Volume 28

Journal of the Numismatic Association of Australia

Numismatic Association of Australia Inc.

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Address:	PO Box Z5211 Perth St Georges Terrace WA 6831 Australia	Website: http://www.numismatics.org.au Website manager: W R Bloom
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ISSN: 0815-998X. The Journal of the Numismatic Association of Australia is a refereed annual publication. Views expressed by the authors in this journal are their own and do not necessarily reflect those of the editors or the NAA.

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Digital preparation and layout by Openbook Howden Print & Design, St Marys, South Australia.

Front cover: Obverse die and medallion of West Australian Newspaper Award (see article "Royal Australian Institute of Architects - WA Chapter award medals")

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President's Report

Our seventh biennial international numismatic conference NAAC2017, which was held in Melbourne in October, was a great success. National Organiser Walter Bloom and the local Organizing Committee chaired by Darren Burgess put together an interesting program, one of the consequences of which was the marvellous selection of papers for this volume of the Journal.

This last year has seen the publication of Peter Lane's *The Coin Cabinet*, and the winning of the Paul Simon Memorial Award by Barrie Newman. Both Peter and Barrie are great contributors to the Association.

Our Vice-President, Darren Burgess, has advised that he won't be renominating at our coming AGM due to the pressure of work and the need to progress some NAV activities. I am grateful to Darren for all the work he puts into the NAA, in particular last year's biennial conference and the Facebook page, not to mention the steady stream of news items. In fact Darren is not completely off the hook as he has become the Victorian State Representative to the Association.

Stewart Wright of Status International has kindly offered us use of a room for the Association's AGM on Monday 16 April (commencing 1pm) at his new premises at 64 Parramatta Rd, Forest Lodge, close to the University of Sydney.

The NAA continues to enjoy sponsorship at a sustainable level, with Noble Numismatics (Gold), Coinworks, Downies (Silver), Drake Sterling, Sterling & Currency and Vintage Coins & Banknotes (Bronze) all contributing to ensure the Association's continued success. However expenses are rising and receipts are falling, even with the steady level of membership. On the positive side, many are taking out ten-year memberships.

I am appreciative of the support of Council and other NAA members throughout the year, and particularly our Secretary, Jonathan Cohen, and Treasurer, Lyn Bloom, who are pivotal in the running of the Association, and our Managing Editor, Gil Davis, for his work in producing this Volume 28 of JNAA.

Walter R Bloom
President, NAA
www.numismatics.org.au
March 2017

Editor's Note

The 28th volume of the journal is a bumper issue and my eighth as Managing Editor. There are eleven articles reflecting a remarkable range of numismatic interests. I am particularly pleased to see the balance of modern Australian and historical numismatic interests, and the excellent scholarship throughout. Many of the articles derive from presentations given at the wonderful NAA conference held in Melbourne from 21-22 October, 2017. I thank the presenters for being willing to quickly turn their talks into articles, despite the hard work this entailed, as well as the dedication of the other contributors.

This journal is the annual publication of the peak numismatic body in the country. As noted in the last volume, I have been working with the President and the Editorial Committee to ensure the standard of all articles we publish compares favourably with the best international numismatic journals. This includes a rigorous double-blind peer-review process. I thank the members of the Editorial Committee (listed below) and the two anonymous reviewers assigned to each article for their prompt and constructive help.

I also wish to express my thanks to the two key people who work quietly and efficiently behind the scenes to help me get this journal out: John O'Connor (Nobles) who proof-reads the articles, and Barrie Newman (Adelaide Mint) who carefully looks after the production process.

In this volume we have six articles on modern Australian topics. The articles by Paul Holland and Walter bloom are numismatic studies respectively of George V pennies and award medals struck by the Royal Australian Institute of Architects, WA chapter. Their treatments are exemplary demonstrations of the 'arcane art' of numismatic studies combining detailed knowledge with keen observation. These are foundational studies for others to follow. Vincent Verheyen uses his expertise in chemistry to analyse surface marks on predecimal proof coins made at the Melbourne branch of the Royal Mint. He successfully demonstrates that some of the marks result from production rather than careless handling, a finding that will have implications for collectors of proofs generally. Jeremy McEachern, Barrie Newman and David Rampling show another side of numismatics – how it can be used to inform our understanding of the past. Their entertaining articles range from illuminating the story of one of Australia's earliest dealers (Rampling on Isidore Kozminsky), to the sporting achievements of one of the country's celebrated early athletes (McEachern on Richmond 'Dick' Eve and the collection of his memorabilia in the National Sports Museum), and even the sorry tale of an 'official' fraudster who nonetheless got away with his misdeeds (Newman on a Ugandan High Commissioner).

The volume also contains five articles on matters historical. Three of them deal with iconography and make fascinating reading, especially when taken together. Bridget McClean looks at Tarentine civic coinage c. 470–450 BC. Charlotte Mann and Rachel Mansfield both deal with iconography under emperors of the Severan dynasty of Rome in the early third century AD. Charlotte deals with the imperial portraiture of Caracalla, while Rachel examines the civic coinage of the eastern city of Antipatris under Elagabalus. The results of their studies are illuminating about how important coins were for disseminating propaganda, and in turn, understanding what was important to the emperors and cities that commissioned them. Christian Cuello takes us to the world of the Visigoths, best known for sacking Rome, but also producers of coinage, some of which reside in the Australian Centre for Ancient Numismatic Studies collection at Macquarie University, which he catalogues and discusses. Finally, Frank Robinson provides a careful study of bank notes of the Empire of Brazil which will be of interest to aficionados of paper money.

There is something for everyone in this volume.

Dr Gil Davis
Managing Editor

EDITORIAL BOARD

Managing Editor
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translate@ihug.co.nz

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(Roman coinage; ancient tokens)
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c.rowan@warwick.ac.uk

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Australian Centre for Ancient Numismatics
ken.sheedy@mq.edu.au

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Te Papa Museum, Wellington
mark.stocker@tepapa.govt.nz

Mr Christian Stoess
(Mediaeval)
Berlin Coin Cabinet
c.stoess@smb.spk-berlin.de

Professor Matthew Trundle
(Money and economics in antiquity)
University of Auckland
m.trundle@auckland.ac.nz

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Articles must comprise original research on numismatic material including but not limited to Australasian numismatics (coins, tokens, medals, banknotes) or ancient or mediaeval numismatics. Manuscripts can be emailed to any member of the Editorial Board in your area of research, along with a copy to the Managing Editor.

Royal Australian Institute of Architects - WA Chapter award medals

Walter R Bloom
Western Australian Museum

Abstract

The Institute of Architects of Western Australia was formed in 1896, incorporated in 1902, became the Royal Institute of Architects of Western Australia in 1921, the Royal Australian Institute of Architects (WA) in 1943, and then the Australian Institute of Architects (WA) in 2008 when the Australian parent changed to a more business-like model. The Royal Australian Institute of Architects (WA) as it is still called had the Bronze Medallion struck in 1925, and several different medals over the subsequent ninety years. Local members were also eligible for certain awards of the Royal Institute of British Architects and the Australian Institute of Architects. We detail the progression of these awards which were made variously to students, buildings and the architects themselves.

The first definite reference to the Institute of Architects formation in Western Australia seems to have been on Wednesday 27 May 1896 when *The West Australian* reported that on the preceding day a meeting of architects in the Criterion Hotel established the Institute of Architects in Western Australia. At that meeting George Temple-Poole was elected as the first President and the entire Committee was established.

When the Institute applied for incorporation in 1902, the Government Gazette described the objectives of the Institute as follows: *The cultivation of the science and art of architecture, advancing, protecting and elevating the practice of it in its several branches, and encouraging intellectual and social discourse among the members.* The Institute's motto was *Ad Altiora*–"Towards higher things". (*Western Australian Government Gazette*, 14 February 1902, p 584).

In July 1921, additional recognition was accorded to the Western Australia Institute of Architects when the Governor proclaimed that King George V had given permission for the association to be known forthwith as the Royal Institute of Architects of Western Australia (RIAWA). The RIAWA made representations in 1924 to the Perth City Council suggesting the awarding of a gold medal annually to the architect who shall erect the best building in the city, but this suggestion was declined (http://nla.gov.au/nla.news-article31223107).

One of the earliest supporters of the RIAWA was Eustace Gresley Cohen, an English-born farmer and architect. He practised architecture in Bunbury and became involved with the Institute of Architects of Western Australia. Cohen always took a very keen interest in the work and progress of young people in architecture. It was for this reason that in 1924 he established a bronze medal to recognise students who have set themselves apart with their work, their attitude to their fellow peers and the respect they have within the profession.

The Bronze Medallion

The first medal (below) of the RIAWA shows the year of founding of the institute as 1892, contributing to the great mystery surrounding just when the Royal Institute of Architects of Western Australia was formed. The year 1892 is enshrined in the RIAWA seal, as shown on this medal, and in various references around 1910-1913, even though the earliest known reference is 1896. Indeed, according to http://blog.perthmint.com.au/2012/09/18/classic-high-relief-from-the-1930s/, *an attempt to establish RAIAWA*[1] *took place four years earlier – and presumably that was considered its foundation date for the purposes of the medal.*

© The Perth Mint © Trustees of the British Museum 1933, 0104.4

Obverse: THE ROYAL INSTITUTE OF ARCHITECTS OF WESTERN AUSTRALIA/ (female nude (Architecture) seated left under John Ruskin's Seven Lamps of Architecture in pilastered apse)/1892/AD ALTIORA

Reverse: (laurel wreath)

Size: 37mm *Metal*: Bronze – Gilded *Designer:* n/k *Mintage*: n/k *Mint:* Perth Mint.

The Perth Mint advises that the dies were made by Hobbs, Forbes & Perisher.

The Seven lamps of Architecture, shown on the medal as 'Aladdin lamps', are *Sacrifice, Truth, Power, Beauty, Life, Memory* and *Obedience*. In 1932, the Perth Mint sent a gilded version of the RIAWA Bronze Medallion to each of the British Museum and the Western Australian Museum; the latter is nowhere to be found.

1 *Royal Australian Institute of Architects, Western Australia*

The first Bronze Medallion was awarded to William Garnsworthy Bennett (†1977) in 1925, the awards going through to 1941; 11 such medals were awarded in total.

In these early years the Institute of Architects of Western Australia (IAWA), and then from 1921 the RIAWA, was essentially a gentlemen's club, but with a strong emphasis on architecture. During the latter part of the 1920s discussions were held with the Institutes of Architects in other States regarding the need for a national Institute to be formed. However, due to the general lack of enthusiasm exhibited in WA for federation, Western Australia declined an invitation to become one of the founding partners of the Royal Australian Institute of Architects (RAIA) when it was formally created in 1930. The IAWA had become an allied society of the Royal Institute of British Architects (RIBA) in London in April 1910 (Richards, p 51), and stronger links were established in the 1930s. The RIAWA always had a close relationship with the Royal Victorian Institute of Architects (RVIA), and indeed when in 1939 the RIAWA was exploring forming a Chapter of the national organisation RAIA, it was the RVIA that supported the independent stance taken by the RIAWA in wanting to still preserve state autonomy (Richards, p 89).

Moves to join the national body continued and were approved by a special meeting of the RIAWA Council on 5th January 1943 and at a special general meeting of members on the following day. The public announcement of the formation of the WA Chapter (RAIA (WA)) of the RAIA appeared in the March 1943 edition of *The Architect*. At the first meeting of the new Chapter, Albert Ernest Clare's efforts in guiding the merger to a successful conclusion were acknowledged by his election as the first President of the Western Australian Chapter.

E G Cohen Medal

Late Mr. E. G. Cohen's Estate (1938, May 20). *Northern Times* (Carnarvon, WA), p 4. http://nla.gov.au/nla.news-article74921297.

The Late Mr. Eustace Gresley Cohen, architect, who died at South Perth in January, left an estate valued at £10,655 for probate, which was left to his family except a gift of £50 to the Royal Institute of Architects of W.A. to provide an annual medal to encourage the young architects of W.A.

The last Bronze Medallion was awarded in 1941 and then for some reason lapsed. The first E G Cohen medal (see the image below) was awarded to John Duat Mercer (†1988) in 1947.

It was announced last night that the award of the E. G. Cohen Medal to Messrs. John D. Mercer and D. M. B. Fitzhardinge, who were the most outstanding students of architecture in this State in 1947 and 1948, respectively, had been confirmed by the West [sic] *Australian*

chapter of the Royal Australian Institute of Architects. The presentation of the awards will be made at the Palace Hotel, Perth, on August 18. Originally known as the Bronze Medallion, the name of the award was changed when the West [sic] *Australian Institute was incorporated in the Australian body. It is only presented when a student shows outstanding ability and few have been issued since the award was instituted in 1936* (sic), *none having been confirmed since 1940* (sic). (http://nla.gov.au/nla.news-article47740156).

Obverse: THE ROYAL/AUSTRALIAN INSTITUTE/OF/ARCHITECTS/(flower)/ WESTERN AUSTRALIAN CHAPTER

Reverse: MEDAL FOUNDED BY/EUSTACE GRESLEY COHEN/1 9 2 4/ AWARDED TO/J.D. Mercer/1947

Size: 38.6x38.6x4.7mm *Metal*: Bronzed *Designer:* n/k *Mintage*: n/k *Mint:* Sheridan's?

There are no records of where this medal was made, but if not by Sheridan's, then the thinner version made by Sheridan's (see below) is certainly a very good copy.

The E G Cohen medal was awarded each year (one for most years up until 1983, and thereafter two per year) to those students who not only excelled in their studies, but also showed leadership skills and assisted the student body. At that time architects were trained at both the Perth Technical College (later the Western Australian Institute of Technology and then Curtin University) and the University of Western Australia. Students are nominated from both institutions, and make a written submission and attend an interview.

Obverse: THE ROYAL/AUSTRALIAN INSTITUTE/OF/ARCHITECTS/(flower)/ WESTERN AUSTRALIAN CHAPTER

Reverse: MEDAL FOUNDED BY/EUSTACE GRESLEY COHEN/1 9 2 4/ AWARDED TO

Size: 38.6x38.6x2.8mm *Metal*: Bronzed – Pewter *Designer:* n/k *Mintage*: n/k *Mint:* Sheridan's.

This is a thin version of the preceding medal, with the pewter version a test strike. It is not known in which year the change in thickness occurred. However the first order placed at Sheridan's was for 25 in January 1990, and a further 20 were ordered in August 2002.

Obverse: Australian/Institute of/Architects/(coat of arms)/Western/Australian/ Chapter

Reverse: MEDAL FOUNDED BY/EUSTACE GRESLEY COHEN/1 9 2 4/ AWARDED TO

Size: 38.0x38.0x2.8mm *Metal*: Bronzed *Designer:* n/k *Mintage*: n/k *Mint:* Sheridan's.

This medal is a redesigned version of the E G Cohen medal taking into account the change in name of the institute in 2008. Sheridan's records show that 20 of these medals were ordered in July 2010, and a further 12 in June 2016. Note that the Royal Australian Institute of Architects is still the official name of the Australian body, the Australian Institute of Architects is its trade (business) name; see below.

RIBA Street Architecture Medal/RIBA Bronze Medal

The RIBA had initiated an award for street architecture in London in 1923, which aimed 'to encourage excellence in design in street facades'. In 1932 it offered a similar award to the Royal Institute of Architects, Western Australia, to be awarded every three years. An explanation of the purpose of the award was published in the first issue of *The Architect* in June 1939:

One of the main purposes of the Award is to direct public attention to new buildings of outstanding architectural merit, and to give a wide recognition to the good qualities of design in such buildings.

The award also enables due recognition to be paid to architects whose buildings attain high standards of architectural quality, and thereby is a constant incentive towards the development of a finer and more beautiful architecture for our State.

The medal took the form of a bronze plaque affixed to the winning building. The first award went to Rodney Howard Alsop (†1932) and Conrad Harvey Sayce (†1932) for their design of the Hackett Memorial Buildings, University of Western Australia. The awards went through to 1964.

RAIA (WA) Bronze Medal

In 1969 the RIBA Bronze Medal was replaced by the RAIA (WA) Bronze Medal (in this case really a medal!), again awarded for a building.

Obverse: THE ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS/(coat of arms)/BRONZE MEDAL/AWARDED FOR ARCHITECTURAL EXCELLENCE/W.A. CHAPTER

Reverse: SHERIDAN

Size: 46.1mm *Metal*: Bronzed *Designer:* n/k *Mintage*: n/k *Mint:* Sheridan's.

The first award was made in 1969 to Ronald Jack Ferguson, in association with Professor Gordon Stephenson, for the University of Western Australia Law School building.

There is no mention of the architect on the plaque, but presumably the firm also received the small version suitably inscribed.

RAIA (WA) Architecture Medal

In 1984 the Bronze Medal was renamed 'The Architecture Medal'.

Obverse: THE ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS/(coat of arms)/ARCHITECTURE MEDAL/AWARDED FOR ARCHITECTURAL EXCELLENCE/W.A. CHAPTER

Reverse: SHERIDAN

Size: 46.1mm *Metal*: Bronzed *Designer:* n/k *Mintage*: n/k *Mint:* Sheridan's.

According to the JCY Architects and Urban Designers website, this medal was awarded for the best building over the previous decade of Prize Winners. Two firms are recorded as winning the medal, in 1994 and 1999 respectively; the second (illustrated) to JCY Architects and Urban Designers (Phillip Cox, Etherington, Coulter & Jones) for the Advanced Manufacturing Technology Centre in East Perth.

RAIA Gold Medal

Image courtesy Noble Numismatics (Sale 116, Lot 710)

Obverse: R · A · I · A MEDAL/(a tower between two figures in mediaeval costume, facing inwards, feet standing on rim of circle, holding a square (left) and plumb line (right))

Reverse: ARTEM PROMOVEMUS UNA/(two chained kangaroos facing inwards, supporting a shield charged with a fluted column in front of a sun rising over a brick wall)/P___B

Size: 63.5mm, 106g *Metal*: Bronze *Designer:* Paul Beadle *Mintage*: n/k *Mint:* John Pinches.

The above image is of a bronze version; the actual 'gold' medal is in gold plated 999 silver. The Gold Medal is the highest honour the RAIA can bestow, recognizing Australian architects who have produced buildings of high merit, who have produced work of great distinction resulting in the advancement of architecture, or who have endowed the profession of architecture in a distinguished manner. The first RAIA Gold Medal was awarded to Leslie Wilkinson in 1960, and the first Western Australian architect to win the RAIA Gold Medal was Mervyn Henry Parry (†2006) of Parry and Rosenthal in 1978. This was followed by Ross Kingsley Chisholm (†1998) and Gilbert 'Gil' Ridgway Nicol (†2010) of Cameron Chisholm Nicol in 1983, Donald Bailey of Howlett and Bailey Architects in 1991, and Kerry Hill of Kerry Hill Architects in 2006.

The West Australian Home of the Year Award

In 1961 *The West Australian,* in conjunction with the RAIA (WA), instituted an award for private residential buildings, where building designs featured in its Housing Section; this was essentially the annual Home of the Year Award.

Obverse: WEST AUSTRALIAN NEWSPAPER AWARD/(RAIA logo)/R.A.I.A.W.A.
Reverse: SHERIDAN
Size: 46.2mm *Metal*: Bronzed–Silvered–Gilded *Designer:* n/k *Mintage*: n/k *Mint:* Sheridan's.

Obverse Die of West Australian Newspaper Award

The inaugural award (and also the national Architecture and Arts award) went to Ian Brackenridge APTC (Arch), ARAIA, ARIBA for his home at 26 Cunningham Street, Applecross. The house was designed during 1958-1959 and completed in 1959.

Ian Brackenridge (b.1935) studied architecture at the Perth Technical College and like many of his contemporaries travelled overseas to work in the UK, and travel through Europe, returning to Perth in 1958.

His own home completed soon after remains an unorthodox residence in a conventional suburban setting. Combining a modest floor area and little formal circulation space within planning based on a 7ft module, the split level plan with entry at the half landing permitted the elevated living space to take advantage of the river views. The balustrade of the full width upper level balcony re-interpreted and simplified the filigree veranda screens of Victorian and Federation housing while the stressed plywood barrel vault roof forms demonstrated the concern for structural and material innovation of the period. In 1961 the

house was awarded both the inaugural 'West Australian Newspaper's Home of the Year' and the national 'Architecture and Arts' award.

https://dynamic.architecture.com.au/emailnews/national/Heritage/WA-Brackenridge-House-FINALamended.pdf

The last award was made in 1968 to the architect Peter Overman for the house at 57 Napier Street, Cottesloe, builder Corser Homes Pty Ltd (*The West Australian*, Saturday 14 December 1968, pp 39-40). Unfortunately the RAIA (WA) records on the West Australian Home of the Year Award are for the most part missing, but the awardees' names together with details of the houses they designed were published in *The West Australian* over that period. Now while the medal is shown in three separate finishes, there are no records at either RAI (WA) or Sheridan's of whether these represented separate award levels, nor is this known by the first awardee (private conversation). However *The West Australian* articles on the Home of the Year Award refer to both the Home of the Year and Awards of Merit. Over the period 1961 to 1968, there were variously two, one or no Awards of Merit. (in 1962, the First and Second Awards of Merit were referred to as Second and Third Prizes respectively.) In each of 1966 and 1967 there was just one Award of Merit, and in 1968 no Award of Merit (and the not-so-glowing summary assessment of the chosen 1968 Home of the Year included ...*came closest to satisfying the many requirements of the three judges*); it is clear that this trend contributed to the demise of the award. It is likely that the gilded, silvered and bronzed medals were given to these three categories. In 1962 and 1964 it was also reported that a bronze plaque was affixed to the winning home. A photo (dated 10 April 1965) in the *West Australian Newspapers Limited* archives indicates that the following is the plaque in question (perhaps engraved?). It shows the coat of arms of the Royal Australian Institute of Architects.

Bronze, 18.8x18.8cm

The inaugural Australian Architectural Conference (1950)

The first Australian Architectural Conference was held in Perth in the week beginning Monday 13 November 1950 (http://nla.gov.au/nla.news-article59594064), with the annual meeting of the Royal Australian Institute of Architects also held on the Monday. At a civic reception interstate delegates were welcomed by Lord Mayor Joseph Totterdell (*The West Australian*, Tuesday 14 November 1950, p 10. http://nla.gov.au/nla.news-article48135825).

CIVIC RECEPTION FOR ARCHITECTS

Members of the Royal Australian Institute of Architects, at present in Perth for the first Australia-wide architectural conference to be held here, were given a civic reception by the Lord Mayor of Perth (Mr. J. Totterdell, M.L.A.) in the Lord Mayor's parlour yesterday. Talking together are the secretary of the institute (Mr. E. J. A. Weller), left, of Queensland, the president of the West Australian chapter of the institute (Mr. W. T. Leighton), Mr. L. Laybourne-Smith, of Adelaide, and the secretary of the West Australian chapter (Mr. E. G. Sier).

Conference name buttons

Obverse: A.R.I.B.A./Mrs./N. H. PERRIN (W.A.)/PERTH
A.R.I.B.A./OTTO/HAUSER/(VIC.)/PERTH
Reverse: -
Size: 32.1mm *Metal*: Pin-back button *Designer:* n/k *Mintage*: n/k *Mint:* n/k.

The abbreviation A.R.I.B.A. refers to the person being an Associate of the Royal Institute of British Architects.

President's pin

RAIA State presidents are each given a silver clutch pin badge.

Obverse: (RAIA logo)
Reverse: -
Size: 23.0x14.3mm *Metal*: Silver *Designer:* n/k *Mintage*: n/k *Mint:* Andrew Welch.

The following clutch pin badge is an example of RAIA merchandise rather than an official badge.

Obverse: (RAIA logo)/R A I A
Reverse: SHERIDAN
Size: 18.6mm *Metal*: Soft Enamelled Gilded *Designer:* n/k *Mintage*: n/k *Mint:* Sheridan's.

Royal Australian Institute of Architects Medal

(1)

(2)

Obverse: ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS
Reverse: (1) SHERIDAN
(2) *B. F. C.* WRIGHT/1989 – 1990/ SHERIDAN
Size: 51.3mm *Metal*: Bronzed and Gilded *Designer:* n/k *Mintage*: 10 *Mint:* Sheridan's.

The version with ribbon was given to Past Presidents. It was instigated in 1990 for the RAIA National Convention in Perth and Kuala Lumpur, held 9-11th and 13-14th October 1990, so that the WA Chapter President at the time would have a medal like his interstate counterparts. The conference, *Architecture in Isolation*, was organised by Peter Parkinson (†2014) who designed the restoration of His Majesty's Theatre. Brian Wright was President of RAIA (WA) during the period 1989 – 1990.

This large (89.5mm, uniface) version of the medal is to be worn on a sash around the neck by the President at official functions including chairing of meetings; just one was made and it is hardly ever used.

Australian Institute of Architects (AIA)

On 1 July 2008, the Royal Australian Institute of Architects commenced trading as the Australian Institute of Architects (ABN 72 000 023 012). While Australian Institute of Architects is the name the RAIA likes to be known by, it is just a business name, owned by the public company Royal Australian Institute of Architects Limited (ACN 000 023 012). According to company legal records, the business of the AIA is "specialist book sales, educational courses, building inspection services and insurance brokers" (http://www.archsoc.com/kcas/raianewname.html). The AIA website states *The Australian Institute of Architects is the peak body for the architectural profession in Australia, representing 11,000 members. The Institute works to improve our built environment by promoting quality, responsible, sustainable design*.

Architects Board of Western Australia

Obverse: ARCHITECTS BOARD OF WESTERN AUSTRALIA/(stylised swan left on stand)/Architects/Act/2004

Reverse: (1) (wreath)/SHERIDAN-PERTH
(2) *BRIAN F C WRIGHT/Board Chairman/1999 – 2006*/(wreath)/SHERIDAN-PERTH

Size: 46.4mm *Metal*: Antique Silver *Designer:* n/k *Mintage*: 50 *Mint:* Sheridan's.

The RAIA (WA) has a close association with the Architects Board of Western Australia, and indeed they share the same building at 33 Broadway in Nedlands. This medal, with a once-off minting of 50 on 30 May 2005 (Sheridan's – File Cards), was given to inaugural Board members and a few senior officers in RAIA (WA). The architect Brian Wright held the position of Chairman of the Architects Board from 1999 to 2006.

I am grateful to:

Chas Sheridan (Sheridan's Badges and Engraving https://sheridans.com.au) for giving me access to the company's records and supplying examples of the RAIA (WA) dies and medals produced there.

Kim Burges (RAIA (WA)) and Brian Wright for providing information and giving me access to RAIA (WA) records.

Natasha Terbeeke (UWA Law School) for providing the image of the plaque affixed to the Law School building.

Chantelle Beckett (JCY architects and urban designers http://jcy.net) for supplying the image of that firm's medal.

Melissa Hayward, Syndication Administrator of West Australian Newspapers Limited, for her help in making available many of the Home of the Year images (plus details) on WESTPIX, which then led to locating the associated articles in *The West Australian*.

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Author

Professor Walter Bloom is the honorary numismatist at the Western Australian Museum. He is President of both the Numismatic Association of Australia and Perth Numismatic Society, Immediate Past Vice-President of the International Committee on Money and Banking Museums (ICOMON), and the writer of the Oceania sections of the Survey of Numismatic Research. Walter has been the recipient of both the NAA Paul Simon Memorial and the NAA Ray Jewell Silver awards.

w.bloom@murdoch.edu.au

Visigothic coins in the Gale collection of the Australian Centre for Ancient Numismatic Studies

Christian Cuello

Abstract

Recent scholarship into the coinage of the Visigoths has allowed for a better understanding of what was once believed to be a mono-metallic, and mono-denominational currency. It is evident that the Visigoths produced not only gold tremisses*, but also silver and copper denominations, while also using past Imperial coinage and currencies from neighbouring Byzantine territories and Western kingdoms. This article provides a brief account of the history of the Visigoths, and considerations of their coinage use, mining on the Iberian Peninsula, and brief reviews of past scholarship. Ten Visigothic* tremisses *and three copper fractions held in the Australian Centre for Ancient Numismatic Studies (ACANS), as part of the Gale collection, are catalogued.*

Keywords

[Visigothic coinage] [Late Antiquity] [Byzantine] [barbarian imitation] [Iberian Peninsula]

The Visigoths: origins and identity

The Visigoths emerged from the larger body of Gothic people who, throughout the fourth century, inhabited a region north of the Danube River on the Western bank of the Black Sea.[1] The Visigoths are associated with the multiple sieges of Rome by Alaric I, resulting in the eventual sacking of the *urbs aeterna* in 410 AD.[2] Mutually beneficial arrangements with Rome yielded the Visigothic Kingdom of Toulouse in 418 AD, which was soon lost to the Frankish-Burgundian alliance at the Battle of Vouille in 507 AD.[3] The Visigoths then retreated across the Pyrenees, eventually establishing in Toledo the capital of the new Visigothic Kingdom.[4]

The reign of Leovigild (568–586 AD), based at Toledo, saw significant developments: the consolidation of territories across the Iberian peninsula, the capture of Suevic and Byzantine lands, legal reform including lifting the ban on miscegenation between

1 Eremic 2014: 122; Thompson 1966: 1-2; Wolfram 1979: 57 & 130

2 Collins 1991: 55-6; Wolfram 1979: 158-9; For ancient accounts: Zosimus *HN* V.35 – VI.13; Jordanes *History* XXX: 155

3 Collins 1991: 107; Thompson 2014: 24; Wallace-Hadrill 1997: 71; Wolfram 1979: 192-3

4 Wallace-Hadrill 1997: 116-117; Wolfram 1979: 10

Goths and Ibero-Romans,[5] and the advent of the regal Visigothic monetary system.[6] His successor, and son, Reccared I, formalised the conversion from Arian Christianity (the religion of the Visigothic elite)[7] to the Catholicism of the Ibero-Roman populace.[8] Chindasuinth (642–653AD) began the compilation of what became the *Lex Visigothorum*, a set of laws (later expanded and revised) which would influence Goth and Ibero-Roman descendants for several centuries. It would outlast the incursion of the Umayyad Caliphate in 711AD, who with a meagre force[9] encountered reportedly little resistance in their conquest. The decisive defeat in 712AD at the Battle of Guadalete brought about the final years of the *regnum Visigothorum.*[10]

The legacy of Imperial coinage in barbarian culture

Coin finds from the Danube region show that during the early stages of interaction between the Goths and the Roman world in the 4th century, gold currency was extensively utilised[11] either for trade or to recruit Gothic troops into the Roman army in temporary (often fractured) and later more permanent arrangements. The response of Thedosius I to the Eastern defeat at the Battle of Adrianople in 378AD resulted in reinstating a treaty with the Goths – originally brokered under Constantine – in 382 AD to obtain troops in exchange for permission to settle in Thrace, relatively unchecked by Roman authority.[12]

Service as soldiers in the Roman army – as mercenaries and later as *foederati* – indicates direct, unequivocal pecuniary exchanges between Goths and Romans. The term *foederati* denoted troops raised from barbarian settlements either within or outside the Roman borders.[13] This was not an unusual practice, or exclusive to the Goths.[14] It is understood that the Visigoth *foederati* were recipients of subsidies which, by the age of Justinian (527–565AD), were paid annually in cash as opposed to earlier payments-in-kind of food rations.[15] Additional benefits included *hospitalitas*, which has traditionally hinged upon the idea of material property exchange and allocation from a finite, shared pool of material assets relinquished from Roman to Visigothic possession in thirds. It is also possible to arrive at a different interpretation of the nature of these assets. Goffart argues

5 King 2006: 13
6 Grierson & Blackburn 2006: 49-50
7 Where the term Visigoth is used it typically applies to the elite as issuers of coinage, and not the diverse Iberian population in Late Antiquity as a whole. See Wallace-Hadrill 2009: 116, Hillgarth 2009: 36-37; Ripoll Lopez 1998: 160-1.
8 Collins 1991: 145; Wallace-Hadrill 1997: 122-3
9 Collins 2005: 141
10 Hillgarth 2009: 112-3; Collins 1991: 150-1
11 Eremic 2004: 122-3
12 Southern & Dixon 1996: 46; Sivan 1987: 762
13 Southern & Dixon 1996: 72-3
14 Sivan 1987: 759; Naismith 2014: 284-5
15 Southern & Dixon 1996: 49 & 78; Haarer 2006: 186

these payments were provided from taxation revenues, drawn from the fisc: a more sustainable source for Constantius, at least in the 570s, to fund Gothic re-settlement in Roman territories.[16] This consideration provides a context within which to consider the payment of service – or simply good behaviour – in gold.

As the exchange of wealth and property maintained agreements and service, coin production became a preoccupation for the Visigoths who progressively found themselves, amongst the other barbarian kingdoms, as stewards of the diminishing Roman power in the West.[17] The persistence of Roman economic institutions well into the Visigothic reign, such as the aforementioned fisc,[18] and a multi-denominational currency, which frequently accommodated foreign coins,[19] serves to demonstrate some level of sophistication and adaptation, if not continuity.

Minting and mining practices on the Iberian Peninsula

The gold coinage of the Visigoths can be divided according to the following scheme:

1. a period of pseudo-Imperial coinage from Gaul (c.418-c.507AD),
2. a period of pseudo-Imperial coinage from Spain (c.509-c.580AD), and
3. the fully-fledged gold *tremisses*, and alongside it the copper issues, of the Visigothic monarchs (c.584-714AD).[20]

The ten gold *tremisses* and three copper fractions in the ACANS collection span several hundred years of cultural, political and economic transformation. They provide a narrative of a people in transition from life on the fringes of the Roman Empire to an independent kingdom of their own.

The Visigothic monetary system after the reforms of Leovigild is considered a unique example for its time; he is among the first of the successors of Roman authority to mint in his own name.[21] However, ongoing influence from the Byzantine Empire[22] is apparent in the imitative coinage produced by the Visigoths (Cat. No. 1-4) and neighbouring kingdoms. An example from the ACANS collection of the subtleties of the relationship between East and West, is a *solidus* in the name of Zeno (Fig. 1). The reverse inscription, terminating in θ is likely the mark of Theoderic the Great (originally a Gothic hostage

16 Goffart 2006: 135-138; Naismith 2014: 284-5
17 Naismith 2014: 278-9
18 Jarret 2010: 6
19 Crusafont I Sabater 1994: 98-101; Crusafont, Benages & Noguera 2016: 245; Naismith 2014: 279; Mora Serrano 2016: 144-7
20 Grierson & Blackburn 2006: 44-54; Pliego 2009: 75
21 The first known autonomous issue of barbaric coinage is attributed to the Suevic king of Galicia, Rechiar (448-56), close to a century earlier. See Berndt 2015: 90.
22 Crusafont I Sabater 1994: 83, 91-3; Grierson & Blackburn 2006: 8-12

in Constantinople who was made consul and dispatched by Zeno to Italy in 488 AD[23]), as seen in later imitations under Anastasius prior to 497 AD.[24] The utilisation of Byzantine types and weight standards[25] in producing the fractional *tremisses*, and in the continuous reference to *solidi* as a standard in legislative accounts as late as the seventh century[26] attest to further synchronicities in the Eastern and Western economies.

Fig. 1 07GE156. Rome, Reign of Zeno (474-5AD; 480-491AD)
Obv. DNZENO PERPAVG; frontal bust with head turned ¾, helmeted, holding spear and shield with cavalry motif
Rev. VICTORI-A AVGGGθ, CONO[B] in exergue; Victoria with long jewelled cross standing l., star in r. field
Solidus. 4.36g, 19.6mm, ↓ Ref.: RIC10.930

Pliny attests to the richness of mineral deposits in the Iberian Peninsula,[27] and there is archaeological evidence of extensive mining during Roman times; in regards to gold, some 231 mining sites have been identified in the North West regions – Asturia, Gallaecia, and Lusitania.[28] Large-scale exploitation of mineral wealth of the region, however, may have only occurred in the first and second centuries BC,[29] with a limited revival of mining in later centuries.[30]

Iberian mines were incorporated into Roman organisational structures (fiscal, territorial & administrative)[31] and while the scale and form of the exploitation of mineral deposits in the region underwent changes in Late Antiquity, there remains a case for territorial units albeit administered by Church parishes and local aristocracies.[32] As such, smaller mints could be founded to take advantage of local mines.[33] Our understanding of Late

23 Metlich 2004: 5
24 *Ibid.*: 16-18. Metlich states there are no known examples of Theoderic issuing *solidi* in the name of Zeno. Following his argument for the attribution of Theoderic issues under Anastaius, this coin and others like it appear to be evidence to the contrary.
25 While the denominations generally correspond, standards eventually gave way to a slightly lighter 'Germanic' weight of 20 grains (1.3g) rather than 8 siliquae (1.5g). See Crusafont I Sabater 1994: 83; Grierson & Blackburn 2006: 50.
26 King 2006: 193-4. Some exceptions are noted in Naismith 2014: 282.
27 *Nat.* 33.21
28 Edmondson 1989: 87-8
29 Orejas & Sánchez-Palencia 2002: 581, 589
30 Edmondson 1989: 89
31 Orejas & Sánchez-Palencia 2002: 590-1
32 Sánchez-Pardo 2014: 1009-14; Orejas & Sánchez-Palencia 2002: 592-4
33 Grierson & Blackburn 2006: 52-3; Sánchez-Pardo 2014: 1009-14

Antiquity mining in Iberia is incomplete; open cut mines (which most certainly existed) and alluvial sources, for example, elude rigorous study. Of the known Visigothic mints from the issues of Leovigild onward the highest concentration were located in the north-western province of Gallaecia – 44 of the 96 Visigothic known mints are also found in this region.[34] These mines were by no means the sole source of gold for this purpose. It is also no longer acceptable to assume the traditional view that the Visigoths minted only in gold: the evidence for Visigothic copper[35] and now limited, silver issues[36] has overturned this assumption.

Recent archaeological research into the Iberian Peninsula during Late Antiquity has resulted in the number of known seventh and eighth century *tremisses* almost doubling,[37] the identification of Visigothic copper coins and silver fractions, and a better understanding of the urban landscape. Coin finds have also increased. While it has previously been assumed that gold quality steadily declined,[38] it is now apparent that a restoration of base purity took place during the reign of Reccesvinth.[39] However, the consistent evidence for debasement points to ongoing problems with gold supply which can now be better understood.[40]

Numismatic research

Here I will provide a brief overview of the key publications consulted for the catalogue. In its time, Miles' *The coinage of the Visigothis of Spain* (1952) was the most comprehensive survey of Visigothic regal issues, consolidating the significant works of Heiss (1872), Mateu y Llopis (1936), and others. Miles brought together some 3,500 coins from a range of collections. The main problem was the lack of literary sources, along with relative weakness in the metrological observations.[41]

A significantly older work, Tomasini's *The Barbaric Tremisses* (1964) demonstrated an attempt to apply a stylistic and chronological framework to the study of imitative coinage, focusing on the Victory type (designated VPW by Tomasini, and seen in several examples from the ACANS collection) as a peculiarity of imitative coinage of the Western barbarian kingdoms. Where Miles touched on the uniqueness of the designs, falling short of any further appraisal, Tomasini reveals a boldness in the deviation

34 Pliego 2009: 101
35 See Crusafont I Sabater 1994; Pliego 2009: 188-90
36 Crusafont, Benages & Noguera 2016: 244-7
37 Priego 2016: 27
38 Grierson & Blackburn 2006: 49
39 Priego 2016: 33
40 Crusafont, Benages & Noguera 2016: 245; one might consider the impact of the 200,000 *solidi* paid to Merovingian mercenaries by Sisenand I in the 630s (Fredegar, IV: 73) which could account for the steep decline in Au content in Visigothic coinage (Priego 2016: 28) and the corresponding improvement in Merovingian coinage (Wood 1994: 174).
41 As noted by Grierson 1953: 184

towards abstraction finally realised in the monarchic type.[42] Attempting to correct some of these issues, *Medieval European Coinage Vol. 1* (1986) contains a broad survey of coins minted after the Western Roman Empire and is an ideal point of reference for initial inquiry into the coinage of Late Antiquity. Any faults with this volume stem from the limitation of consulting only the Fitzwilliam collection, the lack of critical inquiry into assumptions carried over from outdated studies, and the adoption of the traditional "narrative of decline" carried over from scholarship of the last several centuries which has been called into question in more recent times.

Crusafont's *Cobre y Oro* (1994) provides insight into the workings of the Visigothic economy as a multi-denominational system, and is perhaps the first scholar to do so based on the study of copper issues (with later contributions to the study of silver issues). While this work is not without its critics,[43] it remains a valid source as a basis of study for the copper issues, as questions of attribution and chronology are still contested. In its own right, this volume has been utilised to identify the three copper coins in the ACANS collection, and is the only reference to providing a suitable taxonomy, attesting to the tendency to overlook the coppers due to previously poor archaeological practice and misattribution. Finally, Ruth Pliego's *La Moneda Visigoda* (2009) is the most recent, authoritative work on the monarchical issues of the Visigoths, declared by M. Blackburn to be the most comprehensive work on the subject in the last 50 years.[44] Building on the work of Miles, with the data extrapolated in the two volumes from 7,461 coins (including analysis of new hoards), it proposes the discovery of 16 new mints, and previously unknown emissions.

Catalogue of Visigothic coins in the Gale collection of the Australian Centre for Ancient Numismatic Studies.

No.	CAT. REF.	MATERIAL	WEIGHT	DIAM.	AXIS	WT. VARIANCE[45]
1	07GV01	Au	1.46g	13.5mm	12	-0.04
2	07GV02	Au	1.43g	13.5mm	6	-0.07
3	07GV03	Au	1.39g	18.8mm	6	-0.11
4	07GV04	Au	1.40g	17.7mm	6	-0.10
5	07GV05	Au	1.39g	18.8mm	6	-0.11

42 Tomasini 1964: 180

43 For key critiques of Crusafont's attribution and chronology see Marot 1997 and Metcalf 1999. These criticisms have been responded to in Pliego 2016 and Mora Serrano 2016, as well as Crusafont, Benages & Noguera 2016.

44 Pliego 2009: x

45 The purpose of this value is to compare the actual weight of the coins with the weight of the Imperial standard denomination. No. 1-5 compared to the standard 1.5g tremisses. In the case of No. 6-10 the comparison to the tremisses continues, with the secondary value being a comparison to the average weight of Visigothic coin finds to date. See Priego 2016: 28.

No.	CAT. REF.	MATERIAL	WEIGHT	DIAM.	AXIS	WT. VARIANCE[45]
6	07GV06	Au	1.48g	17.6mm	6	-0.02/+0.01
7	07GV07	Au	1.52g	19mm	6	+0.02/+0.06
8	07GV08	Au	1.47g	20.7mm	6	-0.03/+0.02
9	07GV09	Au	1.34g	20mm	7	-0.16/-0.07
10	07GV10	Au	1.23g	20.9mm	11	-0.27/-0.09
11	07GV11	Cu	0.46g	8.3mm	6	-
12	07GV12	Cu	1.15g	11.7mm	5	-
13	07GV13	Cu	1.30g	12.8mm	12	-

Notes on the coinage

The earliest example of a *tremis* attributed to the Visigoths in the ACANS collection (fig. 1) closely imitates a Valentinian III issue from the Milan mint,[46] and is reminiscent of similar Rome and Ravenna issues. It provides some insight into the span of circulation of coin types in the Late Roman West. It typifies barbaric imitative coinage in its crudeness, was possibly issued posthumously,[47] yet demonstrates some discipline in minting practice with a straight axis and closely adheres to the standard weight of the Imperial *tremisses*.

The small size of this ACANS collection prohibits any broad observations on the stylistic evolution of Visigothic *tremisses*. There exists some basis for comparison with the abstraction of the 'running' Victory coins (fig. 3-6), a type that had not seen Imperial usage since 400AD, possibly influenced by Ostrogothic examples bearing the front-facing Victory motif.[48] The progressive increase of flan size is also observable (Cat. No. 3-5). The depiction of the pectoral cross on the Imperial portrait identifies such coins as Visigothic and minted after 500AD.[49] Inscriptions on the imitative coins are typically botched, as in the examples provided.

With the advent of the monarchical coinage of Leovigild (Cat. Nos. 6-10) the name of the ruler – titled *rex* (king) as issuing authority becomes standard. The VPW type is no longer produced, and is replaced with the front-facing bust seen in use until the reforms of Chindasuinth in 653AD.[50] Gold remains the standard for this denomination, however the last example in the catalogue (Cat. No. 11) demonstrates a discolouration likely the result of low gold content found in coinage from this period.[51]

46 RIC10.2030
47 Kent 1994: 225
48 Burnett 1977: 9; Grierson & Blackburn 2006: 48
49 *Ibid.*
50 Pliego 2009: 156
51 Priego 2016: 28; *tremisses* minted during the joint reign of Egica and Wittiza (698-702AD) demonstrate a gold content of 44.82%.

From a technical perspective, particular attention should be paid to the guiding marks appearing as small triangular protrusions from the tops of some letters (Fig. 2). Traces of circular guiding lines can also be seen as rings in the spaces between some inscriptions (Fig. 3). Both methods were combined in cutting the iron or steel dies.[52]

Fig. 2 – detail of Recarred I tremis

Fig. 3 – detail of Witteric tremis

This collection yields a particularly interesting example from the emissions of Sisebut (Fig. 4). While it is a rather fine example in itself, it bears evidence of over-striking, with the characteristic triangle punch-marks appearing as imprints on the struck surface on both the obverse and reverse. It seems unlikely that this is an intentional attempt to re-strike the coin. Further analysis of the secondary strike will be required to reveal its origins.

Fig. 4 – detail of Sisebut tremis

The three copper coins contribute to a growing area of study in Visigothic coinage. Recent evidence and acceptance that the Visigoths (periodically) utilised multi-denominational coinage is contrary to many years of Visigothic numismatic scholarship.

52 *Ibid*.: 193-5

Catalogue

Imperial Imitations: Gaul c. 417–507AD

No. 1
07GV01. Toulouse? Reign of Valentinian III (423–455AD)
Obv. [D]NPLA VALENTINIANVS PF [AVC]; diademed, draped bust of Emperor r.
Rev. CONO[B] in exergue; Cross in wreath, all in dotted circle.
Tremis. 1.46g, 13.5mm, ↑
Ref. MEC1.171 (slight variation); Imitation of RIC10.2030

Imperial Imitations: Spain c. 509–c.580AD

No. 2
07GV02. Narbonne? Reign of Anastasius (491–518AD)
Obv. ƆИANASTAVIS PP AVC; diademed, draped bust of Emperor with pectoral cross r.
Rev. VICTORIA AVCVSTOR•T•; COHOB in exergue; Victory walking r. with palm and laurel wreath.
Tremis. 1.43g, 13.5mm, ↓
Ref.: Tomasini 68 Group A3; MEC1.184 (variant inscription)

No. 3
07GV03, Narbonne or Barcelona? Reign of Justinian I (527–565AD)
Obv. ƆNIVSTIANVS [P]P [AVC]; diadem, draped bust with cross on chest r.
Rev. VICTORI[A] [A]CVTOHAVI; COHOB in exergue; Victory walking r. with palm and laurel wreath.
Tremis. 1.39g, 18.8mm, ↓
Ref.: Tomasini Group Jan 3

No. 4
07GV04. Narbonne or Barcelona? Reign of Justin II (527–565AD)
Obv. diadem, draped bust with cross on chest r.
Rev. Victory walking r. with palm and laurel wreath.
Tremis.1.40g, 17.7mm, ↓
Ref.: Tomasini Group JII 2

No. 5
07GV05. Merida? Reign of Justin II (527–565AD)
Obv. VICTUI RIA*PIE; diadem, draped bust with pectoral cross r.
Rev. VICTUR I A*PIE; CONO in exergue; Victory walking r. with palm and laurel wreath.
Tremis. 1.39g, 18.8mm, ↓
Ref.: Tomasini 478 Group JII 4 (this coin)

Visigothic Royal Issues: Spain c. 580–714AD

No. 6
07GV06. Toleto (Toledo), Reccared I (586–601AD)
Obv. +RECCAREDUS REX, facing bust
Rev. +TOLETO PIUS, facing bust
Tremis. 1.48g, 17.6mm, ↓
Ref.: MEC1.223; Pliego 98b.1 obv, Type 3c.

No. 7
07GV07. Toleto (Toledo), Witteric (603–610AD)
Obv. +VVITTIRICUS REX, facing bust
Rev. +TOLETO PIUS, facing bust
Tremis. 1.52g, 19mm, ↓
Ref.: MEC1.229; Pliego 186b.

No. 8
07GV08. Ispali (Seville), Sisebut (612–621AD)
Obv. +•SISEB•U•T•US RE•, facing bust
Rev. +•ISPA•L•I• PIUS•, facing bust
Tremis. 1.47g, 20.7mm, ↓
Ref.: MEC1.232; Pliego 275g.

No. 9
07GV09. Barbi (Malaga), Swinthila (621–631AD)
Obv. +SUINTHILA RE, facing bust
Rev. +PIUS BARBI:, facing bust
Tremis. 1.34g, 20mm, /
Ref.: MEC1.235; Pliego 366f

No. 10
07GV10. Cordoba, Egica & Wittiza (joint-reign, 695-702AD)
Obv. +INDINNU EGICA Rx; cross-sceptre between confronting busts, three pellets (•••) in lower field
Rev. +I…ME VVITTIZA R; Monogram (Cordoba) on arms of cross in field
Tremis. 1.23g, 20.9mm, \
Ref.: Pliego 732d

Copper Issues c. 575–714AD

No. 11
07GV11. Ispali (Seville)
Obv. SP in field, semi-continuous barbed border
Rev. Equilateral cross upon two steps of increasing width, semi-continuous barbed border
0.46g, 8.3mm, ↓
Ref.: Crusafont Group A, Type 2

No. 12
07GV12. Ispali (Seville)
Obv. Cross flanked by letters S and P
Rev. Inscription around draped bust facing r.
1.15g, 11.7mm, \
Ref.: Crusafont Group B

No. 13
07GV13. Emerita (Merida)
Obv. …VO; Bust facing r.
Rev. Monogram with dotted border
1.3g, 12.8mm, ↑
Ref.: Crusafont Group C

Author biography

Christian Cuello is currently undertaking the Master of Research program at Macquarie University with a focus on numismatic and literary evidence of the Western barbarian kingdoms and our understanding of this period of transition in Western Europe. He is a previous Junior Research Fellow recipient, and currently a Special Projects Officer, at the Australian Centre for Ancient Numismatic Studies at Macquarie University.

Thanks

I would like to express my gratitude to my family, friends, colleagues and teachers at Macquarie University, the reviewers of this article for their insights and guidance, and especially Assoc. Professor Kenneth Sheedy, Director of the Australian Centre for Ancient Numismatic Studies at Macquarie University, for his encouragement in and the opportunity to undertake this research.

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Die pairings, curved-base letters and dots: why are George V pennies so complex?

Paul M Holland

Abstract

Australian pennies of George V are surprisingly complex. For example, the Royal Mint in London inexplicably prepared five different master die types for 1911-1916 pennies, then later all of these die types were introduced into the Australian mints. Other aspects of George V pennies such as the phenomena of 'curved-base letters', unusual dot configurations on coins of 1919-1920 and overdating have perplexed collectors and numismatists over the years. These and other issues are addressed in this article.

Keywords

[George V] [predecimal pennies] [die varieties] [coinage dies] [Australian bronze coinage]

Introduction

For numismatists complexity is 'the spice of life' and this is something that Australian George V bronze pennies epitomize. Besides five different master die types originating at the Royal Mint in London and numerous pairings of these, additional layers of complexity arise in these coins. This includes derivative master dies produced at the Melbourne Mint in Australia in 1919 to meet urgent coining needs when the plans for a new nickel coinage were first delayed, then abruptly abandoned in 1920. These two years are perhaps the most complex for George V pennies and in this article, for the first time, technical details are elucidated regarding the mechanism that led to 'curved base letters' on many of these coins. Also addressed is the presence and sometimes perplexing use of tiny 'mintmark' dots on 1919 and 1920 pennies. Finally, the numerous die pairing varieties of 1920-1931 are discussed, along with some date spacing variations and the 1933/2 overdate. The coins themselves were struck at six different mints: London, Heaton, Calcutta, Melbourne, Sydney and Perth.

Shown in Figure 1 is a George V penny. The obverse was designed by Bertram Mackennal, the reverse by W. H. J. Blakemore. For technical details of the development of George V penny dies at the Royal Mint see JNAA volume 20.[1] It should be noted that the 1919

1 Holland 2010.

penny shown in Figure 1 is from dies that were 'cloned' at the Melboune Mint as an emergency measure when there was a shortage of dies from the Royal Mint in London.

Figure 1. George V penny from dies 'cloned' at the Melboune Mint.

A key framework for understanding the complexity of George V pennies is provided by the identification of different master die types and their pairings. The two obverse die types are the so-called English and Indian dies, or obverses 1 and 2. There are three different reverse die types, reverses A, B and C, sometimes referred to as the London, Birmingham, and Calcutta dies. That these five types are distinctly different obverse and reverse master die types is clearly demonstrated by the fact that they have differing numbers of border teeth, namely 177, 178, 174, 177 and 179, respectively.[2] Fortunately for numismatists, it is not necessary to count each border tooth to identify these types since the alignment of various letters in the legends with border teeth can be employed instead. For example, alignment of the final upright of the N of OMN with border teeth can be used to distinguish between obverses 1 and 2, and the three different reverse types can be identified by examining the relative positions of the letters ALIA of AUSTRALIA with border teeth as summarized in Figure 2. Furthermore, except for the year 1931, only a single reverse die type was used each year, and the two reverse types of 1931 show differences in the placement and orientation of the final date numeral that can be used to identify them.

2 Sharples 1992; Holland 1993.

Figure 2. Identifying features for the master die types of George V pennies including obverses 1 and 2, and reverses A, B and C, respectively, see text.

Development of George V Penny Dies

A structural overview showing the complexity of the master die types and their various die pairings is presented in Table 1. Dates for these coins are shown in the first column, known die pairings in the second, followed by a brief comment in the final column.

Table 1. Summary of master die types and die pairing of George V pennies.

Date	Die Pairings	Comments
1911	1 + A	
All 1912-15	1 + B	
All 1916-18	2 + C	Calcutta Mint only
1919	1 + B	Dot varieties exist
1920	2 + C 1 + C	Dot varieties exist
1921	2 + B 1 + B	Obv 1 are Melb Mint
1922	1 + B 2 + B	Obv 2 are Perth Mint
1923	1 + A	
1924	1 + A 2 + A	Obv 2 are Sydney Mint
1925-26	1 + A	
1927	1 + A 2 + A	
1928	1 + A	
1929	1 + A 2 + A	
1930	2 + A	1 + A reported
1931	1 + A 2 + A	Rev A has ‘dropped 1’
	1 + B 2 + B	
All 1932-36	1 + B	1933/2 overdate

In examining Table 1, a number of interesting observations and questions arise. For example, why did new master tools for a second penny reverse die type come to be fabricated in 1912 only a year after its introduction in 1911, and why were new master dies types introduced in 1916 for the Calcutta Mint? Also, these 2+C types for the Calcutta Mint then appear in Australia in 1920, and for twelve years various die pairings with both English and Indian die obverses are encountered.

The surprising change to a new reverse B master die type in 1912 appears to have arisen almost accidently. This occurred when problems (guttering) were encountered in hardening a punch taken from the original reverse A master die while producing a derivative master die dated 1912 for the Heaton Mint in Birmingham. The problem was addressed at the Royal Mint by the simple expedient of grinding off the defective beads and cleaning up the edge, and then using this punch to produce a new master die with the addition of 177 border beads in place of the 174 that were on the original version.[3] The new 'accidental' Birmingham reverse die type then became standard for all pennies from 1912-1915, as well as many of the other years that George V pennies were struck, including the final coinage years from 1932-1936.

Because of the potential hazards of sea transport due to submarines and surface raiders during the First World War, wartime production of bronze coinage for Australia was transferred to the mint in Calcutta. Of special numismatic interest, in March 1916 new penny master tools for both the obverse and reverse were produced for this purpose. The reverse master die included a small letter 'I' mintmark for India, and was made using a punch (hub) with the 'beads ground away', then re-beaded with 179 border teeth. The new penny obverse type for India made 'to suit the new reverse' was beaded with 178 versus 177 border teeth.[4] Why distinctive new master tools with different numbers of border teeth were produced for these pennies and not for the corresponding halfpennies is unknown, but the new 2+C types introduced for Australian pennies struck in India later played a pivotal role in die pairings of George V pennies, especially in the case of the obverse.

By the end of World War I all five different master die types for George V bronze pennies were thus in place. However, it was the disruption caused by abortive plans to replace Australian bronze pennies and halfpennies with smaller nickel coins in 1919-1920, coupled with the urgent need to maintain a supply of bronze coins in the meantime that had the greatest impact on the numismatic complexity of George V pennies. This included die shortages that forced the Melbourne Mint to 'clone' penny dies as a stop-gap measure. Australian bronze pennies of 1919-1920 are further complicated by tiny hand-punched dots that appear in various positions. While the precise meaning and context of these

3 Holland 2010, 47-48.

4 Holland 2010, 49-50.

dots has been obscure, they are clearly deliberate markings and have sometimes been interpreted as 'mintmarks' although the Commonwealth Treasury specifically rejected having mintmarks on Australian coins beginning in 1919. The decision itself was unusual since 'M' had been used on all silver coins struck in Melbourne from 1916-1918.

The author has been working on various aspects of the complex problems presented by 1919-1920 pennies for more than fifteen years, aided by a reference collection of over 1,250 coins of these two years. This has allowed numismatic study down to the level of individual working dies using 'die markers' such as date numeral spacing/orientation, dot positions, flaws, die cracks, etc. However, going into such detail is beyond the scope of the present article and so only a few summary observations will be made here.

Also, during a recent October 2017 visit to the Public Records Office in Melbourne, I found additional documentary evidence that sheds light on the situation in 1919-1920. These documents begin with a February 19, 1919 letter from the Commonweath Treasury to the Melbourne Mint explaining that due to 'the difficulty of obtaining prompt supplies of bronze coin from Calcutta…the importation of dies sufficient to coin £10,000 of pence and £5,000 of halfpence in bronze coins' had been approved, and that Melbourne should 'undertake to cable for the dies from London or Calcutta as may be deemed expedient.'[5] In other words, it was a lack of reliable and prompt supply of bronze coins from Calcutta that triggered moving coining operations for bronze to Australia, and the Treasury didn't care whether the dies came from either London or Calcutta. It might be noted that the mintage of 1918-I bronze pennies from Calcutta was only 20% of that for 1917, and 25% for the corresponding halfpennies.

After contacting London about dies, a terse 21-word cable from Royal Mint in London to Melbourne followed on February 23rd stating 'six pairs penny dies about fortnight why not mint mark as on silver is not local coinage other Australian mints possible'.[6] This was followed by a letter from London to Melbourne on the 27th that confirmed plans to supply six pairs of penny dies, with nine more to follow. That the subject of mintmarks had been brought up in the cable made sense, as all previous Australian Commonwealth coinage except that struck at the Royal Mint itself, had distintive mintmarks including 'H' for Heaton in Birmingham, 'I' for Calcutta and 'M' for silver coins struck in Melbourne. Nonetheless, the letter also confirms that 'all will be unmarked in accordance with the wishes of the Commonwealth Government'. It goes on to suggest that Melbourne consider adding equipment to begin producing their own dies for both silver and bronze coinage, since the combined number of dies required would severely tax the ability of the Royal Mint's Die Department to provide them.[7]

5 Victoria Public Records Office (VPRO).
6 VPRO.
7 VPRO.

Communications by letter were very slow in the days before airmail, and Melbourne's response to London came in a letter dated May 8th stating that while it had been more economical to obtain the dies for coining silver from London, they were now considering substituting nickel for coining pence and halfpence, and making the dies locally in an 'altered shape and design'. The Melbourne Mint further acknowledged that it 'had no experience in the manufacture of dies' and requested information on this subject from the Royal Mint.[8]

The Royal Mint responded with detailed instructions on the fabrication of dies in a letter of 17 July 1919. This is reproduced in JNAA volume 6.[9] It should be recalled that the original order from the Commonwealth Treasury for 1919 bronze pence had begun 'Pending the introduction of nickel coins...' while plans were underway to produce dies for the new nickel coinage at the Melbourne Mint itself.[10] The confusion between these competing schemes caused delays, and the first batch of 1+B dies for coining 1919 bronze pennies was not received until May, with the first coins from these not struck until June. While two further batches of dies for bronze pennies were received, the plans for switching to smaller nickel coins in 1919 continued to be delayed, until it became too late in the year to order additional 1919 penny dies from London.[11]

This forced the Melbourne Mint to 'clone' the additional 1+B working dies that were needed for 1919 bronze pennies from dies supplied by London as a stop-gap measure. The procedure would be to use a working die supplied by London to produce 'derivative' hubs (or punches), then use these locally produced hubs to produce 'cloned' working dies. The inexperience of the Melbourne Mint at producing both hubs and dies coupled with the fact that the final dies were several stages further removed from the original master dies created in London, led to cloned dies that exhibit observable distortions such as 'curved base letters', especially on the reverse. Such pennies with 'curved base letters' versus 'flat base letters' on their reverses have long been noted,[12] but details as to how they originated was unresolved. In 1993, the author stated that these variations were 'so pronounced and prevalent that it seems likely that they arose during some earlier stage in die production (i.e. at the levels of the hubs used to prepare working dies or from derivative master dies)'.[13]

The author now believes that technical details as to how curved-base letters arose on these coins can be elucidated for the first time. I've concluded that curved-base letters almost certainly arose from 'fish tailing' of the bases of the lettering that occurred

8 VPRO.
9 Sharples 1992, 25-27.
10 Sharples 1985, 6.
11 Sharples 1985, 7.
12 Dean 1964, 37-45.
13 Holland 1993, 16.

during the production of cloned 'derivative' hubs (or punches). This effect is created by unconstrained 'channeled flow' of the annealed (softened) die steel when striking the hubs. From a hydrodynamic point of view, such flow, especially in the uprights of lettering with serifed bases can produce a low pressure eddy in its wake resulting in a 'hollow' at the base of the letter. It might be noted that the author is a scientist who has studied hydrodynamic flow of metals during hypervelocity impact.[14]

Curiously, a key to unlocking this puzzle came from experiments conducted at the Royal Mint on striking coins. These experiments were made using the *same* dies for striking coins under various conditions, and showed that lettering with square or flat bases 'at once developed fishtails and other distortions' in the absence of a constraining collar. This was especially noted on letters with vertical uprights 'as the upright tends to act as a channel and therefore encourages the flow of metal, leaving a hollow which gives the letter a fishtailed appearance'. Furthermore, it was found that such 'fish tailing occurs regardless of the metal used, the thickness of the blank, or the force of the blow'.[15] Extrapolating these findings to the production of a hub (or punch) where there is clearly no such constraining collar, inexperienced workers at the Melbourne Mint may have tried to 'rush' the process of producing new derivative hubs (punches) by not transferring the designs carefully enough using a series of well-controlled and measured blows with proper annealing of the steel forging between steps.

Close-up images comparing flat and curved base letters on the reverses of two 1919 pennies are shown in Figure 3 with flat-base letters on top, curved-base letters below. That this effect is the result of outward 'channeled flow' of metal from the serifed base of the lettering is supported by close comparison of some of the lettering on opposite sides of the coins, i.e. MON of COMMONWEALTH and LI of AUSTRALIA. In particular, note the letters M, N, L and I where there is a clear indentation that occurs directly below the uprights (indicated by the white arrows). Close study of the base of the L is especially instructive, as this clearly demonstrates that the effect occurs below the upright, supporting the 'channeled flow' mechanism. The lettering with broadly rounded features such as the O or where a serifed base is lacking (right side of N), does not show this effect. It should be pointed out that these are both nearly uncirculated coins from the author's collection, the one at the top being without dot, the lower one having a clear dot 'below the bottom scroll'.

14 Holland, et al. 1990.

15 Dyer and Gaspar 1980, 122.

Figure 3. Close-up of flat-base letters (top) and curved-base letters (bottom) of 1919 pennies.

This curved-base letter phenomenon makes it possible to distinguish 1919 pennies struck from reverse dies originally supplied by London having flat-base letters, versus those with curved-base letters produced after the cloning of punches for producing dies in Melbourne. It should be noted that there also appears to be more than one version of 1919 curved-base letter pennies, with some showing strongly curved-base letters (as in Figure 3), others less so, indicating that more than one derivative hub (or punch) for the reverse was prepared. Cloned obverse penny dies were also produced, although the occurance of strongly curved-base letters seems to be especially apparent on the larger serifed lettering on the reverse of the Australian penny.

John Dean also notes curved-base letter reverses for 1920 and many other years of George V pennies, including all 1924-1936 coins.[16] However, this effect is generally not as pronounced as that shown in Figure 3, suggesting gradual improvement in technique for producing hubs (punches) at the Melbourne Mint. Having examined many pennies over the years looking for curvature at the bases of the lettering on their reverses, it has sometimes seemed like a fruitless exercise. Nonetheless, such curvature (even if relatively modest) is real, likely due to varying degrees of the 'channeled flow' phenomenon elucidated earlier during the production of hubs at the Melbourne Mint. Further details regarding curved-base letters for 1919-1936 George V pennies is an especially complex topic and is beyond the scope of the present article.

16 Dean 1964, 37-45.

In 1920, it was again anticipated that the new nickel coinage would finally be introduced. However, this was not to be, and all plans for nickel coins were finally abandoned. By May 1920 when bronze dies were again urgently needed, the Royal Mint was heavily engaged in work on dies for the newly debased (0.500 silver) coins for Great Britain, and it was simply too late to order 1920 dated bronze penny dies from London. As a result, George V penny dies dated 1920 and a pair of punches were ordered via cable on 19 May from the Calcutta Mint instead.[17] On the 25th Calcutta replied 'cannot send finished dies' since coining press details were lacking, so the dies were provided unhardened.[18] It is likely that most 1920 flat-base letter pennies were struck from dies provided from Calcutta, which after machining to fit coining presses in Sydney and hardening, were sent there. Curved-base letter pennies dated 1920 were likely struck from dies produced in Melbourne based on tools provided by Calcutta. This resulted in the 2+C die types appearing in Australian mints for the first time.

Dots on 1919-1920 Pennies

Interpreting the dots on George V pennies of 1919-1920 offers another fascinating layer of complexity. These coins frequently exhibit tiny hand-punched dots in various positions and while the precise meaning and context of these dots is somewhat obscure, they are clearly deliberate markings and have sometimes been interpreted as being 'mintmarks'. That these are deliberate markings is supported by the observation that these dots often show a small 'moat' surrounding the dot due to displacement of metal when they were 'punched' onto the die (this will be illustrated later). In effect, this produces a small raised crater-like 'lip' on the die itself that can be removed either by 'resurfacing' the die, thereby requiring an extra production step, or by eventual wear as the die is used in striking coins. Observation suggests that no special effort was made by the Melbourne Mint to remove this feature. Fortunately, recent work on analyzing the origin of round raised dots due to rust pitting at the surface of dies helps show how dots due to rust pitting can be distinguished from dots deliberately added to the die.[19]

Perhaps the most striking observation about these dots is that unlike ordinary mintmarks there seems to have been no special effort to make them especially visible or durable as permanent markings. That is, they are typically small and easily obscured by wear or surface marking. To the author, this suggests the dots had a more transient utility as identifying markers for dies that was more for internal use by the mint than for the general public once the coins reached circulation. After all, the Commonwealth Treasury had made a specific decision that mintmarks were not to be used on Australian coins beginning in 1919.

17 VPRO.
18 VPRO.
19 Holland 2016.

An overview of the observed pattern of dots on 1919-1920 pennies shows the following variations: dot below the bottom scroll, dot above the bottom scroll, dot above the top scroll only, and double dots (with one dot below the bottom scroll and the other above the top scroll). Although tedious, it seems especially important to study the occurrence of these dots on coins down to the level of individual working dies. Such dies can be distinguished by small variations in the placement of the dot, die cracks, flaws or other features. For this, a stereo microscope and access to a large number of coins of each type is especially helpful. Fortunately, the author has a substantial reference collection of 1919-1920 pennies, enriched in important die varieties for this task. Results show that numerous working dies occur either with a dot below the bottom scroll or a dot above the bottom scroll. In the case of the other dot types, careful study shows that the 'dot above the top scroll only' type occurs on a single reverse working die, and that the 1919 and 1920 'double dot' varieties occur on a single reverse working die each.

Beginning with observations on pennies dated 1919, results show that a dot below the bottom scroll primarily appears on coins that can be identified as being from Melbourne 'cloned' dies with various versions of curved base letters. 'Flat-base letter' pennies, which are believed to have been struck from dies produced in London and exhibit a variety of different date numeral positions, typically do not have a dot. Deferring discussion about the 1919 double dot penny for now, the simplest explanation for 1919 pennies would seem to be that placing a 'dot below the bottom scroll' was used to mark the 'cloned' dies produced in Melbourne, whereas the already hardened dies supplied by the Royal Mint in London occur without dot. It should be pointed out that the dots on these coins are typically very small (0.2-0.3 mm), in relatively low relief and on circulated coins, these are often obscured by wear or surface marking. This sometimes makes categorizing pennies as being 'with or without dot' uncertain, and this has been the source of confusion among collectors over the years.

Moving on to dots on 1920 pennies and again deferring discussion of those types that occur with only a single working die, this leaves coins with a dot either below or above the bottom scroll, noting that 1920 pennies were struck at both the Melbourne and Sydney mints. Following from earlier results for 1919 pennies, a 'dot below the bottom scroll' on 1920 coins would clearly indicate reverse dies were produced at the Melbourne Mint. Inspection of more than one hundred and fifty examples of 'dot above bottom scroll' 1920 pennies show 'flat base letters' presumably from dies originally supplied by the Calcutta Mint. Fortunately there is direct evidence to support this, including a contemporary description by Dr. Arthur Andrews that the dot above bottom scroll type was struck at the Sydney Mint and from mint records showing that the dies supplied from Calcutta were sent to the Sydney Mint after being finished in Melbourne.[20] This

20 Sharples 1985, 9-10.

clearly indicates that 'dot above bottom scroll' pennies were struck in Sydney, effectively making this dot a mintmark of sorts.

The question about the role of dots on 1919-1920 pennies becomes one of intent. Perhaps the primary reason for the persistent belief that some of these dots should be interpreted as mintmarks, is the much later and deliberate use of dots as mintmarks on Perth Mint coins beginning in the 1940s. My view is that the dots on 1919-1920 were strictly intended to denote the origin of the dies and were not intended as the mintmarks so clearly opposed by the Treasury. This explanation also conveniently and logically accounts for the absence of dots on George V pennies from 1921-1936, when the Melbourne Mint produced all the dies and such dots would no longer serve any useful purpose.

Guided by the principle of Occam's razor, that the simplest explanation that can account for the facts is to be preferred, deferred discussion of 1919-1920 dot pennies from single working dies can now be addressed. In other words, what is the origin and intent of the dots on both 'dot above the top scroll only' and 'double dot' coins? That these dots were deliberately punched into the dies for these coins seems quite certain, as the close-up images show the presence of 'moats' around dots caused by displaced metal.

Beginning with the 'the dot above the top scroll only' penny, what could be the possible purpose of placing a dot in this position? This unusual dot configuration was first published by John Sharples in 1985,[21] and he showed me an example during my visit to Museum Victoria in July 1994. This upper dot is only weakly struck, suggesting why this type was missed in John Dean's book and why it took so long to identify. That the dot clearly shows a 'moat' around it demonstrates that it was deliberately punched into the die, and is not an accidental raised dot due to rust formation on the die. The first time I was able to examine multiples of this variety was in July 2004, when Mark Bird showed me a number of examples while I was visiting M. R. Roberts shop. He pointed out that these all displayed the identical dot position, with some also showing a faint flaw after the base of the final A of AUSTRALIA.[22] It was immediately clear that these were all from a single pair of working dies. The two examples in my reference collection both exhibit the faint 'flaw after A' (to the right, just above the base) as shown in Figure 4. Careful numismatic study shows that there is otherwise nothing special about this particular reverse working die apart from the position of the dot. A more extensive survey of twenty of these coins by Neal Effendi show that fewer than half have the flaw after the A, but all display the identical dot.[23] Since it makes no sense to me that this penny variety should have a unique marking, the most plausible explanation for this

21 Sharples 1985, 10.
22 Bird 2004.
23 Effendi and Lever 2014.

'dot over top scroll' type seems to be that it simply resulted from an error in punching the dot onto a single reverse working die. To a mint worker, the face of the die itself would show 'backwards' lettering and the possibility of it being accidently inverted when it was intended that a dot be punched below the bottom scroll of the die can be readily envisioned. This interpretation seems especially plausible in view of the overall 'top to bottom' symmetry of the reverse design of the penny, where it is (reversed) lettering that provides the primary clue for discerning which side is the top of a die.

Figure 4. Details of 1920 'Dot Over Top Scroll Only' penny and (on right) faint flaw after A

The 1919 and 1920 'double dot' coins are more problematic, although both have long been known.[24] Again, careful examination of these two coins reveals nothing special about the dies, although they can be classified as 'curved-base letters' and 'flat-base letters', respectively. Close-up details of their upper and lower dots, along with characteristic die flaws for the working dies of these two coins are shown in Figure 5. It might be pointed out that some ten examples of the 1919 double dot and thirty seven of the 1920 double dot pennies were available for close study in my reference collection, but it is difficult to come up with a plausible explanation as to why these coins would have been deliberately marked with two dots. Note the faint die marker flaws above A to left and over W. (Fig. 5A)

24 Dean 1964, 39.

Figure 5. Details of 1919 double dot (left) and 1920 double dot (right) pennies, see text.

Figure 5A. Die marker flaws above A (left) and over W (right).

The two dots on the 1919 coin are atypical, with the upper dot being ovoid (4.5 by 3 mm) in a noticible depression, and the lower one is about 4 mm, larger than those on most other 1919-1920 pennies. To the author, it seems possible that they occurred when the first dot was mistakenly double punched (accounting for its ovoid appearance) above the top scroll (as for the 'top over top scroll only' type), but the error was noticed and then belatedly corrected by punching a second dot in the correct position. In any case, it seems nearly certain that the 'curved-based letters' 1919 double dot penny was struck in Melbourne, perhaps quite late as this distinctive type was first reported at the September 1920 meeting of the Numismatic Society of Victoria.[25] However, without mint records or other contemporary information on this, we will probably never know for sure. The 1920 double dot penny appears to lack contemporary documentation, although it has been widely known since John Dean's book.[26] On this flat-base letters coin, the small lower dot is weakly struck, sometimes leading to it being mistakenly classified as the dot over top scroll variety.

To properly understand the dots on 1919-1920 pennies, it is also necessary to be able to explain the apparent *absence* of dots on 1920 pennies. That is, assuming the Melbourne Mint used dots to mark the origin of reverse dies, then it seems *all* 1920 pennies should have dots, either below or above the bottom scroll. In the opinion of the author, it is this situation that has been a major stumbling block in understanding the role of dots on these coins. Since many of these dots are small and often obscured by wear or surface marking, this has led collectors and cataloguers to assume that 1920 'no dot' pennies are very common, at least in lower grades. This is understandable, since even in my own reference collection of over six hundred 1920 pennies, nearly two hundred and fifty show no clear sign of a dot, and I should point out that these are generally better than average coins, with full rims and beading with most grading near fine or better.

It wasn't until I began investigating the working dies of 1920 English die pennies in detail a little over fifteen years ago that I gained clear insight on this problem. In particular, detailed study of thirty two 1+C pennies in my reference collection, indicated that based on die markers only two different obverse working dies and pairings were used for these coins. These obverse die markers include a raised horizontal line flaw through IND and an irregular 5 mm long raised vertical flaw near the back of the King's collar, as shown in the close-ups in Figure 6. While many coins from both obverse dies showed a clear dot or a least a trace of a dot below the bottom scroll on the reverse, others had no discernible dot, even when examined under a microscope. Recent published work confirms these earlier (unpublished) results with an even more extensive survey of 1920 English die pennies that included eighty three coins, all from these same

25 Sharples 1985, 10.
26 Dean 1964.

two working die pairings.[27] In other words, all such 1920 English die pennies clearly were originally 'dot below the bottom scroll' whether the dot can now be observed or not, in agreement with listings by Dean[28] and Sharples[29].

Figure 6. Die markers for 1920 English die pennies, see text.

Extrapolating these findings to other 1920 pennies would suggest that all were originally marked with a dot, or at least that the Melbourne Mint intended to mark them this way. This presumption would suggest that 1920 'no dot' pennies don't exist, were struck from working dies where the original dot was in low relief and had either been worn away or been polished from the die, or perhaps were struck from dies where the dot had been omitted by mistake. Certainly a few high-grade examples with no apparent dot are known, but such coins are quite rare. Resolution of this problem is likely to require painstaking analysis of higher grade 1920 pennies with no apparent dot down to the level of individual working dies, with special emphasis on finding very early die state examples, to preclude the possibility that die wear has removed traces of the dot.

After 1920 dots were no longer used as die markers on George V pennies, and any dots that do occur are likely due to the rust on the dies.[30] From this point on, it is master die pairing varieties that are of the greatest numismatic interest. These pairings include a number of scarce or rare varieties of Australian pennies including 'English' die pennies of 1920 and 1921, and 'Indian' die pennies of 1924, 1927 and 1931.

Die Pairings and Other Features of George V Pennies from 1921-1933

In December 1920, the Royal Mint produced a new 1921 dated reverse B penny master die and punches for Australia, restoring the reverse B for pennies. At the same time, obverse 2 tools from the Calcutta Mint remained in use resulting in nearly all 1921 pennies being of the 2+B type. However, in late September 1921 new obverse punches

27 Effendi and Lever 2014.
28 Dean 1964.
29 Sharples 1985.
30 Holland 2016.

were provided by the Royal Mint. This restored the obverse 1 type later in the year, and consequently a few 1921 dated pennies of the rare 1+B type were struck in Melbourne.

What is perhaps of the greatest interest in 1922 pennies is that the somewhat scarce obverse 2 pennies of this year were only struck at the Perth Mint, as first pointed out by Sharples.[31] Reverse B continued into 1922, but in this year some significant variations in the spacing of date numerals occurs. Most 1922 pennies, including all those known to have been struck at the Perth Mint, are from the standard, narrow date reverse hub (punch) supplied by London. However, at least one de-dated punch was also used, allowing experiments with other date configurations including the very widely spaced date shown in Figure 7 for comparson. Dean reports three different date variations[32] and the author knows of others, but this is beyond the scope of the present article.

Figure 7. Standard and wider spacings of 1922 pennies, see text.

Interestingly, the following year, the Royal Mint reverted to the original 1911 Reverse A design type for 1923 dated penny die tools. Why this occurred is revealed by Engraving Department records that show that the mint went back to the original master die created in 1910 in order to have a 'wider table' to work with than that on Reverse B.[33] This resulted in Reverse A tools being re-introduced, creating a situation where all five different George V penny die types were available at various times during the period from 1920 to 1931, thus enhancing the numismatic complexity of Australian pennies.

In 1924, both English and Indian obverse dies again appear on pennies, with the rare 2+A Indian die pairings all struck in Sydney.[34] All 1925 and 1926 pennies are of the 1+A type. However, in 1927 the Indian obverse die again appears on a few rare pennies. It is believed that this is due to leftover dies from the Sydney Mint after it closed in 1926. While some 1928 pennies exhibit a flawed number 8 in the date, all are 1+A die pairings. In 1929, a substantial number of Indian obverse dies were again produced at the Melbourne Mint, presumably from tools originally provided from Calcutta. Consequently, both obverse 1 and 2 pennies appear in 1929 in roughly equal quantities, all paired with reverse A.

31 Sharples 1985, 12.
32 Dean 1964, 40.
33 Holland 2010, 55.
34 Sharples 1985, 17.

The iconic 1930 penny, sometimes termed 'the king of Australian coins', is the key date of Australian Commonwealth coins. The 1930 proofs of record and virtually all circulation strikes of this very rare coin are the 2+A type, although a few obverse 1 coins have been reported. Much has been written on the 1930 penny, including articles in JNAA.[35, 36] Since I don't have an example of this coin, I will not add more here.

In 1931, two obverse and two reverse types were used for striking pennies, making this the most complex single year for George V die pairing varieties. For some reason the Melbourne Mint decided to revert to reverse B part way through the year, presumably using the master tools provided by the Royal Mint in 1921. This resulted in reverse B being used for all pennies of 1932-1936. Also, 1931 was the final year that the 'Indian' obverse 2 die appears, producing both 2+A and 2+B die pairings. I'm fortunate in having nice examples of each, and Figure 8 shows how the reverses of these coins can be distinguished by the placement of the final date numeral. Close-up images of minute die markers from rust (Fig. 8A) are also provided based on a survey of examples in my reference collection and observation of other coins. This clearly shows that both are from individual working dies. Indian obverse 'dropped 1' pennies are considered to be extremely rare. My interpretation of Mullett's summary of Melbourne Mint records[37] indicates mintages of nil thousands (i.e. less than one thousand) and 46,000, respectively, for these 1931 Indian die pennies.

Figure 8. Indian die 1931 penny details, 'dropped 1' on left, regular on right.

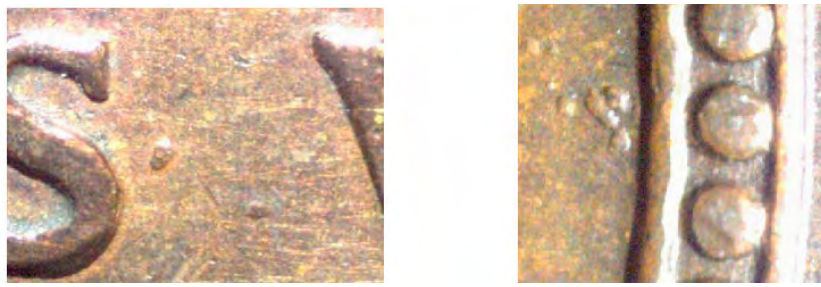

Figure 8A. Die markers from rust.

35 Sharples 1987.
36 Bloom 2010.
37 Mullett 1991.

A capstone illustrating the complexity of George V pennies is the 1933/2 overdate penny. This is highly unusual and is believed to be the only bronze overdate in 20th century British Commonwealth coinage. Detailed numismatic study of the overdate penny and correlation with information from mint records has revealed that it was the result of over-hubbing a batch of six dies in mid-December 1932. These die forgings had already received two blows from a 1932-dated hub and, after annealing, received the final blow from a new 1933-dated hub. An extreme close-up of the overdated numeral from one of these dies is shown in Figure 9. Based on correlation of mint records with a detailed survey of overdate sub-types, it was possible to determine that these coins were struck in March 1933.[38]

Figure 9. Overdate penny numeral showing 3/2, see text.

What is especially interesting about the overdate is that it clearly shows progression between the second and third blows as the design is transferred in producing the die. Here the upper portion of the underlying numeral 2 from the 1932-dated hub appears at the top (toward the centre of the die forging, not shown), and the overstruck 3 from the 1933-dated hub at the bottom (near the rim).

Conclusion

So why are Australian George V bronze pennies so complex? To begin with, the Royal Mint in London inexplicably prepared five different master die types for 1911-1916 coins. Then plans at the Melbourne Mint for switching to a smaller nickel coinage for Australia in 1919-1920 were first delayed, then abandoned. As a result, there were recurring shortages of dies for coining bronze pennies, requiring both the 'cloning' of dies in Melbourne, and the ordering of dies and die tools from the Calcutta Mint. Although the various 'cloned' dies were of the same master die types originally prepared

38 Holland 2002.

in London, during their production in Melbourne distortions of the lettering occurred, especially on the reverse, resulting in distinctive 'curved-base letters' on both dies and the resulting coins. This effect is now believed to have occurred due to channeled flow of annealed die steel when striking the hubs. Also, in 1919-1920 a system for marking dies with dots was introduced, apparently to indicate their source. A few pennies are marked with unusual dot configurations and these are now believed to have resulted from mistakes, either uncorrected or corrected, in punching dots onto the dies. Following the introduction of distinctive penny dies into Australia from the Calcutta Mint in 1920, a variety of different die type pairings can be observed from 1920-1931, with four types in 1931 alone. Finally, over-hubbing of a batch of dies in December 1932 led to various sub-types of 1933/2 overdate pennies.

As a result, Australian George V pennies offer a complex and fascinating topic for detailed numismatic study. At the same time these coins offer an affordable entry point for young collectors or those of modest means in circulated grades, but can be very challenging for the advanced collector and numismatist. Die pairings and other major varieties of George V pennies also provide a logical path for collectors to expand the scope of their existing predecimal bronze collections. As for myself, I have found this to be a nearly inexhaustable series for which many interesting numismatic problems remain.

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Author

Paul M. Holland is a scientist with a Ph.D. in physical chemisty and M.Sc. in oceanography who lives in Santa Barbara, California. He has collected and studied die varieties of both Australian and British predecimal bronze coinage for more than 30 years. Paul is a long-time member of the Australian Numismatic Society and British Numismatic Society, has contributed a number of articles to JNAA, and is a previous recipient of the NAA's Ray Jewell Bronze Award.

pholland@thorleaf.com

The significance of the military representation of Caracalla upon the coinage of his sole reign (212-217 CE)

Charlotte Mann

Abstract

Obverse coin portraiture presents unique insights into the public image of a Roman emperor. This paper will use a close analysis of portraiture struck upon the imperial coinage of Caracalla to explore the degree to which the emperor's public image emphasised his associations with the imperial army. While ancient literary sources state Caracalla cultivated the public appearance of a military man, quantitative studies of his imperial coinage claim that he did not produce a higher volume of 'military' reverse types than earlier emperors, and therefore did not use coins to promote military associations. An examination of imperial obverse portraiture offers an opportunity to reconcile ancient literary and numismatic evidence. Obverse representations of Caracalla reveal a number of militarising features; strong evidence that the association between the emperor and the military described by ancient historians was indeed intentionally publicised on his coins during the period of his sole reign.

Keywords

[Caracalla] [Imperial coinage] [Obverse portraiture] [Roman Army]

Introduction

Literary and numismatic evidence appears at first sight to be contradictory in the case of Marcus Aurelius Antoninus (known for convenience by his nickname 'Caracalla'). Ancient literary accounts describe an emperor who wore his hair cropped and the rough garments of the ordinary soldiery to cultivate the public image of a military man. Quantitative studies of the imperial coinage produced during Caracalla's reign, however, have claimed that he did not produce a higher volume of 'military' reverse types than earlier emperors, and therefore did not use coins to promote associations with the army.[1]

Such uncertainty demands a reconsideration of the numismatic evidence. This paper will use an analysis of Caracalla's obverse portraiture to show that, contrary to the conclusions of earlier studies, the coinage that Caracalla issued as sole emperor did indeed promote the militaristic associations with the common soldiery that define him

1 Noreña 2011, 146-168; Manders 2012, 41-48; Rowan 2012, 112.

within ancient literature. Examining obverse representations of Caracalla at different periods reveals an increasing number of militarising features. It presents strong evidence that the association between the emperor and the military described by ancient historians was indeed intentionally publicised on his coins during the period when he ruled as sole emperor.

Imperial Precedent – the Emperor and the Army

A martial public image became an established element of the imperial public identity when soldier emperors ruled at the end of the third century CE. Caracalla's strong cultivation of public military associations, however, occurred without imperial precedent and was inextricably connected with the controversial circumstances of his accession. Cassius Dio considered his adoption of a militaristic public image to be a consequence of the murder of his brother Geta in AD 212.[2] Caracalla had engineered a stabbing assassination of Geta by a group of loyal guards and, after the murder took place, fled to the praetorian camp for protection and entreated the army to support his position.[3] The army had sworn allegiance to both Severus's sons, so had to be won over by bribes.[4] In a speech attributed to the emperor by Dio, Caracalla secured the support of the military by identifying himself as their 'fellow-soldier:' "I am one of you," he said, "and it is because of you alone that I care to live, in order that I may confer upon you many favours; for all the treasuries are yours." And he further said: "I pray to live with you, if possible, but if not, at any rate to die with you" (Cassius Dio, *Roman History* 78.3).

Literary depictions of his conduct during the German and Parthian campaigns conducted while he was sole emperor also reveal that he continued to model his behaviour upon ordinary soldiers long after he had departed from Rome:

> He always played the soldier's part . . . Scorning luxuries, he used whatever was cheapest and issued to the poorest soldier. He pretended to be delighted when they called him fellow soldier instead of emperor. For the most part he marched with the troops, carrying his own arms and rarely using a chariot or a horse . . . For these actions Caracalla won the affection of the soldiers (Herodian, *History of the Empire* 7.1).

The military identity cultivated by Caracalla was emphatically that of an ordinary soldier, rather than a commander. This distinction is emphasised throughout Dio's description of the emperor's military conduct, which states that "the duties of a commander, however, in which he ought to have been particularly well versed, he performed in a very unsatisfactory manner, as if he thought that victory lay in the performance of the

2 Cassius Dio, *Roman History* 78.2-3; Mattingly and Sydenham 2007, 86; Campbell 1984, 52

3 Herodian, *History of the Empire* 5.1

4 Herodian reports that each soldier received a donation of 2,500 denarii and had his ration allowance increased by one-half (Herodian, *History of the Empire* 4.4.7). See also Cassius Dio, *Roman History* 78.3.

humble duties mentioned rather than in good generalship."[5] This image is compounded by the testimony of the historian Herodian, who reports that Caracalla preferred the title of 'comrade' to 'commander.'[6]

Such displays of collegiality did not begin with Caracalla. The image of an emperor who was a 'soldier-emperor', involved in the day to day life of his men, was instituted by Julius Caesar, who, Suetonius reports, addressed his men as *commilitones* (companions) rather than *milites* (soldiers).[7] Caligula and Claudius used the same term to emphasise their personal leadership of the imperial army and foster military support for their political position.[8] By the second century CE, a degree of familiarity with imperial soldiers had become an inviolable aspect of an emperor's public image. Hadrian, for instance, was said to have dined with his soldiers, while Marcus Aurelius was reputed to have addressed his son Commodus as a 'fellow-soldier.'[9] The emperor's active role as *commilito* developed further during the foreign wars and civil conflicts fought during the third century. The emperor Septimius Severus shared the work, rations and accommodation of his ordinary soldiery, and by doing so, cultivated the respect of his troops.[10]

Thus, an emperor who courted the affection and respect of his men was not without precedent. However, public identification as an ordinary soldier functioned as an inviolable and permanent aspect of Caracalla's imperial image. This image relied upon his appeal to the military to ratify his claim to sole imperial authority upon his accession to sole rule, rather than the commencement of a military campaign in Gaul. This significant departure from imperial precedent is expressed by both the obverse portraiture and the reverse imagery of his coins.

Obverse Coin Portraiture

In the past, insufficient attention has been paid to the fact that obverse portraiture during the different stages of Caracalla's reign provides an important insight into the impact of Caracalla's martial associations upon his public image.

As has been noted above, numismatic imagery had developed a broad iconographic language to denote imperial military activity by the time 'soldier emperors' reached their peak in the late third century CE. In the earlier years prior to Caracalla's rule, however, martial exploits were only a single element of an emperor's multifaceted public identity. They were acknowledged through only one obverse portraiture style – the depiction of the emperor 'armed and draped', wearing the military breastplate that we

5 Cassius Dio. Roman History. 78.13.1-2
6 Herodian. *Roman History* 4.7.4-7.
7 Suetonius, *Life of Julius.* 67. 9
8 Suetonius, *Life of Caligula* 22.1; Suetonius, Life of *Claudius* 10; Campbell 1984, 37
9 Historia Augusta, *The Life of Marcus Aurelius.* 21.9; Herodian, *History of the Empire* 1.5.3-4.
10 Cassius Dio, *Roman History* 74.15.3; Herodian, *History of the Empire* 2.11.2; 3.6.10.

call a *cuirass*, and a draped military cloak called a *paludamentum*.[11] This bust type did not appear until the reign of the fifth Roman emperor Nero (54-68 CE), and only become an established element of imperial obverse portraiture in the third century.[12] For example, Domitian (AD 81- 96) appeared cuirassed on only six issues of coins, despite the significant ideological emphasis placed upon military prowess and triumphal titulature after his German and Dacian campaigns (Figure 1).[13] Hadrian (117-138 CE) appeared cuirassed in approximately one third of his imperial coinage but wore his armour in combination with a laureate victor's crown. This gave him the appearance of wearing ceremonial garb, rather than a soldier's military attire (Figure 2).[14] His civilian aspect was emphasised by the fact that his hair was dressed in long, luxuriant curls and he wore a full beard that denoted his philhellenic philosophical and intellectual interests.[15] It seems therefore that his armour prepared him for ceremonial duties rather than long years on campaign.

Figure 1: Domitian, Rome, *sestertius*, AD 95–AD 96

Obverse: IMP CAES DOMIT AVG GERM COS XVII CENS PER PP. Laureate head of Domitian, right

Reverse: S-C across fields. Triumphal arch surmounted by two elephant *quadrigae* (RIC 2 Domitian 796, Image courtesy of CoinArchives Pro: http://ikmk.smb.museum/mk-edit/images/n7/7628/vs_opt.jpg [accessed 15/08/2017])

Figure 2: Hadrian, Rome, *aureus*, AD 117-118

Obverse: IMP CAESAR TRAIAN HADRIANVS AVG. Laureate, draped and cuirassed bust of Hadrian, left

Reverse: M TR P COS III. Jupiter standing facing with thunderbolt and scepter

11 Hedlund 2008, 52
12 King 1999, 133
13 Example provided by RIC 2 *Domitian* 137, 656, 647, 1446, 1447, 1448
14 Example provided by Hekster 2015, 81
15 Birley 1999, 79

(RIC 2 Hadrian 63d, Image courtesy of CoinArchive Pro: https://pro.coinarchives.com/4bbcc35f0f9e443a3eb83cba 5f10d86b/img/ gorny/249/image00639.jpg [accessed 15/08/2017])

Caracalla's father Septimius Severus fought campaigns in Africa and Britain. He was awarded the triumphal *cognomina Parthicus, Britannicus Maximus* and *Adiabenicus Arabicus*, and the title *imperator* eight times.[16] Despite this, his military endeavours were not reflected in the style of his obverse portraiture (Figure 3). He appeared with a cuirassed portrait bust upon only 27 of the 829 imperial coins produced during his reign (approximately 3%). Further, these portraits did not portray the emperor with the short military haircut worn on campaign, but rather with a 'civilian-length' head of thick curly hair and a full beard. In this regard, Severus's numismatic representation follows that of Marcus Aurelius, who also continued to be represented with long hair and beard while fighting in the Marcomannic Wars (A.D. 166-180, Figure 4).[17]

Figure 3: Septimius Severus, Rome, denarius, 19mm, AD 201

Obverse: SEVERVS AVG PART MAX. Laureate head, right

Reverse: RESTITVTOR VRBIS. Septimius standing left, holding patera in right hand over tripod altar, and spear in left

(RIC 4a Septimius Severus 167a, Image courtesy of CoinArchive Pro: https://pro.coinarchives.com/1bcb821828174e7cd83c8b66fab131b5/img/gorny/249/image00757.jpg [accessed 15/08/2017])

Figure 4: Marcus Aurelius, Rome, sestertius, AD 163/164

Obverse: M AVREL ANTONINVS AVG ARMENIACVS P M. Laureate head, right

Reverse: TR P XVIII IMP II COS III S-C. Mars standing right holding spear and resting hand on shield.

16 Birley 1999, 116-117

17 Example provided by RIC III1 *Marcus Aurelius* 861; Hekster 2015, 81

(RIC III Marcus Aurelius 861, Image courtesy of ProCoin Archives https://pro.coinarchives.com/1bcb821828174e7cd83c8b66fab131b5/img/gorny/249/image00757.jpg [accessed 15/08/2017])

The first coin portraits of Caracalla produced during Severus's reign continued to emphasise 'civilian' modes of representation (Table 1).

Obverse Portrait Busts of Caracalla–Reign of Septimius Severus (total 311)		
Draped Bust (gold)	Draped Bust (silver)	Draped Bust (base metal)
19 issues- 30% of gold denomination coins	103 issues- 65% of silver denomination coins	47 issues- 52% of base metal denominations
Cuirassed Bust (gold)	Cuirassed Bust (silver)	Cuirassed Bust (base metal)
43 issues- 70% of gold denomination coins	57 issues- 35% of silver denomination coins	42 issues- 48% of base metal denominations
Overall Percentage: Draped Bust: 169- (54%); Cuirassed Bust- 142 (46%)		

During his adolescence, as a young co-emperor, coins depicted Caracalla on their obverses with a draped bust in the majority of cases (Figure 5). The proportion of cuirassed portraits varies according to denomination. