

OBITUARY

MRS. J.E.L. MURRAY

WITH the death in September 1996 of Joan, widow of Lieutenant-Colonel J.K.R. Murray, in her eightieth year, the Society has lost one of its most distinguished members, and the only recipient of the Sanford Saltus medal ever to have attained this honour entirely on account of contributions to Scottish numismatics. The list of her published work is not a very long one, but her detailed analysis of the coins of Robert II and of the five Jameses, coupled with extensive study of the documentary sources, brought about major advances in our understanding of Scottish coinage and currency from the late fourteenth to the early sixteenth century.

Joan Elisabeth Lowther Clarke was the younger daughter, and the youngest of the five children, of the Revd. W.K.L. Clarke. She was born on 24 June 1917, St. John the Baptist's day, whence the names Joan and Elisabeth (the latter being the spelling of John's mother's name in the Authorized Version). She came of a clerical and scholarly family, her father, both grandfathers and two great-grandfathers having been in holy orders, and her father and one of her grandfathers also at one time fellows of Cambridge colleges. From Dulwich High School for Girls she won a scholarship to Newnham College, Cambridge, where she graduated as a wrangler. Like a number of other talented mathematicians of her vintage she was in 1940 recruited (by her former Cambridge supervisor) to Bletchley Park where she was engaged through the war in highly secret work of crypto-analysis. The vital part played by those at Bletchley in countering the U-boat threat has only become a matter of public knowledge in recent years. Joan herself, a distinguished member of the small group of key players, contributed a (typically modest) chapter on Hut 8 to *Code Breakers*, a collection of essays by former members of the team, edited by Sir Harry Hinsley and Alan Stripp, which was published in 1994. Her assistance was also acknowledged by Mr. Robert Harris in his novel *Enigma*, based on events at Bletchley in 1943, which was being broadcast as a serial by the BBC in early September 1996, at the time of her death.

The outstanding figure at Bletchley had been Alan Turing, one of the century's greatest mathematicians and responsible for achieving the key breakthrough in cracking the German U-boat code. On 10 March 1992 Joan appeared on television in a Horizon programme about Turing; and in Hugh Whitmore's play *Breaking the Code* she is thinly disguised as Pat Green. Joan and Alan worked closely together, and in 1941 they became engaged. It was a great sadness to her when he had to tell her that their engagement could not proceed on account of his homosexuality. She was later to explain that it was because she had known someone as brilliant as Alan Turing, she felt unable to return to mathematical research after the war. We now know that, although she was only in her twenties during the war, Joan's work at Bletchley made a material contribution to the eventual success of the Allies, and if the MBE that she was awarded for it seems now scarcely proportionate to what she had achieved, it must be remembered that there were limitations on the public recognition of those whose work was so secret.

After the war Joan moved to the Government Communications Head Quarters, where she met Jock Murray, lately retired from the Army and a specialist in military intelligence. They were married on 26 July 1952 in Chichester Cathedral, where her father was then residentiary canon; but Jock's health was poor, and in the same year he was forced to retire, moving with Joan to the ancient port of Crail in Fife, where they increasingly occupied themselves in historical research on the burgh records. By 1962 Jock was sufficiently recovered to return to

work, and they accordingly moved to the village of Uckington, on the outskirts of Cheltenham. For Jock this was something of a homecoming, since he had been born in Cheltenham, where his maternal grandmother lived, while his father, an engineer, was working in Egypt. Jock remained at GCHQ until he retired in 1971, and Joan continued to work there until well into her sixties.

With Scottish blood (he came of the family of Murray of Mastrick, in Aberdeenshire) and an interest in the sixteenth and seventeenth centuries gained from working on the Crail archives, it was a natural development for Jock, who had been interested in coins and medals from his army days, to turn his attention to Scottish coins. His first acquisitions were made in 1964 and Joan, who had an appetite for research and quickly developed an equal commitment to the subject, began to collect in the following year. Jock's greatest interest, both as a collector and as a student, lay in the post-medieval period, while Joan concentrated on the fifteenth century where she soon mastered the existing literature and began to make important observations of her own. In 1965 she sent me the outline of a long paper in which she argued for some rearrangement of the types of heavy groat of James III and IV, and for a more fundamental reclassification of the contemporary gold unicorns. She responded enthusiastically to the suggestion that she should join the British Numismatic Society, while Jock became a fellow of the Royal. From that time onwards Jock and Joan Murray and I were continuously in touch on Scottish numismatics for twenty years, sometimes collaborating in print, always reviewing each other's work before publication. With Jock focussing on the later period, from Mary onwards, Joan on the Jameses, and myself on the earlier centuries, we developed an informal division of labour to cover the whole series. Unfortunately, neither Jock nor Joan found it easy to prepare their work for publication, and each of them has left a considerable body of unpublished material which it would be desirable to complete. What they did publish, however, was of very high quality, and in Joan's case it benefited not only from acute observation of detail but also from the insight of a penetrating mathematical mind trained to decipher obscurities of meaning.

Joan's first published papers (1967 and 1970) were of joint work which we had undertaken on the earlier coinages of James III, but soon afterwards she completed her study of the heavy groats and unicorns of James III and IV, and this appeared as a magisterial paper in the *Journal* for 1971. In addition to an innovative use of specific gravities (by which she demonstrated an unexpected deterioration in the fineness of the gold unicorns of James IV), this article includes an analysis of the portrait groats of James III which in part is based on some curious misspellings in the reverse inscription, where the crypto-analyst observed significant letter patterns that had escaped the notice of earlier students.

In the 1970s Joan Murray was particularly productive. Jock's health was still reasonable, and they were both collecting actively, participating in numismatic meetings and gatherings, and working on a range of topics. Three of Joan's papers read to the Society at this period remain unpublished, on James V (1971), on the early sixteenth-century hoard from Mauchline (1972) and on the Scottish Reformation (1976). The last of these did, however, provide material for an important paper (1980), written jointly with Jock, on Mary's testoons of 1560-1, and this later period, where her interests overlapped with his, also yielded an article on the gold coinage of 1543 (1979), and, as something of an afterthought, a contribution on the possible coinage of the Marian faction during the minority of James VI (1987-9). Sometimes a new addition to her collection would stimulate a fresh line of enquiry, as when the purchase of a coin of David I with a new moneyer's name led her to explore an earlier period, and to add St. Andrews to the canon of twelfth-century Scottish mints (1983).

Increasingly Joan Murray became interested in broader questions about mints, coinage and currency, searching historical sources for relevant information. These researches led to a remarkable paper on the work of the Scottish mint from David II to James VI (1977), and two subsidiary items on the location of the Edinburgh mint (1991) and a mint tender of 1538

(1988). All of these display a thorough familiarity with the records – the first of them includes more than a hundred references to Acts of Parliament and Privy Council, Exchequer Rolls, the Registers of the Great and Privy Seals, the Treasurer's Accounts and other official records. One of the topics where historical and numismatic evidence gave ambiguous signals was the base coinages of the reign of James III, which she made the subject of two important studies. In one (1980), by combining metallurgical analysis, documentary evidence and numismatic detail she was able to demonstrate that the 'alloyed groat' described in the Act of Parliament of 6 May 1471 was not the debased portrait groat of James III but the new billon plack, a discovery which has important implications for the chronology and interpretation of the coinage of the period. In another (1977) she argued for an identification of the *Crux Pellit* copper pennies (attributed by R.B.K. Stevenson to Bishop Kennedy of St. Andrews) with the black money that was one of the stated causes of the king's unpopularity in 1482. She continued to work on this series in later years, collaborating with Madame van Nerom in an article on some continental finds (1983), and becoming increasingly convinced that the *Crux Pellit* coins had been issued by James III.

Jock Murray died in November 1986. Joan had by then herself retired, and much of her time in his last few years had been taken in looking after him. She did, however, continue to do a considerable amount of technical numismatic work at this time, and in subsequent years. In a joint paper (1982) on the fifteenth-century Innerwick hoard she included a die-analysis of the later light groats of James III, and a paper on three late fourteenth-century hoards (1978) led her to undertake a detailed study of the coins of Robert II. We also worked together on the fleur-de-lis groats of James I–II, on which we had planned to produce a more detailed classification in due course. For these purposes she borrowed the relevant parts of my collection for many years, and among her papers are substantial blocks of work, some at least of which ought eventually to be capable of conversion into publishable form.

Mrs. Murray remained at Uckington for five years after her husband's death, but in 1991 she moved to Headington, not far from one of her Clarke cousins. Another reason for moving was to be within reach of the Ashmolean Museum and the Bodleian Library in Oxford. Also, while still at Uckington, she had developed a condition which restricted the use of her right arm and shoulder, and a smaller house with a minuscule garden could reduce the effort of maintaining a household as she got older. For long periods she was in considerable pain, and the increasing difficulty of writing was the main reason why she was not able to bring much of her later work to a conclusion.

