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NEWSLETTER

THE JOURNAL OF THE LONDON NUMISMATIC CLUB

HONORARY EDITOR

Peter A. Clayton

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EDITORIAL

The time to commence work on compiling the annual *Newsletter* seems to come round faster and faster each year – is it something to do with the aging of the Club, or merely its Editor, I wonder. Thankfully, for the Editor, the speakers at our meetings have with one accord been most helpful in providing a script of their talk, and also, much to the Editor's delight, both rapidly after their presentation and in an electronic format.

Club talks are obviously relying on the visual record in their ppresentation and to 'translate' that read and spoken text, often closely keyed to the graphics in the talk, is sometimes a problem. There is nothing more annoying than reading a text that is reliant on illustration and not having the illustrations present – this has always been a problem in publishing illustrations in the *Newsletter*. However, many of our contributors very kindly recast their text into a read without illustrations format, or allow the Editor to 're-jig' the text, and approve it so that a consecutive and intelligible text is presented.

Over the last year the Club has heard seven talks, all but one presented by Club members, which amply demonstrates the knowledge, keenness and commitment of the Club's members. We have heard talks on subjects ranging geographically from 17th century London to Afghanistan, and as diverse as European jettons found in Britain: London 17th century tokens: the mint of Thessalonica in Late Roman and Byzantine times: weighing coins: counterfeiting in Roman Britain: the chemical dimensions of numismatics, and oriental coins of Persia and Afghanistan.

This year saw the 60th Anniversary of the British Association of Numismatic Societies (BANS) held in the splendid surroundings of Royal

Greenwich, and hosted jointly by the Royal and the British Numismatic Societies. A fine souvenir programme was produced and, in the style of many Late Roman coin reverse types, the Club can only wish the BANS VOT LX MVLT LXXV. The Club has been a stalwart supporter of the BANS over all those 60 years, and has had the honour of one of its long time members serving first as the Secretary and subsequently President of the BANS. In the Congress proceedings, amongst a plethora of well-known numismatists, the Club was honoured that two of its members were invited to present talks. Anthony Gilbert has provided an account of the Congress in the pages below.

Yet another year sees the sad inclusion of Obituaries, of Robert Seaman, who for many years served the Club well as its Honorary Treasurer, and of George Berry. Although not an actual member of the Club George had supported the Club over the years with numerous interesting talks. He was a well known researcher on 17th century tokens and known to virtually every Club member. Many will miss their passing.

Peter A. Clayton, Honorary Editor

London Numismatic Club Meeting, 5 February 2013

Robert Thompson, a long time member of the Club and especially widely known for his work on 17th century tokens, and his joint authorship with Michael Dickinson of the volumes of the Norweb Collection of 17th Century Tokens, spoke on 'An Overview of 17th Century Tokens'. He said that it was rather more focussed on Hackney, the particular area in which he had worked for over three decades as a librarian.

'Completion of the catalogue of 17th century tokens in the Norweb Collection, Cleveland, Ohio, leaves me feeling duty-bound to survey what we have learned from the eight volumes published, all in the *Sylloge of Coins of the British Isles* series. As yet I cannot do more than present a contribution to the history of 17th century tokens, with examples taken from the London Borough of Hackney, which merged the Metropolitan boroughs of Hackney, Shoreditch, and Stoke Newington.

There are several reasons for this:

1. I worked in Hackney Libraries for 37 years, and so gained some familiarity with an area through which I walked, cycled, or drove to work.
2. In two of the reference libraries I organised the published literature on Hackney, and in the Pitfield Street library occasionally I dealt with local history enquiries in the absence of archivists Stanley Tongue and Brenda Hough.
3. I have put together a survey of what is known about 17th century tokens for *Hackney History*, published by the Friends of Hackney Archives, and vol.17 containing it.*

4. Finally, the number of 17th century tokens for Hackney is manageable, whereas collectors of those for the City of London, Tower Hamlets or Westminster have my sympathy.

William Robinson introduced his 1842-3 history of Hackney with high-flown language reminiscent of Dr Samuel Johnson: ‘The author has some gratification to reflect that he has not passed uselessly through the world... that his labour has preserved some ancient memoranda of Hackney as it was in the olden time’, and ‘In order to make the present account of Hackney as useful as he could... he has given some account of coins, tokens, &c’. As a document-based historian, however, he was puzzled:

‘The tradesmen of Hackney in the seventeenth century... had their Tokens; but it does not appear that there was any particular design in these tokens, other than perhaps to extend their connexions, or to encourage good feeling’.

It is clear that by ‘design’ he meant purpose, aim, or intention, and that he did not understand the tokens. My object here is to indicate what we do know about those tokens, and why historians of them must largely manage without documentary support.

Tradesmen in the 16th century used lead tokens to supply a need for small change which the Royal Mint had neglected. By the reign of James I (1603-25) these lead tokens had become essential for petty retail transactions, at least in London, but the King, describing them as ‘some derogation to our Prerogative Royal’, prohibited them, and granted a patent for the coinage of farthings in copper to John, Baron Harington of Exton. These royal farthing tokens continued under successive patent

holders until 1645, when the remaining stock was to be melted.

Some kind of small change, however, had become indispensable. Lead tokens continued, and tokens of a new kind appeared, issued mainly by private tradesmen. A dozen were dated 1648, which in modern reckoning probably means 1649 between 30 January, when Charles I was beheaded, and the end of the Old Style year on 24 March. I use the brutal word 'beheaded' because one or two of those 1648 tokens were issued at the King's Head in Tower Street, by the principal exit from the Tower of London where the main series of tokens was minted, so that the note by Browne Willis MP that 'This is the first ever coined', may well be correct. We can only guess at the thinking behind the choice of the King's Head as a sign by a vintner identified only by the initials P S**,** with wife's initial M**,** but it had been a dramatic event.

After the Restoration of the monarchy in 1660 there was much discussion of the need for small change, but nothing was done until 1672, when *A Proclamation for making current His Majesty's Farthings & Half-pence of Copper, and forbidding all others to be used,* acknowledged that several persons and corporations had presumed to cause 'certain pieces of Brass, Copper, and other Base Metals to be stamped with their private stamps; and then imposed those pieces upon Our poor Subjects for Pence, Half-pence, or Farthings'. Some embarrassment at this may be detected in the choice of Britannia for His Majesty's farthings and halfpence, as a reminder that the Romans had brass money.

Though 'Copper be Foreign, and Tin a Native Commodity', Sir William Petty FRS recognised copper as the best for base metal coinage, being the most durable and *inimitable* (the manuscript of William Petty's

Quantulumcunque concerning money, now in the British Library, has too few down strokes, but one too many for 'imitable' as usually printed). Some tokens are clearly of brass, and analyses have shown that even tokens appearing to be of copper are actually low-zinc brass. Occasionally, as for the Mayor of Oxford, and certain London tradesmen, pieces are denominated 'TOKEN', a term explained in 1644 as 'not the name of any lawful coin or money, but only a token, or an acknowledgment, that the party which pays it out, gives it only as a token... to be ready and willing at all times to take it again'. Nevertheless, money may be defined as what is commonly offered or received for the purchase or sale of goods, services or other things, so for the practical purposes of most people, tokens, *de facto*, were money, as Dr Christopher Challis has argued.

In 1665 (when plague was approaching) the master of the Cock ale-house at Temple Bar shut up his house, and advertised that 'all persons whatsoever, who have any Accounts with the said Master, or Farthings belonging to the said house, are desired to repair thither before the 8th of this instant July, and they shall receive satisfaction'. A willingness to redeem their tokens appears also in the promise by Lawrence Righton of Dorchester to re-take 'a Certain Brass Coin... at the same rate he now passeth them, being half pence'; in such legends as THIS FARTHING WIL BE OWN'D | IN TETBVRY (Gloucestershire); in the Winchester proclamation of 'brass Half-pence and Farthings [which] this City shall exchange... for current money of England'; and in the bond that Thomas Walters of Youghal in Ireland 'shall from time to time, as often as thereunto desired by any person or persons to exchange the said tokens or pence, and such his exchange to be sterling money'.

The problems caused by this privatised money may be illustrated from Lincoln in 1669:

'Whereas by the multiplicity of halfpennies and farthings of many several stamps, uttered, paid out, and spread abroad by several particular tradesmen and private persons within this city (for private profit and gain), the citizens and inhabitants... are at much loss and trouble by their receiving halfpence and farthings of so many several stamps that they cannot without much trouble distinguish the owners... nor sort them in such manner as to send them to the owners to change, and after all that pains and trouble many times cannot have them changed..., and sometimes the owners do absolutely refuse to change the same, and some persons that have put forth such farthings are since dead or removed far from this city....'.

Thus, tokens were issued across England, Wales, and Ireland, also on the Isle of Man where Tynwald in 1679 ordered that 'no copper or brass money... shall pass'. The number of places bearing similar names means that re-attributions continue to be made on the evidence of finds and the documentation of issuers, but there is a clear correlation of token-issuing with market towns, and therefore with a quickening trade and commerce.

Grocers and vintners were prominent among token-issuers, doubtless because they worked at a common interface between supplies of small coin ready for payment at short notice, and large numbers of manual labourers not otherwise provided with small change. Hence the tokens were associated by John Evelyn with 'every Tavern and Tippling-House (in the days of late Anarchy among us)'. Coffee-house keepers are also in evidence amongst token-issuers, one of whom advertised in 1658

the novelty of the drink called *Tcha* [tea]. There is, however, a great variety of retail trades represented.

Tokens of the period 1649-72, except for a small number from engraved dies, were struck with dies sunk from letter and pictorial punches. Use of such dies required more force than could be delivered manually, and surviving dies were designed for use in a screw press. This places their production in an established mint, which for England and Wales implicates the Tower of London. A prudent issuer like the City of Norwich, when ordering farthings in 1667 through its Member of Parliament, might request him to 'take care that the stamp of the said farthings be sent down'; but the small number of surviving dies suggests this option was exercised rarely, and that dies retained after an initial order were stored at the Tower of London. Any dies surviving there until 1851, when minting was nationalised, were doubtless destroyed like the moneyers' archive. Further research, once local records of issuing corporations have been exhausted, is likely to be archaeological. Occasionally records survive of exceptional arrangements, like what I have called the Subscribers of Shaftesbury, who seem to have been an *ad hoc* group of citizens without any corporate existence. There may be incidental references, as in the diary note by William Dugdale, Norroy King of Arms, that 'John Salmon, of Chester, maketh brass pence with Arms upon them (3 salmons) to disclaim him'.

Some issuers were indicted for setting out 'farthings & halfpence without any authority, to the great aggrievance of the Citizens', as so far found for Hereford and for Wiltshire. One charge was that the tokens were too light, e.g. Simon Rolfe, clothier of Salisbury, was indicted for striking halfpennies of which four were worth only one penny. Individual

weights vary greatly, even for die-duplicates, yet the City of Gloucester ordered farthings in 1669 which were to be ‘of the full weight of a Bristol farthing’. Apparently any specification would have been of a minimum weight.

The devices chosen by individual token-issuers often represented their trade by the arms of the relevant London livery company, and not of a local company (which sometimes differed only in the colours), e.g. John Collibeer in Exeter put on his token the arms of the Worshipful Company of Weavers of London, and not the arms of the Weavers and Fullers of Exeter. Many family arms seem to have been authentic, e.g. Gervis Maplisden of Maidstone, with the arms of Maplesden on his undated halfpenny, appeared at the 1663-8 Heraldic Visitation of Kent; and Gideon Hayne, merchant of Trim in Ireland, with a token bearing the full achievement of Hayne of Dorchester, had been recorded at the age of five in the 1623 Visitation of Dorset. On the other hand, Simon Rolfe in Salisbury put elaborately-mantled arms on his 1666 halfpenny, yet when his son Samuel, Merchant Taylor, appeared at the 1687 Visitation of London, the verdict was ‘No Arms produced, and no Pedigree to be found in any of the late Visitations of Wilts.’

From about 1667 circular tokens were varied with octagonal, heart-shaped, and square flans, with examples of all three in Hoxton, almost as though there was a Young British Artists group in the seventeenth century. These varying shapes are seen by Michael Dickinson as a ‘gimmick’ to shore up a manufacturing business past its peak, but another possibility is that increased activity by informers such as John Garill induced the moneyers to offer, and issuers to accept, a more obvious means to distinguish their tokens from coin of the realm. As yet I

can see no way to decide between these explanations.

Of several places called HOG LANE, one on the border of Finsbury and Shoreditch, of which part became Worship Street, was presumably the location of John BAVET with a rare surname and an undated token bearing his wife's initial A, for there is a Prerogative Court of Canterbury will of 1675 for John Bavitt, St Leonard Shoreditch, Weaver, wife Ann. The correction from a supposed HODSDON of John Clark's octagonal token reading HOGSDON [Hoxton] has been published separately. There is a lozenge-shaped piece naming *Andrew | Tucker | 1669*, obverse a sea-horse, of which one specimen was annotated 'Hoxton', meaning that it was found in Hoxton, but there is no trace of a person of that name resident there, whereas sea-horses occur in the arms of Tucker of Exeter. Sadly, the wartime destruction of the Devon Record Office prevents us from taking this further.'

Specimens from the London Borough of Hackney

Shoreditch: *Jane Shore*: WILLIAM GILLAM AT THE around two persons standing side by side holding hands, on the left Jane Shore, and on the right, disguised in cloak and hat, King Edward IV; rev. IEAN SHORE IN SHORDICH around HIS|HALFE|PENNY**.** Elizabeth Shore, called Jane, mistress of Edward IV, died 1526/7(?); administration for William Gillom 1670. I can exhibit a specimen which some irate publican or shopkeeper has nailed to his counter: 'This ain't good money', or similar one can imagine him saying. (W 2819)

[Bear] THOMAS GATELEY, 1664; wife A-; no more information has been found so far and it is exceedingly rare (illustrated opposite).

Hackney: *Mermaid tavern*: P[eppiatt], J[ohn] & M[ary]. John Peppiatt was apprenticed a Vintner in 1633; Mary was buried 1655, and John senior in 1669.

Newington Green: [*Salutation*]: IOHN BALL AT THE BOARDED | HOVSE NEERE NEWINGTON GREEN**,** obverse Two gentlemen saluting each other, rev. HIS | PENNY**.** Once I wondered whether this might be a boarding house, floor-boarded, even a bawdy house, but the late Stan Tongue, borough archivist, put me right: it must mean weather-boarded. The English Place-Name Society and others have associated Balls Pond Road with John Ball, but his estate was not administered until 1682, whereas a Thomas Ball was there in 1645, and in 1663 Ann Ball occupied a house with no fewer than sixteen hearths. The name seems to be earlier than John, and perhaps the physical survival of his token misled commentators.

Reference:

*Robert H. Thompson, 'Stamped with their private stamps: the tokens of the 17th century', *Hackney History*, 17 (2013), 3-9: with illustrations, and references. Published by The Friends of Hackney Archives, c/o Hackney Archives Department, Dalston CLR James Library and Archive, Dalston Square, London E8 3BQ. Price £4, plus p&p.

London Numismatic Club Meeting, 5 March 2013

This was the Club's 65th Annual General Meeting held, as usual, in the Lower Common Room of the Warburg Institute, starting at the earlier time of 6pm.

The President, John Roberts-Lewis, presented his annual address, beginning by mentioning especially the sad losses suffered during the year of our last Founder Member, Laurence Brown, LVO, Paul Edis the

Club's long time Treasurer, and David Sellwood, not a member but a well known and much respected friend of the Club. Obituaries of all three appeared in the previous issue of the Club's *Newsletter*. John then recalled the several lectures heard at the Club during the year, paying especial tribute to the Club's Programme Secretary, David Berry, in not only finding the speakers but also in maintaining the programme against all adversity when circumstances precluded the advertised speaker being able to be present.

John said how much he had enjoyed his tenure of office as the Club's President, but was now standing down. He paid tribute to the staunch support he had received from the Officers, the members of the Committee, and indeed of the members of the Club themselves.

The elected Club's Officers and Committee were:

President:	Anthony Gilbert	
Deputy President:	Anthony Portner	
Secretary:	Robert Hatch	Assistant Secretary Gerry Buddle
Treasurer:	Philip Mernick	Programme Secretary: David Berry
Newsletter Editor:	Peter Clayton	Webmaster: Harold Mernick

Committee: David Powell

Tony Holmes was re-elected as Honorary Auditor.

The AGM closed with a vote of thanks by David Dell to the out-going President and to the other Officers of the Club for their continued support and promotion of the Club in various ways. The traditional Cheese and Wine party followed.

London Numismatic Club Meeting, 9 April 2013

Anthony Portner, well known in the Club for his research on Byzantine numismatics and book reviews in the Club's *Newsletter*, spoke on the mint of Thessalonica in the Late Roman and Byzantine period.

The mint of Thessalonica was opened in AD 298/299 during the First Tetrarchy by the emperor Diocletian (284-305) and participated in most of the Roman issues during the fourth century, the types of which will be well known to the collectors of Roman coins. It was closed by the Byzantine emperor Heraclius in AD 629 as part of his reforms which finally did away with the system instituted by Diocletian. Thessalonica then remained dormant for many centuries, although attempts have been made to attribute copper coins to it from the ninth century onwards. The first coin which is attributed to it is a rare gold coin struck by Michael IV (1034-41), and even this is disputed. It is only towards the end of the eleventh century that the mint again springs to life and then issues coinage constantly until c. 1370,

As to the literature - for the Late Roman period *RIC* vol. X (Spink 1994) by John Kent, is all-embracing. There is also an important monograph on the mint in the fifth and sixth century: *Studies in Early Byzantine Gold Coinage* (ANS, New York 1988) by Michael Metcalf, although now somewhat outdated. Wolfgang Hahn's *Die Ostprägung des Römischen Reiches im 5.Jahrhundert* (Vienna 1989) is also very useful.

For the early Byzantine period reliance can largely be placed on the attributions in Hahn in *Money of the Incipient Byzantine Empire* (*MIBE)* vols 1-2, and *Moneta Imperii Byzantini (MIB* 3; Vienna 1981-2009). A monograph also by Michael Metcalf on the copper coinage of Thessalonica under Justinian I (Vienna 1976) is of great interest.

For the later period the Dumbarton Oaks catalogues volumes 4 and 5 (Washington 1999) are invaluable. The volumes by Simon Bendall and Peter Donald on *The Billon Trachea of Michael Palaeologus* (Baldwin 1974) and *The Later Palaeologan Coinage* (Baldwin 1979) though ground breaking at the time are now somewhat outdated. A recent book

by Eleni Lianta, *Late Byzantine Coins 1204-1453 in the Ashmolean Museum*, which largely consists of Simon Bendall's collection, is also of importance.

This talk, however, while it commences with the issues struck from the accession of Arcadius in 383. will have its main focus on those late Roman issues struck in the fifth century from the accession of Theodosius II (10 January 402 - 28 July 450) together with the mint's subsequent activity during the Byzantine period.

Up until the death of Arcadius in 408 the gold coinage did not have an explicit mintmark. The coinage can, however, be recognized by the mintmark being COMOB instead of CONOB, and by the absence of an officina letter. The style is rather crude as can be seen on solidi of Arcadius' western co-emperor Honorius (393-423). No silver is known to have been struck for this period. The only copper was struck before the proclamation of Honorius in 393.

With the commencement of the sole reign of Theodosius II (408-450) the mint mark is made more explicit and the style improves. There is also a large series of issues in gold with four main types of solidi. No fractional gold appears to have been struck in Thessalonica during the fifth century.

Silver coinage was issued between the reign of Theodosius II and Zeno. Much of it has only recently been recognized as such. The sole denomination was a light miliarensis. A coin from the reign of Theodosius II that was formerly given to Constantinople.

Copper was struck for Theodosius at the commencement of his reign and possibly subsequently, but confirmation is still required. Small coppers known as minimi were, however, struck during the reigns of Marcian (450-457), Leo I (457-474) and Zeno (474-491).

Marcian struck two solidus issues, both of which are rare.

Leo I, his successor, struck two types of solidus. The second issue is particularly interesting as showing that Thessalonica participated in celebrating Leo's consulship in either 462 and/or 466. The first issue comes in two varieties with one star in the right field, and with a star in both the left and right fields.

The usurper Basiliscus (9 January 475-August 476) was the last emperor to issue solidi with the distinctive Thessalonica mintmark.

Zeno issued one type of solidus which is now only differentiated from the Constantinople issues, apart from style, by the lack of an officina letter and the two stars in the reverse field - Constantinople issues only have one.

Thessalonica participated, as mentioned, during this period in the striking of small bronze minimi. These are so miserably struck in general that the mintmarks are often off-flan where they existed if at all. Examples of Leo I of Constantinople give an idea of the nadir of the currency at the time when compared to the magnificent bronzes of the early Empire.

The Byzantine coinage is often considered as starting with the reign of Anastasius I (491 to 518), and in particular his reform of the copper coinage in 498. Prior to this it is possible that Thessalonica continued striking minimi of the type which was struck in Constantinople. However, it has not been possible to ascertain for certain that this was the case, as no legible mintmark has been found. As the mint did not participate in the reform of the copper it may well have been closed for the minting of copper at the beginning of the reign or even in the previous reign.

The mint continued, however, to strike rare gold – the lack of an

officina letter together with the addition of a second star in the left reverse field continued to differentiate its issues from Constantinople.

Silver light miliarenses of great rarity also continued to be struck.

The copper reform introduced by Anastasius I provided for four main denomination: a follis or 40 nummi piece, a half follis or 20 nummi piece, a deka or 10 nummi piece, and a penta or 5 nummi piece. On occasion the value could be indicated by Latin numerals rather than letters.

The mint continued to strike somewhat rare gold limited to solidi during the reign of Anastasius' successor Justin I (518-527). There are no known silver coins from this reign.

A novelty, however, is the re-opening of a copper mint at Thessalonica.. Folles, half folles, dekas, pentas, 3 nummi, 2 nummi, 1½ nummi and one nummus pieces were all struck. Whilst some folles show particularly good style many of them and their fractions show a far more cruder style.

The joint reign of Justin and Justinian (4 April 527-1 August 527) produced a unique solidus but no copper.

Under Justinian I the mint produced a regular series of solidi. The first issue was of the old type continued from Justin I. Subsequently the more up-to-date Constantinopolitan design was adopted but without the cross on the angel's globe and without an officina letter. Fractional gold both semisses, the half solidus and tremisses, the third of a solidus, have now also been identified as being products of the mint.

The major innovation is in the copper coinage. A local system of values was introduced. It consisted of 16, 8, 4, 2 and 1 nummi pieces..

Justin II (565-578) continued striking gold at the mint. The obverse dies may on occasion have been sent from Constantinople. Some of the

specimens have a TS ligatured at the end of the legend. Semisses and tremisses are also known. The tremissis is without the metropolitan mint's customary star in the right field.

No silver is known to have been minted during the reign, nor were any folles struck; however, there was a large output of half folles, and dekas and pentas were also minted. The old weight standard prevalent under Justin's predecessor was abandoned.

There were two basic types for the half follis – first, a frontal portrait and then the usual enthroned couple. These were also copied elsewhere – possibly in the Balkans by what has been termed a military mint. They can be distinguished by style and occasionally the omission of the nimbus and also by the A having a straight bar.

Solidi and tremisses are known for Justin's successor Tiberius II (578-582), but no silver is known and the copper continues the enthroned type. The empress Anastasia appears but is not named; the type is unique to this mint. Dekas and pentas are also known.

Maurice Tiberius (582-602) struck rare solidi and tremisses. The tremisses are indictionally dated at the end of the reverse legend, which never occurs in Constantinople. No silver is known for the reign. Large quantities of half-folles were struck as before. The first issues again show an enthroned couple - this time the empress is Constantina, but again she is not named. Later issues show the normal facing bust. There are rare dekas and pentas.

A very rare follis was struck in the twentieth year of the reign. This was the first issue of the denomination at Thessalonica for more than 75 years.

Phocas (602-610) struck gold in all three denominations. There has, however, been much confusion as to which of these coins should be

attributed to the mint. A semissis with a bearded bust is unknown for Constantinople, and again there was no silver.

Once more the half follis was the main denomination. There are four types known. In addition some rather rare folles and even rarer dekas were minted. The mint will have been under the control of Phocas during the revolt of Heraclius (summer 608-5 - October 610) and therefore no revolt coinage was issued.

Prior to the closing of the mint by Heraclius very rare gold solidi were issued which are indictionally dated. No silver is known. Folles, half folles, dekas and pentas were issued until the mint closed in 629. Thessalonica then remained quiescent for many centuries.

A follis of the usurper Nicephorus Basiliacus (1078) may well have been minted in Thessalonica. However, it is during the reign of Alexius I (1081-1118) that the mint again becomes of great importance. This was undoubtedly due to Alexius using the town as his main military base during his campaigns of 1081-85 against the Normans.

It immediately commenced issuing virtually the entire range of pre-reform and debased denominations -'gold histamena' and 'gold tetartera', 'silver fractional milaresia' and copper folles more or less in tandem with the metropolitan mint.

These coins are ostensibly of gold, although some histomenon can be of electrum, with a variety of labarum, or of silver or billon with a patriarchal cross in place of the labarum. The saint is St Demetrius – the patron saint of the city.

The mint issued two tetartera. Again they are ostensibly gold but the first issue is silver and the second issue is billon.

In 1092 Alexius reformed the coinage which was in a deplorable condition. He struck gold hyperpera, electrum aspron trachea, and also

billon aspron trachea, and flat copper tetartera and half tetartera. Some barbarous copies may have been struck in a Greek mint or even by the Venetians in Greece more than a century later; barbarous half tetartera may have been struck in Cyprus as this is where specimens are usually found.

His son John (1118-43) struck four types of hyperpera and also an electrum aspron trachy, a billon aspron trachy, a copper tetarteron and two types of half tetartera.

Manuel I (1143-80) struck a rare hyperperon and possibly three types of electrum trachy. Copper tetartera and half tetartera were also issued. Andronicus I (1183-85) only appears to have struck copper tetartera - as does his successor Isaac II (1185-95)

Alexius III (1195-1203), Isaac's brother, also only minted copper coins both tetartera and half tetartera.

The Latins ruled in Thessalonica from 1204-24 and they struck billon trachea and half tetartera.

In 1224 Theodore Commnenus-Ducas conquered the city. He had himself proclaimed emperor (1224-30) and commenced striking coins in his name: silver trachea, billon trachea, copper tetartera and half tetartera. From this time onward the quality of the copper striking deteriorated markedly. In particular no attempt appears to have been made to take defective pieces and brockages out of circulation.

Theodore's brother Manuel Comnenus-Ducas (1230-37) issued silver and billon trachea. Theodore's son, John Comnenus-Ducas (1237-44), issued billon trachea and a half tetarteron.

In 1246 the Nicaean emperor John III (1222-54) occupied Thessalonica and commenced striking silver and billon trachea. His son, Theodore 11 (1254-58), only issued one type of billon trachy.

Michael VIII (1261-82) struck hyperpera and trachea, and his son Andronicus II (1282-95) issued hyperpera and numerous types of trachea. Andronicus II and III (1325-34) jointly issued a trachy. Andronicus III (1328-41) only issued trachea.

John V (1341-91) struck a copper assarion and in addition his mother, the dowager empress Anna who was ruler in the city between 1353-65, struck copper assaria.

The last emperor to issue coins from Thessalonica was Manuel II (1391-1423) – an assarion.

Anthony's talk was backed with a fine series of illustrations of the coins he was describing.

London Numismatic Meeting, 14 May 2013

This was the occasion of the Members' Own evening, and four members produced short talks.

David Powell spoke on the use of the online British Newspaper Archive as a tool for numismatic research. He was intending to give a talk to the Token Congress in the autumn and his purpose here was twofold:

- to promote what he felt was a very useful resource for discovering contemporary information about coins and tokens lurking in the public non-numismatic domain
- to test out, in a short 10-minute talk, how and how well such information might be presented in a longer and more formal session.

The mechanism was demonstrated briefly, using the search phrase "metal token" as a test case to bring up a variety of articles relating to a variety of paranumismatic series. The first page of results were shown and, after brief discussion of the way in which these could be filtered, a number of them were examined.

The selected articles dated variously from 1859 to 1920 and provided fascinating insight how various categories of token were used, abused or generally viewed at the time. Some provided dating; for example, clues as to when Sunderland replaced its ferry tokens by tickets, when communion tokens were replaced by card invitations, and when and why Bristol Co-Op replaced its white metal one-pint milk tokens by bronze ones.

Others spoke of legal cases; e.g. where one pair of miners defrauded another by substituting their own colliery check for their colleague's, and another where a counterstamped disc in the pocket of a corpse provided the sole means of identification for the court. In a third case a Billingsgate market trader appeared in court for causing an affray in a pub; not for being drunk, but for taking violent objection, whilst completely sober, at being compelled to go into the pub to cash his tokens.

Other social issues were touched on which did not end up in court. The speaker's great-grandfather had been active in promoting the Temperance Movement on his native Tyneside, and in the researching his activities David had discovered fairly accurately, from adverts, just when coffee house tokens had come into being. There was also a good description, from 1903 about how tokens were used to pay hop pickers.

Redundancy notices are another useful sort of information available in the contemporary press. David had recently had the good fortune to pick up, in a local junk shop, some checks of a company called the Stretford Omnibus Company; pieces reputedly quite rare according to Smith's standard work on the series, from an issuer about whom Google had little if anything to say. The British Newspaper Archive conveniently revealed 26 articles, several of which indicated that the company was in

existence by 1864 and had gone into liquidation in mid-1882. For good measure there were a number of interesting anecdotes about the company, its policy and its employees, in between; e.g. conductors fiddling the books, and drivers racing on the public highway.

There were some clues, too, about practicalities. An advert by a church supplies retailer in Edinburgh included communion tokens amongst his many other wares, indicating that issuers do not always, as is often assumed, go straight to the manufacturer; whilst a case concerning the abuse of slot machines resulted in a strong recommendation from the magistrate that token issuers should ensure that their pieces were not of a size and shape which could be readily used elsewhere.

The Newspaper Archive has plenty also to say about the main coinage and the attitude to it of the people of the day, and in order to balance the talk a little David included a couple of examples. Back in 1887 his great-grandmother's cousin's husband found the Harptree Hoard, originally of 1496 fourth century Roman pieces, and he determined to see how much the newspapers of that time had to say about it compared with the hoards found today. Not a lot! just two or three lines nine months later when some antiquarian [Sir John Evans] gave a talk about it, and certainly nothing about the modern law [The Treasure Act 1996] of dividing the value/reward 50:50 between the farmer (boss) and finder (his labourer).

Finally, a short piece from 1945 about the practice of people in quite modern times having to use a variety of tokens in gas meters due to the temporary shortage of shillings; it was tolerated, provided that the owners were prepared to redeem them when the collector came round. What you were meant to do if you hadn't got any tokens or those which you did have didn't fit, it didn't say!

Anthony Portner contributed the story of a remarkable family link. My great-grandmother Selma Sternfeld (née Jaffé) was born in Posen on 6 January 1863. She had *inter alia* twin sisters Rosa and Lina born on 26 February 1859, also in Posen. Selma married a Munich dentist called Alfred Sternfeld.

Rosa married a well known Munich coin dealer and auctioneer called Eugen Merzbacher. Lina married Jacob Alexander from Hamburg in Berlin on 17 October 1882.

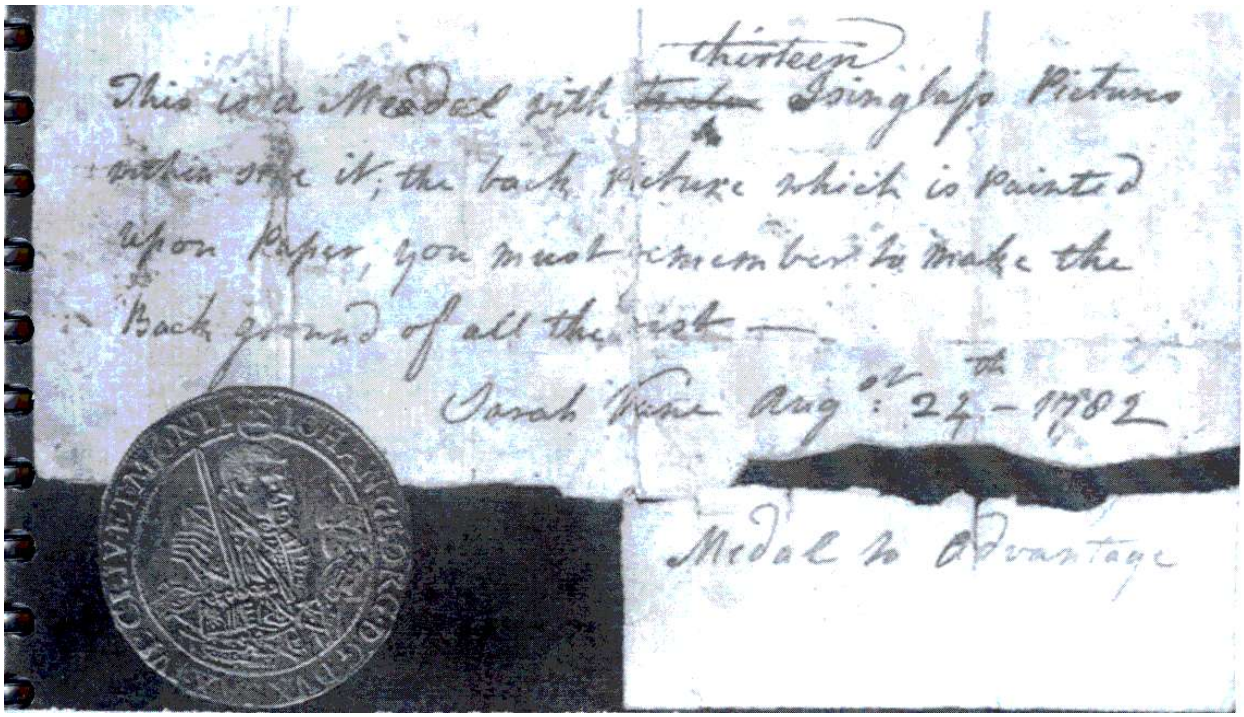
I recently acquired this medallion celebrating Lina and Jacob's marriage which was issued by Eugen and Rosa. My specimen is struck in silver but they are also known in copper and gilt copper. It may be that the bride and bridegroom received a specimen in gold.

The obverse (?) recites their marriage in Berlin. The reverse (?) has the coat of arms of Posen and Hamburg, the Hebrew for good luck, and the statement that the medallion has been dedicated to the couple by E. and RM = Eugen and Rosa Merzbacher. The medallion is taler size.

Whether medallions were issued for other members of the Jaffés or Merzbachers, or whether this was a one off is at present not known.

How I learnt of the existence of this medallion was due to the work of a Dutch researcher Lucas Bruijn who was researching a grandchild of Lina and Jacob who was on the same transport as Ann Frank. The actual specimen was located by a fellow Byzantinist, Andreas Sommer, who had seen it in a Munich dealer's list. Serendipity, and helpful watchful colleaagues, can work wonders !

Philip Mernick spoke on the subject of a Box Thaler purchased some years ago. The coin is a Thaler of Johann George I of Saxony dated 1647 and it came in a modern wood frame with an old handwritten note. On opening it was found to contain a small painted picture of a man and of a



woman in 17th century costume and 13 clear discs with fragmentary paintings. Their seemingly poor condition meant that it was put aside for quite some time. When it was re-examined several years later, the piece of paper was found to be 18th century operating instructions!

They read 'This is a medal with thirteen Isinglass* pictures within it; the back picture which is painted upon paper you must remember to make the background of all the rest. Sarah Vine, August 24th 1782'. This explained why the clear discs seemed to be missing areas of paint, they were intended to overlay the painted disc some parts of which would then show through. When all 13 discs were placed over the background and copied it became clear that a story was being told. The clear discs were not numbered so it wasn't certain in what order they should be viewed, but the story was roughly: boy meets girl, boy and girl fall in love, get married, have a child, live happily ever after.

* Isinglass here means Mica not the 19th century extract of fish swim bladders, used for clarifying wine and beer, also called Isinglass.

London Numismatic Club Meeting, Tuesday 4 June 2013

The Club was delighted to welcome the husband and wife team of Frances and Howard Simmons, long-time members of the Club and well known to everyone for their management of the London Coin Fair over many years. Their subject was 'Weighing Coins', and their immediate first question was: Why do we need to weigh coins anyway?

When first made, coins such as a guinea of George III, 1776, were to an official standard of manufacture. This has always been the case. The minting authority has standard weights by which to measure the new coins, and they have a close tolerance with a minimum and a maximum acceptable weight. These official standard weights are really rare objects; the ones we've seen have been recent with just numbers on them. We do not know what happened in antiquity. The Roman *exagium* weights were probably official testing pieces, whether for taxes or something else.

However, as everyone knows, coins lose weight once they have been put into circulation. Once issued, there will be a correct value weight which is the minimum acceptable. Weights specifically made for coins, as opposed to normal commercial weights in pounds and ounces, only started in the Roman period. Before that there has always been a close connection between the weight and coin, so a tetradrachm is four drachms - and a drachm is a weight standard, and the coins and weights

are almost interchangeable. By Roman times, a value standard was introduced into the coinage, so a silver denarius was worth a denarius almost regardless of its weight. However, the coinage was replaced with each new emperor, and sometimes more frequently, so metal loss due to circulation was not so much of an issue.

The Emperor Constantine (AD 307-337) introduced a new gold coin, the solidus. This still fitted in with the preceding weight standard yet coin weights started to appear around this time in the 4th century AD.

Standard English weights

The domestic measuring of weights was really so that you knew that you had a genuine coin that had not been tampered with, clipped or was of low weight. In England this started to be necessary with the introduction of the gold coinage of Edward III (1327-77).

The early weights were unofficial, such as a pewter weight for a noble, and also pictorial so that you could easily identify what was being measured; they were probably made by goldsmiths. It should be noted that the weight of the new gold coins was not an easy fraction of an ounce, a standard weight, so the coin weight was a real help for honest trade and commerce. However, there was a certain amount of dishonesty occurring, and in 1423 in the reign of Henry VI official coin weights were sanctioned.

The first official weight for a noble had a crowned fleur-de-lys on it, just as on the coins. It was either made at the Mint or for the Mint and distributed from London. There is a series with a crowned rose for the ryals and a crowned A for the angels as well. Also, there were weights for the fractions, half and quarter of all these types. The angel weights and the smallest fractions are really rare but the nobles and their halves are relatively easy to find.

After about 1600 weights were made of brass rather than bronze. Many of the square weights are thought to have been made in Holland for the English market. There are even some die links for those that are interested. It is possible that Dutch makers were manufacturing them in London. There were understandable concerns about this so once again official round weights were made. Nicholas Briot, a French die-sinker, was commissioned to make the dies for the official weights denoted by a letter B on the reverse. It should be noted that now the value of the coin being weighed is given on the weight in shillings and pence. An official weight for a Charles I shilling has 'without grains' on it, indicating an adjustment to the standard from when it was issued, i.e. they were issued at one weight but although this piece weighs the absolute minimum such a coin could still weigh and remain in circulation. It is unusual in the British series to have weights for the silver coins, but this did happen

during and after the Civil War.

After the Restoration of the monarchy with Charles II in 1660, a new gold coin was established: the guinea. On a weight for it the portrait is based on the coinage and the reverse has the crown and sceptre with the weight and value clearly spelled out. Weights were constantly being made and there are lots of varieties.

