Lead seal matrices of the 16th and early 17th century
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ABSTRACT
In the 16th and early 17th century many Scots used lead seal matrices with simple heraldic designs. This note describes seven which have survived, and presents analytical information which suggests that their makers often mixed tin with the lead to make it harder.

INTRODUCTION
This note draws attention to a small group of Scottish 16th- and early 17th-century lead seal matrices with simple heraldic designs. It is thought that they are typical of those used by many Scots of the period. None of them can be dated exactly but they are listed here in what the writer thinks is a likely chronological order, using such clues as are provided by ownership and style.

THE MATRICES
1 Lead seal matrix with a shield bearing arms: a quatrefoil with an animal (sheep?) in chief. The inscription, in black letter, reads sig...m . ihon . h...l with trefoil stops. It has been defaced, apparently by being gripped in a pair of pincers. This was done presumably on the death of its owner, or when he acquired a new seal, to render it unusable. On the back there is a tang with slight indentations round its base where a handle has pressed down on it, and corresponding to the top of the seal face are engraved three crosses to act as a guide when in use. Diam 35 mm (illus 1).

It was found in 1992 near Coupar Angus Abbey (NGR NO 224397) and on being declared Treasure Trove was given to Perth Museum. It is possibly the seal of John Hammill, a canon of Dunkeld and steward of Coupar Angus Abbey. He appears in the latter post in 1555 (Easson 1947, 205). The matrix was evidently cast complete with a blank shield and bands to contain the inscription. Punches were then used for the letters, stops and main motif on the shield. The animal had to be engraved, most crudely. It may date to the 1550s.

The seal of Colonel David Boyd of Tourgil (Stevenson & Wood 1940, ii, 258, no 513; National Museums of Scotland unregistered cast) has similar trefoil stops and an inscription of punched letters, in this case of roman capitals (illus 2). It is only known, however, from a document of 1599 and cannot be much earlier than that since Boyd only acquired his rank and land sometime between 1582 and 1593 (RMS 1580–93, no 416; RPC v, 592).

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Lead seal matrix with a saltire couped, the initials \textit{tm} in flanks, and a boar's head in base (Stevenson & Wood 1940, iii, 500, no. 11). The inscription, in black letter, reads: \textit{+ s thome meirnis} with sprigs of foliage between the words. Diam 30 mm (illus 3). The back of the seal has a stalk-like handle rising from a six-petalled flower. It is badly corroded and part of its rim is now detached. The impression in illustration 3 was apparently made soon after its discovery in 1911 in the graveyard of Inverurie Parish Church. It is in the collections of the National Museums of Scotland (NM 158).

It has not been possible to identify Thomas Mearns, the owner of this seal, but there was a family called Mearns in Inverurie at least from the late 15th century (Davidson 1878, 119, 228, 364, 397). The seal seems likely to date to the middle of the 16th century. It is a competently designed piece, the lettering and main design being engraved. The absence of a shield for the heraldic charge is unusual and may indicate, perhaps, that Mearns was unsure of his right to bear arms.

Lead seal matrix with a shield, surrounded by sprigs of foliage, bearing arms: a saltire, between a star in chief and a crescent in base, and crosslets in the side spaces. The inscription, in roman capitals, reads: \textit{S. IOHANNES. BURGH}. The stops consist of sprigs of foliage and the Ns are reversed. Diam 33 mm (illus 4).

This matrix is in the collection of the British Museum (Tonnochy 1952, no 327). There
are impressions of it on documents of 1571 and 1572 (Stevenson & Wood 1940, ii, 266, no 636) indicating that its owner was John Burgh, portioner of Wester Craigtoun, Perthshire. The lettering and decoration on the front is all engraved. The design on the back is cast in the form of an eight-petalled flower with a stalk rising in the centre as a handle. A casting seam is visible across its diameter and over the stalk. It has an engraved cross to mark the top.

4 Lead seal matrix with a shield, surrounded by sprigs of foliage, bearing arms: on a saltire engrailed a gemmed ring at fess point. The inscription, in roman capitals, reads S. M. IACOBI . MAXVEL . VIC . DE . STRA . Diam 35 mm (illus 5). The back is cast as an eight-petalled flower with central stalk handle, as on no 3. Indeed, it even has the same wear marks on the stem, derived from a common original. The stem is now bent and broken. The design and lettering on the seal face are engraved. It is in the collections of the National Museums of Scotland (NM 109), having been found last century in Orkney. Its owner would appear to have been Master James Maxwell, Vicar of Stronsay, Orkney, from 1541 to 1574 (Haws 1972, 230).

