result of influence from an eastern English source, such as Tyneside (cf Edwards 1988, 18) or from the London area.

Triple-letter marks

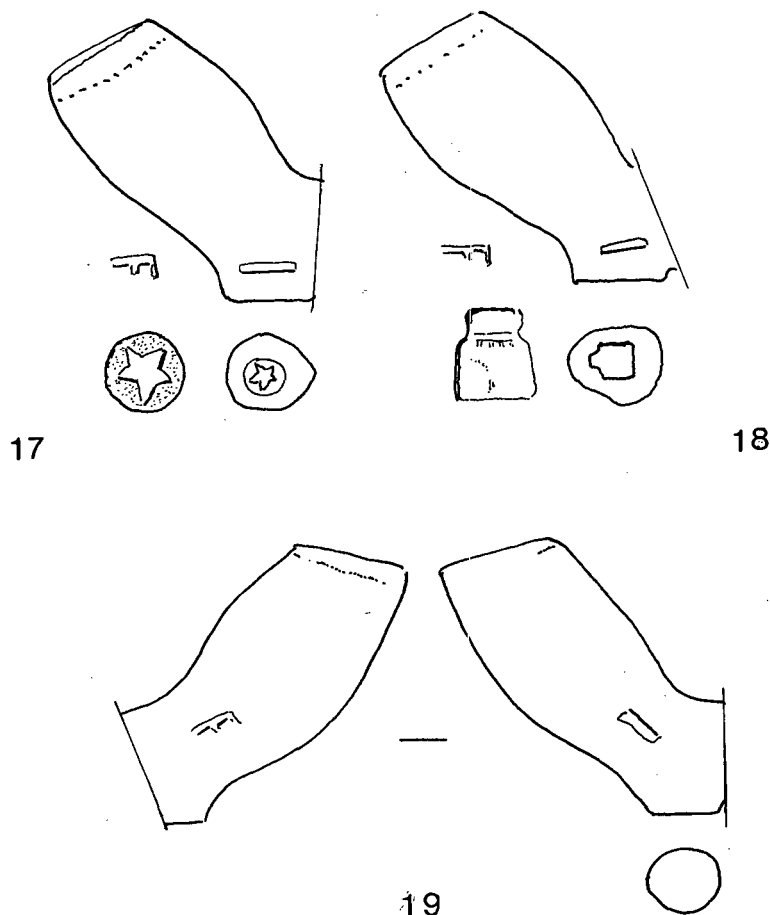
There was a short-lived fashion among Scottish pipemakers for basal stamps with three letters, in which the upper two letters are the initials of the maker and the lower letter the place of manufacture. Examples are found from makers in Edinburgh, Leith and Glasgow (Gallagher 1984; 1987d, 52; Martin 1987, 201, fig 12.96 & 12.97). Their use is normally confined to well-rounded forward-leaning bowls. Two examples of an IP/S mark (illus 3, no 15) were recovered from excavations in Stirling Castle (Davey 1980, 48, fig 13.8 & 13.9; Gallagher 1987a, 334, fig 36.49) and these pipes may be the work of James or John Paterson (see above). Unlike the marks from Edinburgh, Leith and Glasgow they are not on the distinctive well-rounded bowls of c 1660–80, but on a more upright, wider-mouthed type that may be dated typologically to the late 17th century. In this context, the use of three letters indicates a conservative maker who was adapting this style of marking when it already had been abandoned by the more innovative makers of the major Scottish pipemaking centres. The style of marking demonstrates the continued influence of Dutch pipes, on which basal stamps bearing letters were very common (cf Duco 1987, 73–97).

Fleur-de-lis marks

Two examples of pipes with a previously unrecorded fleur-de-lis stamp (illus 3, no 16) were recovered in recent excavations from Stirling Castle (Gallagher, forthcoming a). The choice of motif may have been influenced by Dutch pipes, on which it is common. Basal stamps with a single fleur-de-lis, in relief on a circular field, were produced in Gouda and other Dutch centres (Duco 1982, 48). The examples from Stirling are unusual in that the stamp is made with a die in the shape of the motif rather than presenting it within a frame.