There are English weights for foreign coins in the 1740s as Portuguese coins had an accepted official tariff for exchange; there was no daily gold fix at the time. The reasons why the Portuguese coins were accepted, but not French or Spanish, was purely because the gold content was the same as the British. The Spanish never made their coins to the same standard anyway and the French messed about with the gold content of their écus, so for most of the 18th century Portuguese coins were allowed to be used in trade. For example, a weight for the dobra or double Joe of Joao V was made by Kirk, a medallist and toy maker. Some of the best made British weights come from his workshop.

With the George III 1776 guinea weight we're getting back to what is the weight of a coin. This has a value, 21 shillings, and a weight in pennyweights and grains: 5 pennyweights and 9 grains. There are whole series of guinea weights and their fractions - half and quarter at this time, thirds later. but standard weights keep changing so there were 5 penny-

weights 8 grains for the new guineas 1772 and 5 pennyweights 6 grains for coins dated prior to 1 January 1772. These are all minimum acceptable weights. The proliferation of numbers of weights is an indication of how serious the problem of lightweight coins was in the 18th century.

The problem continued late into the 19th century; in 1887 a weight for Victoria's Golden Jubilee year from the Standards Department Current Weight for a half sovereign was 61.125 grains or 3.96083 grams. The Light Gold Coins Act of 1889 allowed pre-Victorian sovereigns to be accepted at face value up to 4 grains light, until March 1890, then as bullion until February 1891. These are known in combination with a specially made scale and a sovereign weight is 119.27447 grains only.

International trade had different considerations to address and different weights were used.

In 1499 Philip the Fair of Flanders decreed the making of a set of weights for all the coins that were readily seen in trade. These include the English series of gold coins, the French, Spanish and the coins of the many small states in the Low Countries and Germany; for example in Norwich, the wool trade went from England to Flanders, the hub for the rest of Europe. These early weights are quite scarce, and all are pictorial e.g. a crowned shield with a sun inside for an *écu au soleil* (France). The

reverse has the weight expressed as the number of coins to a Troy Mark of Cologne, 70. Why Cologne? It was an accepted international standard, and had the authority of the church.

In England, the series sets of weights usually numbered 11 but these international traders required 20, 30, 40 even 50 weights in their sets. Some of the 17th century weights related to coins made 100 years earlier. When a coin weight was made bears no relation necessarily to the year the coin was made, where it was made, nor to its use.

What happens when coins are no longer coins? When they fail the coin weight test, they are bullion. In this country the weight standard for precious metals has been the Troy ounce, subdivided into 20 pennyweights or 480 grains (24 grains to a pennyweight).

Equipment

The equal arm balance is the most ancient of balances. In ancient Egypt, in Chapter 125 of the Book of the Dead, the heart of the dead person was weighed against Maat, the feather of Truth. This type of balance is workable today and recognisable in markets the world over. A similar action scale used by an 18th century trader is little different from that used by a medieval trader: there is a space in the fitted box to protect the scale, places for the coin weights and a small lidded section for the grain weights to make adjustments.

A complete set of weights for various foreign gold coins, 1749, Low Countries (image courtesy of Willem van Alsenoy)

Some examples of boxes show pictures of the different gold weights on a label in their lid.

With the advent of the industrial revolution, more coins were in circulation. Nearly everyone in business or commerce needed to test the gold coins going through their hands. A business opportunity was seen by some clockmakers in Lancashire to make balances that folded neatly into a pocket-sized wooden box. These were by no means cheap! A good example would have cost a guinea (£1.1s). The equivalent prestige piece of equipment today would probably be the latest smart phone or tablet.

The same clockmakers came up with a rather ingenious method of disposing of the weights and having a counterweight instead, flipping over the counterweight to weigh the heavier coin by altering the distance of the counterweight from the fulcrum. Technically this is a clever mechanism. Most of the clockmakers were in Ormskirk and Prescot, the area just to the north and east of Liverpool. From there goods were sent down mainly to London to be marketed there, sometimes with new labels added by the retailer.

The weighing of coins with balances went on almost into the 20th century, dying out when we came off the gold standard in 1931. No country currently uses the gold standard as the basis of their monetary system although they may have gold reserves.

Going back in time, there were other developments apart from the equal arm balance. The steelyard balance had a moveable counterweight. As the distance from the fulcrum increased the weight it could test would increase proportionally. So you could weigh with a 7lb weight a 56lb sack of grain or wool.

Then there is the question of measurement as opposed to weight. The earliest form of coin measuring is with the tumbril, invented when coins began to be flat and more uniform not only in weight but in size. The tumbril uses gravity; you put the coin on the plate and if it weighs

enough to counterbalance the counterweight then it is good. The principle is that the mass at the centre of gravity is being tested and therefore the position of the coin is important. It is an inflexible device: the coin passes or fails.

Developed from this idea is the rocker balance, produced after the introduction of the sovereign in 1816. This has pegs for positioning the coin, a slot for measuring the thickness and is quite robust. It is machined brass, a precision instrument and was quite expensive to buy at that time (*c.* 1820s)

By the 1830s a number of manufacturers had cracked the manufacturing process and the cost of the rocker balance went down. They were made of cast brass pieces which could then be adjusted and fitted together. These were retailing at 1/6 or 2/- each in the 1830s.

We hardly see modern weighing except for automatic bulk weighing, as when you weigh a certain number of coins in a bag going into your bank or pay with them at the Post Office. Normally to verify the coin put into a slot machine, it is still weighed and measured, and possibly rejected if fake or too worn and used. Probably more coins are getting weighed now than ever before, e.g. in parking meters, vending machines and ticket machines, but even this is fading as our monetary system goes virtual and online. Credit ratings, alas, cannot so easily be tested !

London Numismatic Club Meeting, 3 September 2013

Hugh Williams last came to the Club in April 2012 to give a talk on Carausius and the First British Empire (see *LNC Newsletter*, vol. VIII, no. 16, January 2013, pp. 7-23). This time his subject was 'Counterfeiting in Roman Britain'

Coinage came into existence in the sixth-century BC, in the kingdom of Lydia in modern Turkey. The earliest coins were made of electrum, an alloy of gold and silver, but were quickly replaced by coins in both pure metals. The idea of coinage as a medium for economic transaction quickly took off, followed closely by the idea that counterfeiting could be a profitable sideline. So was born the so-called second oldest profession in the world. Contemporary sixth century copies of silver coins of Lydia were made of base metal and plated with a layer of silver, which, with the ravages of time fractured and started to peel away from the base.

Two and a half thousand years later, the problem still exists today. A substantial percentage of one-pound coins in circulation today are illegally produced copies that have passed into circulation. This is carried out by syndicates who introduce large quantities of coin into general circulation. Currently there is a display of such forgeries in the centre case in the Citi Money Gallery (Room 68) at the British Museum**.** These examples have in common that, in each case, the forgery is contemporary with the original, and was made to be passed into the current coin pool.

The reasons for copying currency are threefold: first, and perhaps most obviously, to create a coin, at a cost in resources and labour of less than its face value. Secondly, an acute shortage of official coin might make everyday transactions difficult, a problem solved by introducing unofficial coin into circulation. Thirdly, there is a possibility, which will

be discussed later, that some copies may never have been used in general circulation, but have been used as a token coinage for local or even religious purpose.

Methods of production were varied. Copying of gold or silver for personal profit would entail using metal that was as base as possible, yet passable in appearance as true metal. Alternatively a well-produced copper core could be plated with good silver or gold. Such a coin is known as a *fouree*. It is interesting to note that our current bronze coinage is actually steel plated with a thin layer of bronze [**Ed**. See David Goodall's talk in this issue.] Struck counterfeits require the production of false dies, a skilled and time-consuming process. Nevertheless, the dies can then be used to strike many coins in a short period of time. The easiest method of producing counterfeit coinage is simply by casting. An impression of the coin is made in clay, for both reverse and obverse, wax is then poured into the moulds. The halves are joined together, then encased in a matrix of clay which is fired, melting the wax. The spaces created are then filled with molten metal creating the counterfeits when removed from the clay. The copies often have a spur for the pouring slot, and invariably show the join between the two halves.

Britain was part of the Roman Empire for nearly 400 years, and during this time official Roman currency was the medium for trade throughout the Province. It is also true to say that throughout this period contemporary copies were produced in a series of epidemics.

When Claudius invaded Britain in AD 43, a large amount of coinage was required to pay the troops. Large quantities of silver coinage were brought over, consisting in large part of well-worn Republican denarii, many having been in circulation for over one hundred years (and they are often found in hoards with later coins by metal detectorists).

There was also a need for copper coinage to facilitate small everyday transactions.

The copper As of Claudius was the first victim of widespread copying in Britain. This has a portrait of Claudius on the obverse, and a figure of Minerva with spear and shield on the reverse. The reverse bears no legend only the letters SC for *senatus consulto* (‘struck by decree of the Senate’*).* Clear copies of this type, usually of quite presentable standard, occur frequently on early military sites, and there is a school of thought that these were produced with official blessing to help alleviate the shortage in the supply of small change. This, however, was merely the initiation rite of the first epidemic. Smaller, lighter and cruder became the order for production of these pieces, until they became barely recognisable copies of the original. To a lesser extent, the large bronze sestertii of Claudius also became a victim of counterfeiting. The most copied reverse was that showing the figure of Spes, the goddess of hope. Examples are known in the name of Nero Claudius Drusus, the father of Claudius. Once again there has been some debate over the years as to how ‘official’ these copies were. It is interesting to note that examples have turned up in Britain and Gaul officially countermarked DV, and given official blessing to circulate at half face value.

With the opening by Nero of a secondary mint at *Lugdunum* (Lyons), giving a better supply of coinage to the newly conquered island, copies become scarce for almost the next one hundred years of occupation. An unusual exception is an As of Nerva (emperor AD 96-98), found in Britain and which illustrates that counterfeiting was still happening, though on a very limited scale. This coin was struck from high quality false dies, and about half a dozen examples have turned up in southern England and Wales.

During the second century counterfeits remain relatively scarce. A die for the reverse of a denarius of Hadrian was found at *Verulamium* and is in the Verulamium Museum. There has been much discussion that it may be an official die, especially in the light of the inscription *ADVENTVS AVG*, the arrival of the Emperor. This would tie in with Hadrian's visit to Britain in 122, and the suggestion has been made that it formed part of a travelling mint attached to the Imperial entourage.

The idea of a travelling branch of the mint is conjectural, but the *BRITANNIA* coinage of Antoninus Pius, struck in 154-5, does tend to give support to the idea. This reverse type is found almost exclusively in Britain and there seems little reason to doubt its official nature, but the coins give the impression of being hurriedly and somewhat carelessly produced. There was much campaigning in Northern Britain at this time, including the creation of the Antonine Wall, and the Emperor probably visited Britain about this time.

Many of the counterfeits that found their way into circulation in the next one hundred years of so originated on the Germanic borders of the Empire; these are known as *limesfalsa.* The denarii are very well produced, but are made of a very base alloy. The alloy is typically almost 70% copper, 20% lead and 10% tin. They are usually struck using dies of exceptionally good quality. The bronze coinage was also copied, but usually by casting. The casts are invariably smaller in diameter and much lighter than the original. A hoard of counterfeit denarii of Claudius found in Suffolk are exhibited in a centre case in the Roman Britain Gallery in the British Museum. Copies were also made of later denarii, often in base copper; one of Septimius Severus is particularly interesting as the legend on the reverse, which is retrograde, refers to the Emperor's fourth consulship (COS IV), and is unknown as a genuine coin type. However,

although the emperor is given a fourth consulship, he only ever took three!

The third century was a time of rampant inflation in the Roman Empire. The standard circulatory coin was the *antoninianus*, initially a silver coin introduced by Caracalla 215, and circulating as a double denarius. The radiate crown worn by the emperor indicated its value, and this was a distinctive feature of all later *antoninianii.* Inflation caused rapid debasement of the *antoninianus*, until by 270 it became a much smaller coin of 99% copper.

In 258 Britain became part of the breakaway Gallic Empire. Coin supply was restricted to the two mints of the newly formed regime, at Lyons and Cologne. Rampant inflation necessitated a continually greater supply of coinage. The situation was perfectly set up for a second great epidemic of counterfeit coinage. This coinage was dismissed until recent decades as being barbarous and uninteresting. In reality nothing could be further from the truth. The coins form a true Romano-British coinage, the designs are full of interest, and the workmanship covers the whole spectrum from exceptional art to disjointed stick figures and unrecognisable abstract pattern.

The first Gallic usurper, Postumus (259-268), issued coins of full flan with up to 20% silver content. Although his coins were copied, it is unlikely that the epidemic started before his assassination in 268. The following Gallic usurpers, Victorinus (268-270) and Tetricus (270-273), issued a plentiful, but evidently still insufficient coinage, with a silver content reduced to virtually insignificant quantities. This gave the counterfeiters the opportunity to make good size, and often accurate copies with insignificant material cost. The rest of the Roman Empire suffered from the same inflation, and official coinages struck in Rome,

and in the East for late issues of Gallienus, Claudius II, Quintillus and early issues of Aurelian were of similar low intrinsic value. These also circulated in Britain and Gaul and were copied in abundance.