5 Lead seal matrix with a shield bearing arms: three cinquefoils. The shield is surrounded by flowers (roses, cinquefoils) linked by lightly engraved foliage. The inscription, in roman capitals, reads M IACOBI HAMILTOVN . Diam 36 mm. There is a piece missing at the top (illus 6). The back is in the form of a flower, as with the two previous seals. It derives ultimately from the same pattern but the model actually used to make its mould had acquired
a flatter and more worn appearance, perhaps as a result of use. It also has cast in it a date and a maker’s mark. The former is rather worn but may be 1601. The latter is a conjoined DM. It also has an engraved cross to mark the top of the seal face.

It is in the collections of the National Museums of Scotland (NM 112), having been found in Linlithgow. A note in volume 18 of these Proceedings (1884, 17) identifies the owner as James Hamilton, MA, admitted minister of Bo’ness in 1677, died 1685. It is unlikely that the seal would date to this period as their use by private individuals was
uncommon, if not unknown, after the early 17th century. This is attributable to an Act of Parliament of 1584 (*Acts Parl Scot*, iii, 353) under which sealing was no longer required of deeds capable of being registered, ie almost every type of legal document. James Hamilton is a very common name at the end of the 16th and the beginning of the 17th century and there are a number of more likely owners. Given its provenance a good candidate would appear to be Master James Hamilton, son of a Linlithgow burgess of that name, who was summoned by the Privy Council in 1601 to answer a charge of provocation to assault (*RPC* vi, 264). The maker's mark may be for David Mylne, an Edinburgh goldsmith admitted in 1573 (Jackson 1964, 511). The mark is not known on any surviving silver but it is similar in character to those of other contemporary Edinburgh goldsmiths. However, since it was the matrix which served to model the mould for Master James's seal that was actually stamped DM and not Master James's seal itself, it follows that both seals may have been made by different craftsmen.

The shield on the seal face is defined by a bevelled edge which was cast into the matrix. The lettering, cinquefoils and flowers were added by means of punches. Just apparent at the centre of the shield is a prick mark left by the compasses employed in marking out the design. Other seals with a similar design, using the same or similar punches, include the seal of Andrew Veitch, portioner in Stewarton (*illus 7*), on documents of 1605 (Stevenson & Wood 1940, iii, 637, no 14; National Museums of Scotland detached seal, H.1992.95); the seal of James Hamilton of Liberton (*illus 8*) on a document of 1598 (Stevenson & Wood 1940, ii, 397, no 8; NMS unregistered cast); and the seal of Sir Archibald Stirling of Keir,
recorded in 1607, which has thistles as well as roses (Stevenson & Wood 1940, iii, 622, no 9; Fraser 1858, 557, fig 13). All of these would appear to be from the same workshop.

6 Incomplete lead seal matrix with a shield bearing arms: two mullets in chief and a crescent in base with a cinquefoil for difference. The shield is flanked by sprigs of foliage. The inscription in black letter reads ...hanis (sprigs of foliage) .... The designs and letters are all engraved. Diam 33 mm (illus 9). The back is in the form of an eight-petalled flower as on the previous seals, but its petals are narrower and more pointed. A letter G (?) is cast into the design at one edge, presumably part of a maker's mark. The stem handle is broken off.

This seal was found at Soutra, Midlothian, on the site of the medieval hospital (NGR NT 453584), and is presently in private hands. Despite its fragmentary state it is possible to suggest an owner for it. The spacing of the surviving lettering and foliage in the inscription indicates that he had a short surname and no territorial designation. This, coupled with the heraldry, makes it almost certain that we are dealing with someone called John Scott, closely related to the Scotts of Harden. A likely candidate is John Scott, younger brother of George Scott of Synton, Selkirkshire (Paul 1910, 72; RMS 1609–20, nos 193, 1909). He seems to have succeeded his brother in the lands of Synton after 1608. The seal, if his, may therefore date prior to that.