I/F PIPES

It was normal practice in 17th-century Scotland for a pipemaker to mark his better quality pipes with his own initials mould-imparted on the side of the base, thus identifying the actual maker, as opposed to the basal stamp that usually identifies the town of manufacture. Despite the number of pipemakers documented from Stirling, only one set of initials has been recorded marked in that manner. This is I/F, which may be identified as the mark of John Fergusson, who worked in Stirling from 1664 until his death in 1671. (It is possible that the moulds bearing the I/F mark continued to be used after John Fergusson's death.) I/F pipes have been found with two styles of stamp: a star (illus 4, no 17) and a castle (illus 4 no 18). The castle was the distinctive mark of Edinburgh pipemakers, on whose products it appears in many variations (Gallagher 1987e, 290). Three bowls with I/F initials are recorded, however, which bear castle-style stamps; two from Stirling (Gallagher forthcoming a; Stirling Museum acc no B464) and one from Pittenweem (Martin 1987, 201, no 95). This would have been identified as an Edinburgh product by the 17th-century smoker, but there is no known Edinburgh maker with these initials. It may be that Fergusson was promoting sales by deliberately misleading his customers. All three stamps have little or no interior details, possibly resulting from the use a worn die. Both types of basal stamps are on bowls of very similar form,



ILLUS 4 Bowls marked I/F

possibly from the same mould. The typological date of this form is compatible with John Fergusson's known period of pipemaking in Stirling from 1664 to 1671.

In most I/F pipes the initials occur low on the sides of the base, the normal position on Scottish pipes of that period. There is one unusual example where they are positioned higher on the bowl (illus 4, no 19). The bowl is similar to London form 21 (Atkinson & Oswald 1969, 180, no 21) and the marking may be influenced by southern English pipes, possibly those of East Anglia (Atkin 1988, 45, fig 2).

In addition to the above possible Stirling products there are, from excavations in Aberdeen, a basal fragment stamped RP/B and a roller-stamped stem marked PATERSON (Davey 1987c, 254–6, nos 12 & 24). The former may be identified as the work of a Robert Paterson, pipemaker, of Bannockburn, near Stirling and the roller stamp also may have been produced by a member of the same family, although pipemakers of this name are recorded in Holland. These include a Robbert Pieterss in Amsterdam, who originated from Auchtermuchty, in Fife (Duco 1981, 333).

BOWL FORMS

The bowls from Stirling conform to recognized Scottish forms. Some typological development can be noted in the range of pipes, although many of the different forms could be contemporary in date. The earliest pipes, of c 1660–80, are developed biconical forms, some associated with I/F marks (illus 4, nos 17 & 18). By contrast illus 4 no 19 is an elongated form, unusual in Scottish pipes. Others are forward-leaning, well-curved bowls with narrow mouths and flared heels (illus 1, nos 1–3; illus 2, no 6), similar to those produced in Edinburgh and Glasgow (cf Gallagher 1987e, 280. fig 10.8 & 10.9). Forms become more upright (illus 2, no 8) developing in the late 17th century into fuller, taller bowls with wider mouths (illus no 14), some of which are associated with the single S basal stamps. Bowl no 9 (illus 2) is an early 18th-century form, similar to crudely made bowls from excavations in Kelso (Gallagher 1987e, 285).

Any analysis of the extent of the distribution of Stirling pipes is limited by the small number of excavated pipes in Scotland, in particular those from Stirling makers. From available evidence it is apparent that two main factors limited the distribution of Stirling pipes. One was the presence of the dominant Edinburgh pipemakers, 56 km to the east, whose reputation was such that Stirling makers appear to have copied their distinctive basal stamp. The other was the Glasgow industry, the main supplier for the west of Scotland. In the face of this competition, the Stirling pipemakers seem to have produced pipes mainly for the local market. Stirling pipes have been found in groups with Glasgow pipes at Glenochar, near Crawford, and Lesmahagow (Sharp 1987, 294–5), 75 km and 53 km south of Stirling. The finds of Stirling pipes from Lothian extend as far east as Cramond, 45 km away, on the edge of Edinburgh, plus a single example from Tantallon Castle, East Lothian; none is recorded from central Edinburgh.

CATALOGUE OF ILLUSTRATED PIPES

Stamps with stars, straight-sided rays (illus 1)

- 1 Bowl, milled and bottered, with a star basal stamp; NMS NQ523 (4).
- 2 Bowl, finely bottered but without milling, with a star basal stamp; Lesmahagow, Lamarkshire (Sharp 1987, 295, fig 19.7).
- 3 Bowl, milled and bottered, with a star basal stamp; Lesmahagow (Sharp 1987, 297, fig 20.9).
- 4 Bowl, milled and bottered, with a star basal stamp; Stirling Museum acc no B458
- 5 Bowl, milled and bottered, with a star basal stamp; Cramond, Midlothian.