The production of these so-called 'Barbarous Radiates' was not confined to Britain, but also took place in Gaul, Germania, Hispania and North Africa. Coins from the same dies have been found on the Continent and in Britain, showing continuance of trade during the breakaway regime. As was the case with the first Claudian epidemic, it would take the introduction of a new and well-produced coinage to bring the epidemic to an end. The return of *Britannia* to central control, coupled with Aurelian's reform of the mint between 271 and 274, should have signalled the end for the 'Barbarous Radiate', but though coinage supply to the Continent was restored, the flow of coinage into Britain was still very limited, with the radiate counterfeits most likely in production until Carausius' usurpation of 286. Some of these counterfeits show interesting features. The intrinsic value of the metal seems not to be a determining factor, and some copies were made in much better silver alloy than the originals. It may well be that coins of Postumus were used as blanks and restruck. Some counterfeits show illiterate or illegible reverse legends. Many can be dismissed as the product of an illiterate provincial diesinker, but a small group show legends which appear to read easily. Amongst these are legends such as *CAIO, VONDI and CASITER* - could these be significant names of people or places associated with the coinage?

Postumus was also responsible for introducing a large brass coinage of sestertii and double sestertii. In Britain and in Gaul the large sestertii of the Antoninines were still in circulation, albeit in a very worn state. The need for production was there, and the Postumus-issued large

denominations were with or without a radiate crown. Maybe the radiates were worth twice the laureates, though this is not supported by flan size. The radiate coins were extensively copied, but there appear to be no copies of the laureate pieces.

Not all the 'barbarous radiates' were struck on large flans, and many are on tiny flans as small as 5mm in diameter. Understanding these tiny radiates is problematic. On size alone they would have fooled no one as to intrinsic value. Back in 1949, Philip Hill suggested that they might form an early Anglo-Saxon coinage, with designs taken from the odd coins found at that later date. There is no archaeological evidence forthcoming to support this theory, and all evidence since Hill's paper suggests that these small coins do come from the late third century. What then was their purpose? They often turn up in groups, for example the Market Drayton (Shropshire) hoard of over 3000 coins (found in July 2011)), and often near temple sites. Could they have been offerings to the temple's gods? After all, if a wish or vow required the casting of a handful of coins, a market would be present for anyone selling a considerable number of 'tokens' for in good large *antoninianus.*

Carausius, who was in charge of the Roman fleet north of Gibraltar, usurped power, and declared himself emperor in Britain in 286. There was an immediate need for an active coinage supply in order to supply the legionaries and the fleet, and a mint was opened in *Londinium.* This sudden increase in available coinage seems to have made the production of barbarous copies virtually redundant. The early coinage of Carausius is rapidly and carelessly produced, and determining the boundary between official and counterfeit is, in the case of many coins, difficult. It has even been suggested that some of the illicit die-engravers were set to work on the early coinage. Copies do exist, but they are the

exception rather than the rule. The production of the tiny *minissimi* ceases, and copies are usually of decent weight but poor style.

The massive re-coinage instituted by Diocletian in 296 coincided with the return of Britain to the Central Empire. The London mint remained open, and a good supply of the new *follis* coins filtered into circulation. A few cast counterfeits have come to light and moulds for their manufacture have been found at Duston in Northamptonshire.

Smaller Constantinian bronzes were copied from about 325. Most designs seem to have been copied, though not in large numbers, and the engravers showed considerable skill in making very accurate copies, often on very small flans. A small copper coin showing a river bridge was struck in Constantinople but they are rarely found in Britain, and a copy with a British provenance is particularly interesting. Many members of Constantine's family were represented on the coinage, and a delightful specimen representing his stepmother, Theodora, is only 9mm in diameter. I am concentrating on the counterfeiting of Roman coinage in Britain, but it needs to be emphasised that this was an empire-wide problem. Constantinian coins were copied, often with aesthetically pleasing results, in the Balkans. They were even copied as far afield as Sri Lanka (Ceylon) and India, which traded actively with the Roman Empire at this time. Generally they are crude in execution, but nevertheless it is possible to determine the prototype in every case.

Returning to Britain and concentrating on the third major epidemic of counterfeiting, in 350, Magnentius, a general under Constans, declared himself emperor, with *Britannia* as part of his domain. He issued coinage, both in his name, and in the name of his brother Decentius. The coinage was of good standard, but the times were turbulent, and the counterfeiters soon began work in Britain. Many of the copies are of an extremely high

technical standard, and they seem to have circulated alongside official coin, the smaller copies possibly making up for a lack of small official change. It is to this period of upheaval that a single Magnentian copy, struck in that name of 'CAIVS' belongs. There is no historical record of a 'Caius' in a position of power at this time, but nevertheless it is a most interesting piece.

The failure of the Magnentian revolt probably denuded Britain of a large number of troops. Reprisals were forthcoming, and the historian Ammianus Marcellinus mentions the visit of Paul the Chain, who is portrayed as a fourth century Inquisitor General. Coinage supply also diminished setting the scene for the third major counterfeiting epidemic.

In 346, the joint emperors, Constantius II and Constans, had introduced a new bronze denomination bearing the reverse legend *FEL TEMP REPARATIO,* which can loosely be translated as 'Happy times are here again'! The legend and types were to remain in current production for the next twelve years and with several variations of design to accompany the legend. These included the emperor on the prow of a boat; standing with captives; dragging a barbarian from a hut and, most bizarrely bearing in mind the legend, a soldier spearing a fallen horseman lying alongside his stricken steed. All types were copied but it was the fallen horseman reverses, and to a more limited extent the galley type, that received most coverage in Britain. Copies exist of all sizes, right down to *minissimi* . These tiny coins are often only recognisable from a mere part of the design on the reverse; part of a soldier, a portion of horse or a few letters of legend. Once again there arises the possibility that these were token or votive coins, not forming part of the everyday circulation pool.

Two groups of the fallen horseman copies give rise to speculation

and interest. A very small number exist with unexpected exergual marks, which do not seem to derive from those of official mints. Examples are known clearly marked ML, and Philip Hill cites two further examples marked *COL* from Lydney (Glos.), and *PLN* from Maiden Castle (Dorset). The question raised is - do these marks refer to a British mint at *Londinium*, and/or at one of the British coloniae?

The second group of interest have sometimes been referred to as the 'Carausius II' coins. They were first identified by Humphrey Sutherland as early as 1945 ('Carausius II, Censeris… *Num. Chron*. V, pp. 125-33). On a copy of the 'emperor on galley' type, Sutherland read the obverse legend as *DOMINO CARAVSIO CES*, with the reverse reading *DOMIN CONTA*. There are the only two known specimens of the galley type, but several specimens bearing similar legends have come to light bearing the fallen horseman reverse. They bear legends such a *DOMINO CA.... CENSERIS*, and all have the title *DOMINO* or *CENSERIS* in either the obverse or reverse legends. A second common factor is that they are almost always overstruck on the earlier *GLORIA EXERCITVS* coinage of Constantine I, showing two soldiers with one or two standards. These were struck about 335, a quarter of a century earlier. There is no record in history of Carausius II, but the name of the original usurper evidently lived on.

This third epidemic ends suddenly, as Valentinianic currency floods into Britain from about 363. The large handsome bronze coins of Julian the Apostate with their notable bull reverse appear to have enjoyed very limited circulation in Britain, but at least one copy has turned up, found in the West Country.

Counterfeiting after 363 becomes very limited, and it is cut-down flans that provide another discussion point. The fine large Magnentian

double-*centoninialis* was sometimes cut into small pieces. Meanwhile the silver siliquae issued officially seem to have become the target of a peculiarly British habit. These heavily clipped pieces seem to have enjoyed active circulation; the reason for the clipping though still remains a mystery (see Andrew Burnett, 'Clipped siliquae and the end of Roman Britain', *Britannia*, vol. 15 (1984), pp. 163-8).

Official coinage supply to Britain virtually ceases after 402, and the need for coinage in transactions seems to disappear at the same time. Coinage from 380 onwards is little copied, very late examples are indicative of both the poor quality of the coinage entering Britain, and to the lack of skill of the counterfeiter.

It is easy to dismiss counterfeit specimens as irrelevant and academically worthless, but I hope that this paper counteracts this misapprehension. These coins form an important and fascinating part of British numismatic history, and deserve much more attention.

[Hugh supported his talk with a fine selection of slides illustrating the various forgeries.]

Reference

Ken Peters. *Counterfeit Coins in Roman Britain. The Story, Bibliography and Individual Counterfeits' Record.* 203pp, illus b/w throughout. P/b. Envoy Publicity, Biggin Hill, Kent, 2011.

London Numismatic Club Meeting, 1 October 2013

David Goodall, a chemist by profession and well known to a number of LNC members from his attendance at numismatic congresses, came to give a talk entitled 'The chemical dimensions of numismatics'

David said that numismatics as we know it today is concerned with

almost 3000 years of social, economic, technical and political change, as exhibited through the medium of coins. This would not have been possible without the existence of certain facts of chemistry.

There are 80 metals, but only a few are suitable for making coins. Those that have been used for this purpose are iron, nickel, copper, zinc, aluminium, tin, lead, silver, gold and platinum. Any metal used should be hard- wearing to ensure an economic lifetime for a coin, and it should retain an acceptable appearance after exposure to air and atmospheric pollutants. Pure metals are usually too soft, so a metal alloy is preferred.

Until relatively recent times, gold and silver were the basic determinants of the value and acceptability of coins and monetary systems. These two metals were accessible at a time when the chemistry and technology of metal extraction was unknown.

Gold has always been associated with beauty, wealth and power. It is the chemical inactivity of gold that has given it a unique place in numismatic history. This inactivity meant that it was found as native (pure) metal in rocks or alluvial deposits, and it is a consequence of this inactivity that ancient gold coins are found in as good a conditions as they were when they were in use, even after centuries of exposure to the atmosphere, or of burial and exposure to the corrosive chemicals in soil.

In contrast, silver is chemically quite reactive. It is sometimes found trapped in rocks as native metal, where it is not exposed to environmental chemical attack, but it is usually found combined with sulphur.

Over many centuries of numismatic history, the base metals iron, copper, nickel, tin, lead, zinc and aluminium have all been used, either as alloy constituents or alone.

The emergence of coinage metals depended on four factors:

1. The chemical form in which metal was encountered. Gold was available as native metal. Copper and lead were present in chemical combination with sulphur or oxygen, but the sulphur and oxygen could be removed by heating the sulphur – or oxygen – containing materials in air in the presence of charcoal. Some metals, such as nickel or aluminium, cannot be obtained by that method.

2. Local availability of metal. This was contempor-aneous with emerging civilisations. Gold and lead were discovered in Egypt before 5000 BC. Copper and tin were discovered in the Middle East by c. 3500 BC. Zinc was discovered in India and China by c. AD1300.

3. Knowledge of metal extraction technology. The conversion of metal-oxygen compounds to metal had initially depended on the burning of charcoal. This had restricted the number of metals available. A profound change occurred after coke was made c. AD 1750 by burning coal in a limited supply of air. After that date, coke replaced charcoal and much higher temperatures could be obtained in the conversion of the oxygen-containing metal minerals to metal. This made the large-scale production of metals like iron and nickel possible. Copper, tin, lead and zinc are easily isolated from their oxygen-containing minerals using charcoal. They have melting points at least 500C lower than the temperature of the charcoal furnaces, so can easily be poured as liquid metal and cast.

4. Characteristics of metal. These comprise colour, as, for example, the yellow of gold, red of copper, white of silver, and ease of working, as noted by low melting point and malleability. Copper, silver, gold, lead, tin and zinc are low melting and malleable, so can be easily worked into shapes. These metals have been used to make coins from ancient times.

There are landmarks in metal availability which are of particular importance in numismatics:

1. By 3000 BC it had been realised in India, Mesopotamia and Greece that copper could be made a much harder metal if small amounts of tin were added to it. The new alloy, known as bronze, initiated the Bronze Age.

2. Silver was known before 3000 BC, but its availability was very limited. Some silver was found as native metal, but it occurred mostly with lead in chemical combination with sulphur. A process was required for separating the silver from the lead. The sulphur-containing compounds could be converted to the metals using air and charcoal but the problem of isolating silver still remained.

Around 3000 BC a process known as cupellation was developed in Asia Minor. This enabled lead to be separated from silver. The process spread and enabled silver coinage to become available to all subsequent classical Mediterranean civilisations.

3. Around AD 1700, coke became available and was used in place of charcoal to convert metal oxygen-containing minerals to metal. This enabled much higher temperatures to be obtained, and allowed metals with high melting points, such as iron and nickel, to be isolated and worked.

4. Aluminium became available as a cheap metal from which millions of low-value coins have been made worldwide, but it did not become so until the early 20th century. Aluminium had been isolated in very small amounts in AD 1820, but it could not be made economically in large quantities until chemical and technological developments occurred in the late 19th century. Aluminium had been a rare and valuable metal

beforehand. Napoleon III had used aluminium cutlery for his most distinguished guests on state occasions, and wealthy women wore aluminium jewellery.

Platinum was used during the years 1829-45 in Russia to mint 3, 6 and 12 rouble coins. This occurred as a consequence of the discovery of platinum in the Ural Mountains. For a while the value of platinum fell below that of gold, and this gave rise to the appearance of some counterfeit British sovereigns in the 1870s, which were made of platinum with a thin layer of electrochemically deposited gold.

Once a coin has been cast or struck, chemistry plays a surface role. This sometimes happens before a coin is put into circulation:

1. Darkening of bronze coins by dipping newly minted coins in sodium thiosulphate solution (the 'hypo' solution formerly used in photography) occurred in the case of farthings dated 1897-1917, as a means of avoiding confusion between the farthing and the half-sovereign, and again in the case of pennies dated 1944-46.
2. Since 1992 British bronze coins have been replaced by steel on which copper has been electroplated, in order to minimise production costs.
3. In times of insufficient supplies of silver, copper coins that have been dipped in silver-containing liquids have been used as silver coin substitutes. Such occurred in the later Roman Empire.
4. Silver- and gold-plated coins made using amalgams (silver and gold solutions in mercury) have appeared as forgeries from time to time.

Surface chemistry is a dominant feature in relation to the aesthetic aspects of numismatics. Coins appeal, amongst other things, as a result of the chemical reactions that have taken place on their surface, as exemplified by toning and patina formation. Such effects are caused by oxidation, perspiration, and other environmental chemical reactions. The

chemistry is complex. Perspiration, for example, contains salts, ammonia and various acids. Urban atmospheres, especially before the Clean Air Act, contained many sulphur-containing compounds, as well as other material. All of these, together with the oxygen naturally occurring in air, led to chemical reactions on the surface of coins.

Copper and bronze coins develop brown and black surfaces due to the formation of copper oxides and copper sulphide. The stage of chemical development also depends on the composition of bronze. Roman bronzes have a wider range of copper content than modern bronzes and demonstrate a wider variety of colours in their chemically attacked surfaces than do modern bronzes.

Copper and bronze coins undergo various types of chemical corrosion reactions. Verdigris results from formation of green basic copper acetate at localised sites, usually around a metal lattice fault. So-called ‘bronze disease’ is apparent as a light green deposit and is an overall destructive process which, if left unchecked, can lead to the complete disintegration of the coin. Bronze disease is commonest in an enclosed area (‘micro-climate’) and requires the presence of water vapour, oxygen and chloride-containing corrosion products (for example, from perspiration residues).

Patina is a light green encrustation consisting of basic copper carbonate or sulphates. It is a hard protective coating, which is stable, but it can corrode to unstable compounds if the concentration of pollutants is high.

The surface of silver coins reacts with atmospheric oxygen to form a grey toning of silver oxide. The surface of such coins, after many centuries, on exposure to strong sunlight, can undergo a partial photochemical reverse reaction, which results in a light blue toning.

The surface of silver coins can become black if exposed to atmospheres containing sulphur compounds (and also if stored in other than mahogany cabinets, especially those of oak).

Chemical analysis of ancient coins has yielded much information. No records of metals and associated technology are available before the 13th century. The chemical composition of an ancient coin depends on the raw material from which the metal was obtained to make the coin, its nature and location, smelting, etc. Analysis indicates much about the extent of chemical knowledge at the time the coin was made, especially with respect to the extraction of metals.

Two types of analytical method are used:

1. Destructive methods which involve dissolving a coin in acid, followed by spectroscopic or complexometric titration measurement of the acidic solution. Such methods are only acceptable if the coins are of low value, or a common type, and if the data required are more important than the aesthetic value. Ancient coinages are often not of uniform composition, so a statistically significant number of samples for analysis is needed. In such cases common types of coins can be used, for example, Roman bronze coins. Early Roman coins contain significant amounts of combined oxygen. This oxygen cannot be removed at the maximum temperature obtainable in an ancient charcoal furnace (i.e. .c. 1600C). Almost all later Roman coins contain no oxygen, which suggests an improvement in the technology.

2. Non-destructive methods. These include neutron activation analysis, which depends on the conversion of silver to a short-lived radioactive form whose radioactivity can be accurately measured. Other non-destructive methods are linear X-ray spectrometry and electron microprobe analysis. These methods have indicated phenomena such as

surface lead enrichment following long burial of lead alloy coins, surface copper enrichment after long burial of bronze coins, and have elucidated the composition of lead corrosion products on lead-containing coins. The latter corrosion products can be related to soil acidity and fertilisation policies of earlier times. Measurement of the silver content of ancient coins is by far the most important matter, and neutron activation analysis is a powerful analytical tool in this respect. Silver was the most important metal in ancient everyday coinages. The silver content of coins reflected the state of the economy and the quality of silver coin made in a city indicated its status as a trading centre. Along the old trade routes, coins of comparable high silver quality have been found.

Silver debasement was a sign of a decline in prosperity or of large military campaigns. Ancient coinages were monitors of political and of economic situations. Sometimes there was a subtle reason for the decline in the silver quality of coins. Silver supplies became scarce in the later centuries of the Roman Empire. Early in the third century AD the primary sources of silver available were low-grade raw materials. Roman technology was unable to extract the silver from these. Later in the third century, however, deposits of silver chloride were discovered in Cornwall, Brittany and Alsace. In the latter areas silver-coated copper and bronze coins were abundant. These coins were made by dipping copper or bronze coins in the molten silver chloride, whereby the surface layer of copper was replaced by silver, These silver-coated coins were unsatisfactory because the silver soon wore away to reveal the underlying copper or bronze.

Apart from its application in silver analysis, neutron activation analysis also showed that ancient silver contained up to 1% of gold, which could not be removed in ancient times. Modern forgeries of old

silver coins are easily detected since modern highly refined silver contains less than 0.001% of gold. Roman gold, however, was as well refined as modern coinage gold.

Deposits of silver and gold always contain trace elements of other precious metals such as palladium and platinum, but the ratio of paladdium:platinum in each deposit is different. Therefore it is possible to identify the source and to monitor the movement of silver and gold in ancient times. Using the palladium:platinum ratio is similar to finger printing or DNA-labelling.

Lead was mined in several areas in ancient Britain and lead coins were made and used in Roman Britain. The main source of lead is a mineral in which lead is combined with sulphur. Lead possesses different isotopes (atoms of different atomic weights), the principal ones being lead 204, 206, 207 and 208. The ratio of these isotopes varies according to the geological deposit. If one considers the history of a Roman lead coin, this began with the raw material from which the lead was extracted to make the coin, which may then have lain buried for two millennia, and was then discovered in a badly corroded state where most of the lead only exists as lead corrosion products. Isotope analysis reveals that the lead isotope ratios have remained unchanged. It was shown that the mint of Londinium in Roman Britain used lead entirely from British sources. [The main source, a Roman government franchise run by contractors, was the mines in the Mendip Hills, Somerset. Lead 'pigs' (large cast blocks often with raised inscriptions giving the emperor's name and source), have been found, notably in excavations in London. **Ed**.]

Conservation of coins has to be considered in various ways. Chemical cleaning of old coins removes chemical compounds formed over a long time, and which are part of the coin's history. This process

cannot be reproduced once it has been erased. Such cleaning destroys the appeal and value of the coin. Removal of the chemical compounds from the surface of the coin leads to pitting. The only acceptable cleaning is the physical removal of chemically uncombined materials such as grease and dirt, using an inert degreasing solvent. Dirty silver and gold may be cleaned using warm soapy water.

Various containers are used for the storage of coins. Those made from wood, such as coin cabinets, have to be chosen carefully, since wood generally contains acids and other corrosive substances, and adhesives may also be involved, which give off corrosive vapours. The only suitable wood for coin cabinets is seasoned mahogany.

The main danger is PVC (polyvinyl chloride), used in coin pockets and albums. PVC degrades, giving off acid vapour. It is normally treated with plasticisers and stabilisers to make it pliable and stable. These substances contain acids similar to those in perspiration, which migrate to the surface where they react with the metals in the coin. The only suitable material is PET (polyethyleneterephthalate) which is chemically inert, contains no stabilisers or plasticizers, and is optically ideally transparent.

[**Ed**. David presented his talk using illustrations of many relevant coins and chemical formulae but in the text of his talk printed here he has explained in plain man's language what the chemical formulae illustrated meant. This has produced a most readable and informative article.]

London Numismatic Club Meeting, 5 November 2013

Tony Holmes, a Past President of the Club and a frequent contributor to the Club's lecture programme, spoke on 'The local copper coins of the Iran and Afghanistan'.

Tony showed a number of illustrations of copper coins which were issued by the local town rather than by the government, which retained

close control of the silver and gold coinage. By contrast, the copper coinage is mostly pictorial and shows many living creatures. These coins circulated in areas mostly of the Shi'a persuasion - unlike the Sunnis, the Shiites do permit images of living things and even people.

The area in question is not even under a single rule. Iran had been taken by Genghis Khan and delegated to the Il-khans. From 1320 their empire began to break up, though in 1501 Iran was conquered and re-united by the Safavids. From 1722 their empire also began to break up but the Kajar shahs held Iran itself from 1779.

After the Mongol conquest, Afghanistan descended into anarchy until Mohammed Shaybani occupied Transoxiana in 1500, and went on to take Balkh and Badakhshan, which his dynasty held until 1747 when Ahmed Shah Durrani conquered northern Afghanistan.

South-eastern Afghanistan remained in the Mughal empire of India (Kabul and Zandarhar). Western Afghanistan (Herat) fell to the Safavids of Iran. All of which, though well evidenced in the gold and silver coinage, had absolutely no effect whatever on the copper issues.

Among the rather naïve, even crude, types shown were: deer from Qanduz, Hisar, Badakhshan and Qandahar; dragons from Tiflis and Yerevan, and even St George killing the dragon from Kimanshahan (this is a Middle Eastern tale brought back to Europe by the Crusaders); elephants from Gerevan and Gilan; swords from Balkh, Herat, and Ahmadshahi, which may show the fabled double-bladed sword of 'Ali-dhu al-fikhar.

Herat has a type with a quadruped on each side – it is usually described as a mouse or a rat, but one cataloguer has called it a lion, which strains credulity ! A better suggestion may be a jerboa. It also has a type with cheerful sun face using the edge of the coin as the outline of the

design, and a fish, overstruck on an East India Company ¼ anna.

Zandahar uses another fish; a hexagram with the word ‘’adl’ (‘just’) in the centre, and a crown of British Imperial type, possibly copied from a soldier’s button. It dates from the period of British occupation (1878-81), but does not seem to be a British issue. A similar type has a local interpretation of the crown, and another shows a peacock gobbling up a worm.

Abu Shehr on the Persian Gulf shows two lions holding swords above a double-headed eagle; one would love to know whether this reflected anti-Russian feeling at the time (1842).

A sun face peeping over the back of a lion is a well known figure in Islamic art; it was shown on coins from Isfahan, Nimruz, Tabriz,Yayd and Urumi.

Amongst many odd types was a bale mark (certifying a bale of goods) from Bandar Lenjeh, a lion seizing a deer (Qom), four suns in the angles of a cross (Ghazni, a RRR type), and a couple, who may be Laila and Majnun from Persian mythology, or possibly an astronomical type (Gemini, the Twins). The former interpretation may be supported by their not being of the same size.

One coin comes from a mint that simply marks its coins as ‘struck in Iran’. Does it mean that it is a national issue intended to circulate throughout the country, or simply an anonymous local mint ? Later coins do resemble issues that are clearly meant for the whole country and have denominations marked on them and are eventually machine struck, so this may represent the transition to government coinage after centuries of local productions.

Any attempt to correlate the types with dates of issue seemed to

show no relationship. However, an endeavour to correlate the types with the geographical area showed that of 57 'sword' types, 56 were from Afghan mints and only one from a Persian mint. It will be interesting to see whether other types are attached to a particular area or not. Weights do not in general suggest denominations – and most coins have been over struck several times. Though there are a few cases where, although all the coins are marked 'fulus', there could be a fractional relationship.

London Numismatic Club Meeting, 3 December 2013

Philip Mernick spoke to the Club on 'Mostly Made in Europe: Medieval jettons used in Britain'. He started by defining the terms jetton and medieval and said that he was using the Portable Antiquities Scheme (PAS) definition of 1066 to 1539 rather than the Oxford English Dictionary's 1000 to 1453. The PAS database is very useful as it indicates what was most probably used in the areas covered by the scheme. Medieval jettons were made in many countries but the presence of foreign jettons in collections does not necessarily mean that they were actually used in Britain. The PAS database recorded just under 7000 jettons of which 35% were described as medieval and 65% as post medieval. A closer examination of the first 1000 records broke them down as English 6.9%, French 19.6% and German 73.5%. This corresponds well with the medieval/post medieval split previously given as the German jettons were from Nuremberg and almost entirely post medieval in date.

The abacus or counting board was introduced into England around 1000 AD but the earliest description by Richard, Bishop of London, c. 1179, suggests the use of coins as counters. Thomas Maddox's *History of the Exchequer*, 1711, says that Venetian coins were used in the time of

King John (1199-1216). The Venetian grosso was first introduced by Enrico Dandolo (Doge 1192-1205), so Maddox's Venetian coins may well have been grossi of Dandalo or his successor Pietro Ziani (Doge 1205-29). English manufactured jettons first appeared shortly after the opening of Edward I's new London mint in the Tower of London in the 1270s and they continued to be made throughout the reigns of Edward II and III. The PAS database contains examples of most main types, both mint struck and crude possibly 'unofficial' types.

Italian jettons were probably made from the 13th to the 15th centuries and large numbers are held in Italian collections. However, the PAS database only records one jetton as Italian and another that is most likely Italian, although not so described. A few more are, however, known to have been found in Britain, including one bearing the badge of the Bardi found near Salisbury c. 1938 (Salisbury Museum catalogue, part 3, 2001). Italians held many financial posts during the 13th and 14th centuries and it is possible that some had their jettons made in England rather than imported. The talk included several suggested examples.

French jettons were probably made in Paris from the middle of the 13th century and although one such early jetton was PAS-recorded (from Kent) the great majority were probably made in Tournai. These so-called 'banal' jettons with obverses showing standing kings, shields, crowns, dolphins, etc., and also some with Burgundy and Flanders related designs, have all been recorded in Britain. They represent what was used in Britain after local manufacture ceased . The capture of Tournai by the forces of Henry VIII in 1513, and its subsequent incorporation into the territories of Charles V, led to a significant decline in its commerce and jetton demand was subsequently met from Nuremburg. As previously mentioned these made up about two-thirds of all jetton finds recorded by

A selection of jettons found in England.

Top left: English, Edward II/III; top right: French.

Bottom left: Italian; bottom right: Nuremberg.

[All images from the PAS data base]

PAS. They start with small early issues, mostly found in London, continue with anonymous ship, Venus and rose/orb types, and then the extremely common versions with maker's name, those of Hans Krauwinckel being, by far, the most numerous.

What were all those Nuremberg counters used for? Cocker's popular arithmetic book first published in 1677 does not mention reckoning with counters but there certainly was still a demand in the 1630s as Zacharias Jansen obtained permission from the Amsterdam authorities to make copies of Nuremberg counters for customers in England. Although not recorded by PAS a number of these have been found in London; no Continental finds are known. Similarly, the William Hall/Paines brings Paines tokens with rose/orb designs, listed as Dickinson as uncertain 36 to 38A, may date from the 1630s rather than the 1660s.

Gary Oddie is currently studying the finds from three fields in Cambridgeshire that may have been the site of a market. The more than 800 finds mostly run from Mary to Charles II and include many silver coins, royal farthings of James and Charles I, 17th century tokens, wool seals and more than 200 jettons, the great majority being from Nuremberg. A market may have needed arithmetical calculations but also small change. Did the Krauwinckels fill the small change gap before, and during, the issue of the Lennox and Rose farthings?

The British Association of Numismatic Societies 60th Anniversary Congress, Greenwich, 5-7 April 2013

This milestone Congress marked the Diamond Jubilee of BANS, which was founded in 1953. It was held at the De Vere Devonport House Hotel, a grand four-storey red brick building with a maritime history (formerly a nursing college) situated in the centre of historic Royal Greenwich, a UNESCO designated World Heritage Site. The two great national societies, The Royal Numismatic Society and the British Numismatic Society had agreed to act as the joint hosts for this Congress. This was fitting as it mirrored the first full Congress, which was also similarly jointly organised and also held in London in 1954. Ninety people, including six past Presidents of BANS attended this Congress over the course of the weekend. Delegates mainly hailed from the UK, but there were also a few from overseas – Ireland, Australia and the USA.

The arranged programme followed the established format of these Congresses. An illustrated Souvenir Programme had been produced and was handed out on arrival as part of the Welcome Pack. On the Friday evening Nicholas Mayhew, President of the Royal NS, welcomed everybody to the Congress and introduced Marion Archibald, the weekend's first speaker. Her talk, 'The Mary Queen of Scots palm-tree ryal revisited' gave us a new over view and expounded further ideas on the design of the coin. Dinner in the hotel restaurant followed.

Christopher Comber chaired the first session on Saturday morning. He introduced Graham Dyer, former Curator and Librarian of the Royal Mint, who spoke about the first Congress which was held at Bournemouth in 1953, but this was actually before the Association was officially formed. Philip Mernick (the LNC's Treasurer) was the second speaker. He gave an excellent exposé of 'Thameside fakery: Billy and

Charley's extraordinary output'. In support of his illustrated talk, Philip had brought along some examples of these fake antiques manufactured by William Smith and Charles Eaton.

After the coffee break Dr Christopher Challis hosted the second of the morning sessions. He introduced Stewart Lyon who gave us 'Sixty years of Anglo-Saxon numismatics'. The next speaker was Raphael Maklouf, founder of the private Tower Mint and of the London Mint. and well-known for his design of the Queen's previous head on our coinage. His 'off the cuff' contribution was entitled 'A sculptor's personal view of royal effigies on coinage', where his forthright comments on portrait design were in complete contrast to the previous speaker!

After lunch, attendees were able to take advantage of the regular BANS Congress Saturday afternoon free time. No special group outings, trips or visits had been planned or organised. The Congress's fine location offered everyone the opportunity to experience and savour a place that has helped to mould Britain's maritime history. Some of the main attractions included The National Maritime Museum, the largest museum of its type in the world, and situated next to the hotel. The Royal Observatory, home of Greenwich Mean Time and the Prime Meridian, is situated on the hill in Greenwich Park, the oldest Royal Park in London. The Old Royal Naval College (now Greenwich University) with its extensive grounds immortalised by Canaletto in 1752, and its Painted Hall, one of the finest banqueting halls in Europe was currently undergoing an extensive conservation programme. The Cutty Sark, the last of the tea clippers and the swiftest sailing ship in her day, was installed in dry dock in 1952, gutted by fire whilst under restoration in 2007, and had since undergone extensive reconstruction and was now beautifully restored and reopened to the public, together with a visitors'

café beneath its raised hull. Or, one could just relax in any one of the historic hostelries nearby.

Saturday evening is the time for the traditional BANS Congress Dinner, which was held in the hotel. Each attendee received at their diner place a small bag containing five chocolate 'coins'.These 32mm diameter pieces had been designed by joint Congress organiser Kevin Clancy's wife, Laura Partridge, who works in the Design Department at the Royal Mint. Coin engraver Robert Elderton carried out the modelling for these 'coins'. These delightful mementoes portrayed the BANS logo on one side, and on the other, an abstract conception of swirling banners together with the wording BANS GREENWICH 2013 – a nice touch to the evening. There followed a short raffle.

John Rainey chaired the first session on Sunday morning. He introduced Robert Bracey, a specialist on Indian coins. Robert delivered a measured talk on the ancient 'Temple of the Sun: The coinage of Multan to AD 965'. The next talk was given by Dr Michael Lewis and Ian Richardson, respectively Deputy Head and Secretary of the Department for Treasure and Portable Antiquities in the British Museum. Appropriately for this weekend at Thames riverside Greenwich their contribution was entitled 'Finds from the mud'.

After coffee, Keith Sugden took charge of the final session, and began by welcoming to the stand Peter Clayton (a past President of BANS and also of the London NC), to give us The Linecar Lecture: ''Remember Nelson', Britannia's God of War. The medallic and numismatic record'. This talk, illustrated by traditional 35mm colour slides, looked at medallic and coinage portraits of Nelson relating to his great naval victories. The speaker's pace was fast and attention gripping,

and from this writer's viewpoint somewhat appropriate, for Admiral Lord Nelson's body had lain in State here in Greenwich in 1806 in the Painted Hall, part of the Old Royal Naval College.

The final talk and to conclude the programme was the CNG (Classical Numismatic Group) Lecture. This was entitled 'Alexandria, Queen of the Mediterranean, and the coinage of Roman Egypt', by Professor Chris Howgego of the Ashmolean Museum, Oxford. Lunch in the hotel restaurant was followed by departure from a very good Congress.

The choice of Greenwich as the location for this special Congress was an excellent one. Our own club, the London NC, was one of the original 13 local societies, alongside the two national societies, the Royal and the British, to attend a meeting on 11 April 1953 to consider a scheme for establishing a British Association of Numismatic Societies. This followed a number of 'Coin Days', which had been organised since 1947. The London NC has co-hosted together with the Royal NS and British NS a BANS Congress both in 1966 and 1975, and then singly in 1989.

This Congress was the most expensive to have been held by the BANS, but the cost to attendees had been heavily subsidised by generous and substantial numismatic trade support which it had received and for which proper recognition was delivered from the Chair. The London NC's own webmaster, Harold Mernick, was on hand throughout the weekend to ensure that the digital projection of speakers' contributions went effortlessly and without any hitch (and also the 35mm slide projector). I quote from the Introduction penned by Dr Kevin Clancy (joint organiser with Dr Joe Bispham) in the printed Commemorative Programme: 'A lot has changed over the course of the last 60 years but

the friendly spirit of co-operation remains. By bringing people together in a congenial setting to discuss and learn from each other, the weekend will be a celebration of what BANS does well'.

However, the reducing numbers of societies and clubs, and also their memberships, is of national concern to BANS. In 1970 there were no less than 70 clubs and societies affiliated to the Association. Today, there remain but 38, with another ten known outside of BANS. Numismatics is changing rapidly, the Internet is facilitating the recording, archiving, imagining and dispensing of numismatic knowledge and material on-line. BANS is about numismatics, yes, but with a live wrapper, its forte is meetings with cordiality and sociality, everything the Internet is not. As Seneca the Roman philosopher and writer once said: 'To be everywhere is to be nowhere'. The two great societies, plus many local societies, are putting their material on-line, developing their websites, both to advertise themselves and potentially to attract new members.

As in the wider world of commerce, the message may be uncomfortable for some to contemplate or digest, but successful organisations have learnt to evolve or change to survive. After 60 years of success, the challenge for BANS is to remain vibrant but, more importantly, relevant to the numismatics of the future. Can BANS survive until its centenary or even its 75th anniversary? Who knows, but to do so, like all societies and clubs, it will have to take on board and compete with social developments influenced by rapidly changing modem media. The London Numismatic Club, a staunch supporter of BANS, wishes it well.

Anthony Gilbert

CLUB AUCTION RESULTS **by Anthony Gilbert**

118th Club Auction, 2 July 2013

Although this Club event was printed in the 2013/14 Programme card as the 119th Club Auction, it was in fact the 118th, which had been postponed from 14 May, the last listed meeting in the previous Programme card.

The auction was held at the Club's usual meeting place, the Warburg Institute, at 6.00pm, the Club's new starting time for all meetings.

Twenty minutes were allowed for viewing and inspection of the 90 lots that had been assembled by the auctioneer, David Powell. Lot 26 of the 90 listed lots had not been presented. It was announced to the 15 members and one guest who were present that Club Rule 12a – 'Only Club members shall take part in Club auctions' would be strictly adhered to.

Following the new arrangements agreed with the Warburg Institute whereby we finish our meetings at 7.30pm (with nominal 'breathing space' to 7.45pm), the auctioneer had decided to dispense with the interval and to run straight through the bidding process, thus allowing the cashiers enough time to tally the books and make payments to those vendors who were present on the night. Marcus Phillips had agreed to act as deputy auctioneer.

The 13 paddle holders had a good mixture of lots to bid on – coins, tokens, medals, banknotes and books covering many areas. The auctioneer set a fast pace, such that the cash desk requested several times for a minute's break whilst they caught up with successful bidders queuing to pay for their lots. There were five vendors, including nine lots

of books and off prints from the estate of the late Paul Edis, the Club's sorely missed Treasurer, and which had been donated towards Club funds.

As with all auctions great and small, it pays to concentrate, for one can get carried away in the bidding process and over pay, or else 'drift' during the quite periods and miss bargain opportunities. Vendors had placed keen reserves, with many lots being knocked down at, or just above, their reserve price. Top price on the night was £20 for lot 14, an Elizabeth I sixpence, 1567 mm lion, which sold at its reserve. Also, for £20 was lot 90, a selection of 41 South American banknotes, remarkably with no reserve. Lot 16, a Charles the Bold of Burgundy double patare, was knocked down for £17 against its reserve of £6. Lot 49, two Nuremburg jettons were bought at £10 against a reserve of just £2. Lot 13, a Celtic Potin Class 1 went for £15, three times its reserve. Lot 73, the 1949 edition of Seaby's *English Silver Coinage*, was a bargain 'steal' for £1 against no reserve; although obviously dated, it is still historically interesting. Seven lots of *The British Numismatic Journal*, 1974-1980, were keenly reserved at just £3 each, and at which amount they all sold. Overall, banknotes did well, as did tokens and medals. Fifteen lots remained on the table, failing to arouse any interest.

Total sales for this Club auction were £393.00 with the Club benefiting by way of commission and donation (Paul Edis's lots) to the sum of £59.10. This auction had been postponed by two months because of prior commitments by some of the Committee members. However, the auctioneer compiler, David Powell, had done well to push forward the not easy task of gathering the lots together and then producing the list on time. We also thank the members for making the evening a successful one by their participation – on the night it had all been worth while.

OBITUARIES

Robert Seaman, 1935-2013

Robert (to us, always, Bob) was an only child whose life was altered at the age of ten when his mother was killed in one of the last V2 rocket attacks on East London. His father worked night shifts servicing London Transport buses. so after a spell in hospital Bob was passed to various aunts. I think that this led to him being rather 'driven' to succeed. Everything he did (except sport) he did meticulously. In his teens, he was a keen photographer, fisherman and jazz clarinettist; the latter led to the offer of a job playing in a resident band in the West End, but he took the safer option of what was then the Bank of British West Africa. Over the years this morphed into the Standard Chartered Bank and Bob rose to be Personnel Manager, one of the persons he managed being a youthful John Major.

The Bank nurtured his interest in coins and West Africa and he was proud to become a Fellow of the Royal Numismatic Society, a Fellow of the Institute of Bankers and, later on, a Fellow of the Royal Philatelic Society. His term as Treasurer of the LNC was before the computer age and at intervals I spent time addressing scores of envelopes. In time Bob became knowledgeable about silver, old documents, clocks and watches, and the Boer War. I dreaded his every change of direction because it led to another shelf being filled with learned tomes, both modern and antiquarian, on the latest interest.

The many letters of condolence I have received reflect this variety – with one letter mentioning his research on the coinage of Stephen, another a philatelic display of Biafra and another his notes on Oliver and Richard Cromwell.

Twenty years ago he survived kidney cancer but the illness led him to take early retirement from the Bank. More recently, increasing pain and weakness in his legs and back, probably due to wartime injuries, coupled with the onset of diabetes, made his trips to London challenging. In July, he was unable to bear his own weight to stand up and was admitted to hospital. Over three months, the immobility brought on two attacks of pneumonia, and he died peacefully on 6 October. The week before he had asked me to bid for two lots in an auction, and they duly arrived three days after his death – a collector to the last! *Julia Seaman*

George Berry, 1928-2013

Although George Berry was not a member of the London Numismatic Club he was well known to its members as an interesting and amusing speaker on his own speciality of jettons and 17th century tradesmen's tokens.

George was born on 18 October 1928 and died on Sunday 7 April. I first knew him as Secretary for Publications of the British Association of Numismatic Societies (1962-9), on which he also represented the Buckinghamshire Numismatic Society. Elected a Fellow of the Royal Numismatic Society in 1964, he was awarded the Society's Lhotka Memorial Prize in 1974 for his book, *English Medieval Jetton*s as the most helpful to the elementary (and any other) student of numismatics. He had already produced *Discovering Coins* (1968), and *Discovering Trade Tokens* (1969).

In *Records of Bucks* he published well-researched articles on the token issuers of High Wycombe in 1967, and of Chesham in 1971. As a member of the British Numismatic Society (1972-91) he contributed to the *British Numismatic Journal* (1973), with Peter Preston Morley, on a

revised survey of Buckinghamshire tokens; with Brian Wood in 1975 on a hoard of tokens found in Bushey where he was then teaching; on two London tokens found near Hitchen and, in 1992 with Robert Thompson, on a misplaced token of Robert Bloomer in COLMAN HILL, from Halesowen, where he had lived, and taught children named Bloomer.

Local knowledge also enabled him to attribute the tokens of ROSORD to Rufford, Lancs. A valuable volume is his *Taverns and Tokens of Pepys' London*, 1978. As his son Ian said at his funeral at St Thomas's Church, Holtspur, Beaconsfield on Friday 19 April, he was a great *raconteur*, skilled in telling stories. The French noun appropriately recognises his love of France, so much so that a French pupil had invited him to the family home, and came to his funeral.

The biographical approach to history interested him the most. When he brought trays of tokens to a BANS lecture course it seems he had not read Milne's *Oxfordshire*, and we had an exciting late night finding punch links between different tokens.

Domestic problems did not stop him laughing, but probably meant that he kept no record of his publications, nor correspondence addressed to him. From a seat in the local supermarket he wrote a hundred articles, mostly on jettons and tokens, for *Coins and Medals* magazine and its successors. Somehow he usually tapped a new source, and fortunately he gathered up the substance of many of these articles in *Seventeenth-century England: Traders and their tokens* (1988), dedicated to his wife Barbara, who died in 1998. To mark his 80th birthday on 18 October 2008, George attended that year's Token Congress, and talked about his National Service experiences in the army. He will be much missed in the world of numismatics. *Robert H. Thompson*

[George's collection of 17th century Buckinghamshire tokens was offered at auction by Dix Noonan Webb (DNW) in their sale on 2 October 2013. They comprised lots 119 to 200, and a personal memoir of George by Peter Preston-Morley, with a colour portrait, preceded the listing. The collection fetched £22,374.

George's collection of jettons was offered by DNW on 4 December 2013, lots 2744-2860. Peter Preston-Morley's appreciation and a colour portrait preceded the listing.]

BOOK REVIEWS

Britain's First Coins. Chris Rudd and Elizabeth Cottam. 56pp, with over 300 coin illus. Paperback, £10.

Britain's first coins were issued from c. 120 BC to AD 45, and they were British Iron Age coins, not Celtic. An incredible amount of information has been packed into this small book. All the coins are enlarged and, a brilliant move, since the original photos are from black and white records, they have been coloured to indicate their appropriate metal. The coins were all issued east of the river Severn and south of the river Humber representing about 100 rulers and many different tribes. Some tribal kings, keen to project their image, produced a portrait type often based on Roman prototypes, and with reverses similarly based on Roman originals. However, in many instances the obverse and reverse designs are incredible examples of British Iron Age art. Far too often in the past the designs noted on the coins have been ignored instead of studied. The symbolism on the coins that careful study has revealed has cast fresh light on the Iron Age communities and their structure and is carefully explained here.

The book is laid out under a series of headings, not chapters, which

illustrate the coins, explain them, and often include parallel relevant objects that clarify them. Denominations are explained, the manufacture and casting process, and then coins from the individual issuing areas are presented.

We have here an extremely useful overview of Ancient British Iron Age art reflected on coins that are in many instances, miniature masterpieces. All the illustrated ancient British coins are cross referenced to the most up to date reference work on the series, *Ancient British Coins* (2010). This book is an essential first stepping stone into the series for the novice, and a most useful compact quick reference for the advanced collector and student.

The book really is incredible value in both monetary terms and content. *Peter A. Clayton*

A History of Roman Coinage in Britain. Sam Moorhead. 219pp, 44 figs, 30 maps, over 800 coins in colour amongst over 1600 colour photos. Greenlight Publishing, Witham, Essex, 2013. £25. ISBN 978-1-897738-54-2.

This book originates from the series of 22 articles that Sam Moorhead wrote in *Treasure Hunting* between 2008 to 2011. It is not, however, just a straight reprint of those articles, Sam has brought them up to date and added much new information and illustrations. The basis of the illustrations is coins that have been recorded in the Portable Antiquities Scheme (PAS), and gives a chronological overview of Roman coinage from c. 300 BC down to the early fifth century AD when Britain left the Roman Empire. Sam is the National Finds Advisor at the British Museum in the Department of Portable Antiquities and Treasure. Added to which,

he is closely concerned with the major numismatic and archaeological societies in Britain – you couldn't have a better combination than that of expertise.

The first chapters give very useful background information, dealing with recording Roman coins (and particularly noting the Treasure Act 1996 and the PAS); Roman currency systems; listing the emperors and empresses represented on coins found in Roman Britain, the obverse and reverse legends and types. The chapter on Roman mints is most illuminating, coins from mints as far away as Cyzicus in modern Turkey have been found in Roman Britain.

The main part of the book starts with Chapter VII (i.e. 7, it seems unnecessarily pretentious to number the chapters in Roman, and for some a bit difficult, all the way to XXVIII = 28). The history of Roman coinage is presented via the finds recorded in the PAS, beginning with Republican coins, which occur in some of the early hoards because they were still of good silver. The following chapters then present and describe the coins and their context in appropriate groupings, e.g. Flavians, Gallic Empire, etc.

The coin illustrations are mainly taken from coins recorded in the PAS, so many are in 'as found' condition but are still reasonably readable and identifiable since most have been enlarged by 11mm and their original size, as well as their PAS registration number, is given in the caption. Where some emperors or empresses are not represented via PAS finds, coins from the BM collection are used to illustrate them. To give the fullest coverage coins of persons not found in Britain, some such as Antinous (Hadrian's lover) are shown, although it is remarked on p. 84, that 'only a small number of provincial coins were ever struck for Antinous' – but outside of the large issues that were appropriately struck

at Alexandria (Antinous drowned in the Nile) there are at least 11 provincial mints striking for him.

Amongst the additional coins illustrated there are two outstanding anomalies: on. p. 45, Fig. 1, the cast bronze currency bar, 17cm (6¾ ins) across, is reduced to a mere 4cm (1½ ins) - even if it had been reproduced at half actual size it would have been better served. An even worse example of the designer's hubris is Fig. 47 on p. 155. Here the magnificent gold Arras medallion is not even at actual size (41mm) but reduced to a mere 32mm, completely losing the point and its detail.

Very much on the plus side in the book are the many excellent colour photos of overall views of specific hoards and even some of the hoards under excavation, and interesting relevant sites both in Britain and on the Continent. Of particular note is the series of colour distribution maps based on PAS finds provenances, which are acknowledged, to Philippa Walton (they come from her doctorate thesis that was based on PAS finds).

The book ends with Appendix I, a useful Glossary of Terms; Appendix II, Further Reading, and Appendix III, Archaeological and Numismatic Societies. The latter is rather misleading as on a single page it simply gives the email addresses for the Royal and the British Numismatic Societies, and the British Association of Numismatic Societies – referring to the latter's web site to find local societies.

These cavils apart, there is no question but that this book is going to be widely used not only for broad coin identification, but to give a rounded picture of coinage in Roman Britain and particularly to show how much information can be gained from proper reporting (even of the 'grot') which all adds to the overall picture.

One cannot leave this review without commenting on the splendid,

hugely enlarged, obverse of a unique gold aureus of Carausius, helmeted, found in Derbyshire in 2007. Fortunately, it was found in association with another aureus of Carausius (the fourth known of that type, Fig. 1, p. 147) and the Coroner declared them to be Treasure under the Treasure Act 1996, and a hoard; they were therefore saved for the nation.

Peter A. Clayton

Indian Medals, Tokens Pictorial Plaques and Pendants circa 1800 to 2010. The rise of modern India reflected in iconography; an insight into Indian Culture from mainstream traditions to the tribal art of rural India. Michael Mitchiner. 944pp, b/w illustrations throughout. Hawkins Publications, Sanderstead, Surrey 2012. Hardback, £135.

This is another massive tome from the prolific pen of Dr Mitchiner (it weighs exactly 7 pounds = 3.2kg). The author's prodigious output since 1975 comprises some 20 volumes, broadly covering the ancient Classical World, the Islamic World, and the India Sub-Continent, as well as Medieval Pilgrim and Secular Badges.

The Introduction states that 'much new material [is included]… since my book on Indian tokens…One of the purposes of this study is to publish new material and to integrate it with what is already known… some series are discussed in detail, while others are summarised in order to integrate them into the general pattern of evolution in the manufacture and use of medals, tokens… [etc]. Thus he sets out and explains his methodology and includes quite detailed and informative historical notes to the pieces. The reader should study the opening eight pages, 'Introduction and Scope', which expounds on the main types covered: these include the religious Ramatankas, 'jewellers' rupees, putlis (imitation Venetian gold ducats), medals of British India and the Indian States, chapras (badges of office), tolas (paper drafts - essentially bills of

exchange), base metal tokens struck for the coffee and tea industry, cash coupons and canteen tokens. Here the author also explains Indian cultural concepts that are important to digest in order to comprehend the iconography of the pieces, the expansive spread and diversity of both national and local beliefs and religious events crucial to the cohesiveness of the Indian social fabric.

The extensive list of Acknowledgements witnesses a long list of contacts (and their hospitality) during his several visits to India and is evidence of the amount of serious research undertaken.

The Contents List (almost an index in itself) covers 26 pages and divides into five main parts, themselves further sub-divided into a total of 37 sections. The reviewer found difficulty in getting to grips with this as the author's chronology does hop about, changing emphases on the differing approaches to the listings, and not always concurring with his stated treatment of these pieces. This is possibly the result of co-ordination in this important catalogue of the varying standards of listing supplied by the many contributors acknowledged.

The Catalogue section numbers pieces from 1 to 2642, nearly all illustrated. Some very important research, (not previously seen by the reviewer) appears in a 10-page section of detailed historical background material to the British East India Company (EIC) and its acquired territories gleaned mainly from early Gazetteers. A 42-page section highlights the many jewellers' copies of EIC rupees. Similarly noticed are the putlis - jewellers' copies influenced by the designs on Venetian gold ducats, zecchinos and sequins, all internationally traded coins, and featuring the Doges from c. 1646 to 1797 (when the Venetian Republic was destroyed by Napoleon). There is a good historical account of the operation of the tea and coffee trade, and how a serious fungal disease

saw the conversion of the coffee estates to tea production. Tea growing became a very important local crop and has left a legacy of base metal pickers' checks and estates tokens, largely issued from c. 1860 to the 1940s.

As with many combatants in WW2 India suffered metal shortage, especially after the Japanese occupation of Malaya, cutting off supplies of tin to produce the lower denominations. Small change being in short supply, other alternatives were sought using alloys, and especially with less nickel. Cash coupons made of cardboard appeared, and a 30-page section deals with these. Canteen tokens, originally card or paper chits, had to be replaced, because of their fragility, with copper, brass or aluminium tokens. These actually served a dual purpose as not only part payment to workers but also fiscally controlling the amount of food consumed – essentially a ration coupon.

A large section presents India's medals from Independence in 1947 to the present and covering many and diverse themes. At the end of this section is a useful glossary of terms. Another large section on Plaques and Pendants, 36 pages, is useful for comprehending the treatment of imagery on the medals and tokens, and there is also, on p. 896, useful tables of the main Indian scripts. The Bibliography is extensive in date, from the earliest, *The Histories* of Herodotus to the expected basic works such as Major Pridmore's extensive catalogues. The Index, some 25 pages, has approximately 3750 entries, reflecting the depth of study in the book.

In summary, this volume is a highly readable, useful and serious study of the subject matter. It can be difficult to read, but persevere – study the extensive Contents page, making notes, and then use the Index in conjunction. Dr Mitchiner's strength here lies in the enormous amount

of background information provided; the historical notes are copious, almost mini-essays in many instances, and the gathering together of much material that has only previously been published in various minor or obscure little known works.

This book should appeal to the historian and researcher as well as the numismatist and tokens and medals researcher. Considering the size of the book, and its wide-ranging contents, the price of £135 in relation to other numismatic publications, is remarkably reasonable.

Anthony Gilbert