7 Lead seal matrix with a shield, surrounded by sprigs of foliage, bearing arms: a chevron with a mullet at fess point, between two cross crosslets in chief and a boar's head (?) couped
in base. The inscription, in roman capitals, reads S. ALEXANDER. KENNEDE with sprigs of foliage as stops. Diam 32 mm (illus 10). All the decoration on the front is incised. The back is cast with a series of radiating ribs, gathered in the centre into a stalk rising into a three-lobed terminal. This is a very crude copy of the flower designs on matrices 2–6. It has a prominent casting seam and an incised cross to mark the top of the design. This seal was found in 1989 at Balchriston in Ayrshire and is now in the collections of the National Museums of Scotland (H.1991.56). There is nothing known of the Alexander Kennedy who owned it.

DISCUSSION

The above seven seal matrices belong with a large group of seals of the lesser nobility, lairds, minor clergy and burgesses, all of late medieval date and all with certain characteristics in common. They have simple heraldic designs with a round-bottomed or broad-pointed shield surrounded by a Latin inscription giving the name and, where appropriate, the lands of the owner. They have circular faces with a diameter of about 32–40 mm. It is difficult to give a precise date when such seals started to become popular but an examination of Stevenson & Wood’s monumental survey of Scottish Heraldic Seals suggests that they were already in vogue by the second decade of the 16th century. There are, of course, several heraldic seals of earlier date with simple heraldic designs but they tend to be rather smaller in size and their shields have a narrow-pointed base. Good examples are the three seals of Patrick Nisbet, Adam Forman and John Paxton, attached to a document of 1426 (MacDonald 1904, pl IV). They are 22–25 mm in diameter.

The lettering on 16th-century seals is either black letter (lower case) or roman capitals. The use of the latter appears to have been prevalent from the 1540s onwards, but black letter also occurs on many seals which were in use in the later part of the century. There is an almost complete lack of information on who was making seals in the 16th century. It seems likely, however, that many would have been made by goldsmiths, whether they were in silver, bronze or lead. Certainly, it was to a prominent Edinburgh goldsmith, Adam Leys, that Cardinal Beaton turned for his round seal in 1539 (Hannay 1913, 93) and, as noted above, the Edinburgh goldsmith David Mylne may have also have been making seals.

Although only a small group of lead matrices have survived, it seems likely that many more were of this metal. It was cheap and readily worked. A business specializing in the sale of matrices could have kept a supply of blanks, ready to be engraved or punched to a customer’s specifications. The use of lead for seal matrices at this time does not appear to have been prevalent elsewhere, in England or Europe, and matrices in the form of a flower seem to be a Scottish design. There are also some Scottish lead matrices of earlier date, including the 13th-century seal matrix of the burgh of Arbroath (Caldwell 1982, 48–9), a 13th/14th-century personal seal, probably of one of the MacDonals of Islay, found recently beside Dunstaffnage Castle in Argyll, and the seal matrix of Princess Margaret of Scotland, wife of Archibald, 4th Earl of Douglas, found at Threave Castle, but probably a forgery of about 1400 (Caldwell 1981). All three are in the National Museums of Scotland.

All seven matrices have been subjected to X-ray fluorescence analysis on behalf of the writer to establish whether they were wholly of lead or a lead alloy. Seal no 3 was analysed by the British Museum Department of Scientific Research (Cowell unpublished), the other six by the National Museums of Scotland Analytical Research Section (Wilthew unpublished). Cowell notes that seal no 3 has about 8% tin. Seals 1, 4 and 7 have respectively 9.7%, 6.7%
and 2.6% tin. Wilthew was unable to obtain a metal surface on seal no 6 without doing it unacceptable damage but was still able to estimate that it contained high levels of tin, probably at least as much as no 1. Only seal no 5 contained practically no tin at all – a trace at 0.3%. Seal no 2, however, may have contained 50% or more of tin, giving it the composition of pewter. Unfortunately, Wilthew was unable to do a reliable quantitative analysis on it owing to heavy corrosion. It seems evident that tin was deliberately added to the metal of all these matrices with the exception of no 5. It would have taken a considerable amount of pressure to make a good impression in wax with these matrices and the tin would have been some help in producing a harder alloy, more resistant to buckling or cracking.

ACKNOWLEDGEMENTS

Thanks are due to Michael King of Perth Museum, John Cherry of the British Museum, and John Lennon for allowing access to their seals; also to Paul Wilthew and Michael Cowell for analytical reports.

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