Stamps with stars, petal-shaped rays (illus 2)

- 6 Burnished bowl, milled; Lesmahagow (Sharp 1982, M99).
- 7 Burnished bowl, partial milling; unprovenanced; NMS H40
- 8 Burnished bowl, crudely milled; Perth (Davey, forthcoming, no 9).

Stamps of incuse stars

- 9 Large crudely made bowl, bottered, stamped on the base with an incuse star; St Andrews (Davey, forthcoming no 12).
- 10 Basal fragment stamped with an incuse star with a central boss in relief; Pittenweem (Martin 1987, 199, fig 11.87).
- 11 Basal fragment stamped with an incuse star; Pittenweem (Martin 1987, 199, fig 11. 88).

Stamps with single-letter marks

- 12 Burnished bowl with milling and a letter S basal stamp; Darien, Panama (Horton *et al* 1987, 244, no 9).
- 13 Fragment of a burnished bowl with a S basal stamp (NMS HX193).
- 14 Basal fragment with letter S stamp; Stirling Castle (Gallagher, forthcoming a).

Stamps with triple-letter marks

- 15 Milled bowl, with a heart-shaped IP/S basal stamp; two examples from Stirling Castle (Davey 1980, 48, fig 13.8 & 13.9; Gallagher 1987a, 334, fig 36.49).

Stamps with fleur-de-lis marks

- 16 Milled bowl with basal stamp of incuse fleur-de-lis; Stirling Castle (Gallagher, forthcoming a).

I/F pipes

- 17 Bowl, milled, with mould-imparted I/F and star basal stamp; Stirling Castle (Gallagher, forthcoming).
- 18 Bowl, milled, with mould-imparted I/F and castle portcullis-style basal stamp; Stirling; Stirling Museum acc no. B464.
- 19 Tall slender bowl with mould-imparted I/F; Stirling; Stirling Museum acc no B470.

ACKNOWLEDGEMENTS

The authors would like to thank the staffs of the Smith Museum and Art Gallery, Stirling, and the Royal Museum of Scotland, Edinburgh for their co-operation, Chris Kelly for permission to examine pipes from Niddry Castle, West Lothian, and especially Gordon Ewart, whose several excavations at Stirling Castle have provided the base of the corpus.

REFERENCES

- APS Acts of Parliament of Scotland*. Thomson, T & Innes, C (eds), Edinburgh, 1814–75.
- Atkin, S 1988 'A group of seventeenth-century marked clay pipe bowls from East Anglia', *Clay Pipe Research*, 1 (1988), 42–52.
- Atkinson, D & Oswald, A 1969 'London Clay Tobacco Pipes', *J Brit Archaeol Assoc*, 32 (1969), 171–227.
- Caldwell, D H 1991 'Tantallon Castle, East Lothian: a catalogue of the finds', *Proc Soc Antiq Scot*, 121 (1991) 335–57.
- Cook, W B & Morris, D B (eds) 1916 *Extracts from the Records of the Guildry of Stirling 1592–1846*. Stirling.
- Davey, P J 1980 'The Clay Pipes', in Ewart, G 'Excavations at Stirling Castle 1977–1978', *Post-Medieval Archaeol*, 14 (1980), 46–50.
- Davey P (ed) 1987a *The Archaeology of the Clay Tobacco Pipe, X. Scotland*. Oxford (=BAR Brit Ser, 178).
- Davey P 1987b 'Perth', in Davey 1987a, 306–14.
- Davey P 1987c 'Aberdeen', in Davey 1987a, 253–62.
- Davey P forthcoming 'Clay pipes from recent excavations in St Andrews'.
- Duco, D H 1981 De Kleipijp in de Zeventiends Eeuwse Nederlanden, *The Archaeology of the Clay Tobacco Pipe*, V, 111–468. Oxford (=BAR Int Ser, 106(ii)).