In March 1994, although by now very frail, she read her last paper to the Society, a nearly finished account of the coinage of Robert II. This is one of the most difficult parts of the Scottish series since the coinage is superficially uniform, and successive phases can for the most part only be distinguished by slight differences in lettering. But we had spent much time studying the material together and I hope in due course to be able to complete the work. The last item in her bibliography is a review of a book on medieval Scottish prices, a subject which she had studied intensively for many years and used to good effect from time to time in discussing changes in the weight or fineness of Scottish coins. Mr. Nicholas Mayhew, author of the long chapter on 'Currency' in this book, has told me that a draft of it was seen and checked in detail by Mrs. Murray, and incorporates her latest thinking.

In 1978, when discussing the Drumnadrochit hoard, she had remarked that she was 'not entirely convinced by the arguments in favour of an earlier date than 1393 for the introduction of the light front-face groats' of Robert III; but further work on the coinage of this period strengthened her view that the change from the (heavier) profile groats of Robert II to the lighter front-face groats took place in 1393 and not in 1390 as Burns had argued. In her 1995 review she refers in passing to the 'drastic 1393 reduction in the weight of the Scottish groat', and this reflects the contents of a note which she had attached to the text of her unpublished paper on Robert II. In view of the importance of her arguments it seems worth placing them

on record without delay, and I have accordingly included them hereafter in an appendix (with the minimum of editing necessary to enable the note to stand alone).

Joan Murray was a very private lady, whose natural reticence was enhanced by the self-discipline of extreme secrecy in her early adult years. She was a gentle and kindly person, regarded with affection by fellow members of her local church, but without the openness of manner that makes for easy acquaintance. She lived on an intellectual plane, and her careful choice of words added to a natural hesitancy of speech. Except when warming to a specialist theme – a new die-link perhaps, or a broken letter punch – she did not find conversation easy. On the telephone there would often be long silences, but a few days later a letter would arrive, lucid, warmly expressed and full of incisive comment. She would take immense pains to respond to correspondents (including eminent historians as well as numismatists) who sought her advice. We are indeed fortunate that someone of her formidable powers should have turned her attention to medieval numismatics, and to such remarkable effect.

LORD STEWARTBY

Note: For an obituary notice of J.K.R. Murray see *BNJ* 56 (1986), 202–4. Shorter notices (with photographs) have appeared in *NCirc* Feb. 1987, 7 (JKRM) and Nov. 1996, 405–6 (JELM). I am indebted to members of

their families for various items of information included above. Joan's relationship with Turing is described in A. Hodges, *Alan Turing: The Enigma* (New York, 1983), pp. 206–17.

NUMISMATIC PUBLICATIONS AND PAPERS OF J.E.L. MURRAY

- 1967 'Unpublished Scottish Coins IV. Early James III' (with B.H.I.H. Stewart), *NC* 1967, 147–61.
- 1968 Review of *The Scottish Coinage, with supplement* (with comments on the revaluation of silver coins of Charles II in 1681), *BNJ* XXXVII (1968), 201–2.
- 1969 'Hoards in Scotland under James IV', *NCirc* June 1969, 199.
- 1970 'Unpublished Scottish Coins V. Light Groats and Base Groats of James III' (with B.H.I.H. Stewart), *NC* 1970, 163–86.
- 1971 'The Coinage of James V of Scotland', unpublished, read to British Numismatic Society, 26 January 1971.
- 'The Early Unicorns and the Heavy Groats of James III and IV', *BNJ* XL (1971), 62–96.
- 1972 'The Mauchline (Ayrshire) Hoard', unpublished, read to British Numismatic Society, 25 January 1972.
- 1976 'The Scottish Reformation and the Coinage', unpublished, read to British Numismatic Society, 28 September 1976.
- 1977 'The Black Money of James III', *Coinage in Medieval Scotland (1100–1600)*, edited by D.M. Metcalf (BAR 45), pp. 115–30.
- 'The Organisation and Work of the Scottish Mint, 1358–1603, *ibid.*, pp. 155–70.
- 1978 'Elvet Moor, Lumphanan and Drumnadrochit Finds of Late Fourteenth-Century Scottish Coins', *BNJ* XLVIII (1978), 73–9.
- 1979 'The First Gold Coinage of Mary Queen of Scots', *BNJ* XLIX (1979), 82–6.
- 1980 'Some Placks and Base Groats of James III of Scotland' (with M.R. Cowell), *Metallurgy in Numismatics* I, edited by D.M. Metcalf and W.A. Oddy, pp. 180–3.
- 'Notes on the Vicit Leo Testoons of Mary Queen of Scots' (with J.K.R. Murray), *BNJ* L (1980), 81–90.
- 1982 'Innerwick Hoard 1979' (with D.H. Caldwell and M. Delmé-Radcliffe), *BNJ* 52 (1982), 132–50.
- Review of *The Scottish Antiquarian Tradition*, edited by A.S. Bell, Edinburgh 1981, *BNJ* 52 (1982), 260.
- 1983 'St. Andrews Mint under David I' (with I. Stewart), *BNJ* 53 (1983), 178–80.
- 'Monnaies 'au Globe et à la Croix' Appartenant à des Collections Belges' (with C. van Nerom de Bue), *RBN* 129 (1983), 91–118.
- Letter about Darien gold, *NCirc* XC, Feb. 1983, 11.
- 1987 'The Coinage of the Marians in Edinburgh Castle in 1572', *BNJ* 57 (1987), 47–53; also 'Addendum' to this (with D.J. Rampling), *BNJ* 59 (1989), 213.
- 1988 'A Tender for the Scottish Coinage in 1538', *Later Medieval Mints*, edited by N.J. Mayhew and P. Spufford (BAR Int. series 389, Oxford 1988), pp. 222–8.
- 1989 See 1987.
- 1991 'The Location of the Edinburgh Mint, 1358 to 1463 – and Linlithgow Mint', *BNJ* 61 (1991), 126–9.
- 1994 'The Coinage of Robert II', unpublished, read to British Numismatic Society, 22 March 1994.
- 1995 Review of E. Gemmill and N. Mayhew, *Changing Values in Medieval Scotland* (CUP, 1995), *BNJ* 65 (1995), 256–7.