- Duco, D H 1982 *Merken van Goudse pijpenmakers*. Lochem.
- Duco, D H 1987 *De Nederlandse Kleipijp*. Leiden.
- Edwards, L 1988 'Seventeenth- and Eighteenth-Century Tyneside Tobacco Pipe Makers and Tobacconists', in Davey, P (ed) *The Archaeology of the Clay Tobacco Pipe XI*. Oxford (= *BAR Brit Ser*, 192).
- Gallagher, D B 1984 'Scottish Three-Letter Basal Stamps', *Soc Clay Pipe Research, Newsletter*, 3 (July 1984), 9–11.
- Gallagher 1987a 'Stirling Castle', in Davey 1987a, 325–35.
- Gallagher 1987b 'Linlithgow Friary', in Davey 1987a, 299–305.
- Gallagher D B 1987c 'Early Pipemaking in Stirling', in Davey 1987a, 165–6.
- Gallagher D B 1987d 'Tobacco Pipemaking in Glasgow, 1667–1967', in Davey 1987a, 35–109.
- Gallagher D B 1987e 'Kelso', in Davey 1987a, 279–91.
- Gallagher, D B 1987f 'Linlithgow', in Davey 1987a, 299–305.
- Gallagher, D B 1987, 'Edinburgh pipemakers in the seventeenth century: the documentary evidence', in Davey 1987a, 3–13.
- Gallagher, D B forthcoming a 'The Clay Pipes', in Ewart, G, 'Excavations in Stirling Castle 1992–93'.
- Gallagher, D B forthcoming b 'The Clay Pipes', in *Excavations at Cramond*.
- Gallagher, D B & Sharp, A 1986 *Pypis of Tabaca: Edinburgh Tobacco Pipemakers and their Pipes*. Edinburgh.
- Harrison, J G 1990 'Some Early Gravestones in the Holy Rude Kirkyard, Stirling', *Forth Naturalist and Historian*, 13 (1990), 79–96.
- Harrison, J G 1991 *Stirling Burgess List 1600–1699*. Central Scotland Family Hist Soc, Monograph No 1.
- Horton, M C, Higgins, D A, & Oswald, A 1987 'Clay Pipes from the Scottish Darien Colony (1698–1700)', in Davey 1987a, 239–52.
- Laing L R 1967 'Excavations at Linlithgow Palace, West Lothian, 1966–7', *Proc Soc Antiq Scot*, 99 (1967–7), 111–47.
- Martin, C J M 1987a 'A Group of Pipes from Mid Shore, Pittenweem, Fife', in Davey 1987a, 183–209 .
- Martin, C J M 1987b 'Balgonie Castle', in Davey 1987a, 263–7.
- Sharp A 1982 'The clay tobacco pipes', in 'Lesmahagow Priory: excavations 1978', *Glasgow Archaeol J*, 9 (1982), fiche M99.
- Sharp A 1987 'Lesmahagow', in Davey 1987a, 294–8.
- Renwick, R (ed) 1887 *Extracts from the Records of the Royal Burgh of Stirling, I, 1519–1666*. Glasgow. RMS Royal Museum of Scotland
RPC Register of the Privy Council of Scotland.

Manuscript sources

Central Region Archives (CRA)

Scottish Record Office (SRO)

- CRA Cowane's Hospital Accounts, SB5/3/2 discharge 1681–1682.
- CRA Stirling Burgh Council Minutes B66/20/6, 19 July 1699.
- CRA Stirling Burgh Court Book B66/16/27, 15 March 1720, Lorne v. Keir.
- CRA Stirling Burgh Register of Deeds B66/9/10 f.34, Band by James Paterson, merchant, in favour of John Paterson, pipemaker and Elizabeth Murray his spouse.
- CRA Stirling Burgh Register of Deeds B66/9/10 f.244–5, Contract between Dame Lillias Forrester and Robert Ferguson, pipemaker in Stirling.
- CRA Stirling Burgh Treasurer's Accounts, B66/23/1.
- CRA Stirling Guildry Minutes, PD6/1/3. 4 April 1660, case against John Burd *et al*.
- CRA Stirling Guildry Minutes, PD6/1/4, 222, 244.
- SRO Stirling Burgh Treasurer's Accounts 1660–1682, E82/55/5, discharge 1660–1, fol 6r.
- SRO Testaments

Testament of John Ferguson, wright in Stirling, 2 June 1671. CC21/5/8, no 137.

Testament of Finlay Spittal, indweller in Stirling, 13 Sept 1679. CC21/5/9, no 296.

Testament of Annaple Anderson, relict of Finlay Spittal, pipemaker in Stirling, 24 Dec 1684.
CC21/5/10, no 190.

Testament of William Gilfillan, weaver in Stirling, 20 Jan 1693. CC21/5/11, f.1.

Testament of John Paterson, sometime in Glenhead of Sauchie and thereafter indweller in Stirling,
25 Feb 1708. CC21/6/4/26