APPENDIX: DATING THE END OF THE ROBERT PROFILE GROATS

Early in the 1390s the weight of the Scottish groat was reduced by about a quarter, and the reduction was marked by a change of type. A facing head, in the English manner, replaced the traditional Scottish profile portrait, with three pellets instead of a mullet in each angle of the reverse cross. The following are Mrs. Murray's comments on the dating of this change.

In June 1385 the Scottish Parliament ordered that the silver coinage should be made as before, authorising the use of foreign money as bullion, and also laid down currency values for various gold coins. In March 1389 the matter of the coinage was one of the Articles for Parliament to consider, probably because of difficulty in maintaining the standard, but there is no record of any decision on the subject. The first Scottish record of a change was the Act of Parliament on 24 October 1393. There was, however, an ordinance of the English Parliament, on 13 November 1390, that the Scottish groat should pass for twopence (instead of threepence), the halfgroat for one penny, and so on. This was taken by Edward Burns (*The Coinage of Scotland*, I, pp. 270–1) as evidence that the lightweight Robert III coinage was introduced before or shortly after Robert II's death, in April 1390, on the grounds that there was no other change to justify the reduced English valuation: Lord Stewartby accepted this (*The Scottish Coinage*, p. 36). The English action in 1390 can, however, be adequately explained without postulating a change in the Scottish standards. It followed a petition of 'the poor commons' that Scottish money 'might be utterly removed out of the realm', which would have been in accordance with the normal English policy of forbidding the circulation of foreign coin: although the response was not to ban the Scottish money, the effect of tariffing it well below the bullion value would be to drive it out of circulation. One may also note that the Scottish penny and halfpenny which were to pass for a halfpenny and farthing were presumably good silver ones, and not the Robert III ones of reduced fineness, 'semblable a la coigne d'Engleterre, et de fauxe allaie', complained of in 1406.

There is Scottish documentary evidence, less well known because not in Cochran-Patrick's *Records*, which confirms the 1393 date for the change. The simplest is in the Exchequer Rolls for the year to March 1394, valuing the noble at 9s. 6d. '*de moneta jam de novo fabricata*'. 'Newly made' might not necessarily refer to that year, but certainly the value of the noble, in accordance with that specified by Parliament in 1393, was new, being an increase of 14d. over that recorded in 1392 and 1393 (and 22d. over that ordained in 1385). Different evidence was used by William W. Scott in his article on 'Sterling and the Usual Money of Scotland, 1370–1415' (*Scottish Economic and Social History*, 5, 1985, 4–22). He states that 'the policy of the Scottish government' from the weight reduction in 1367 until 1393 'seems to have been to maintain in public' that the Scottish money was equal to the English. 'The Register of the Great Seal of Scotland and other records of grants made by the kings of Scots' show 'with almost complete consistency, a series of transactions where money is expressed as sterling . . . up to mid-October 1393.' In the two exceptions, the Crown was not a principal party. 'The Crown documents in and after 1394 set a new pattern . . . the vast majority is in [terms of] usual money of Scotland/of our kingdom'. (Similar phrases sometimes occurred earlier in non-Crown documents.) Thus the use of such terms was presumably decided after the 1393 statute, which meant that it was no longer possible to maintain that Scottish money was equivalent to English sterling money. If there had been an earlier statute, of which there is no record, ordering the lowered standards and repeated in 1393, the change of terminology in the Crown documents would surely have occurred earlier.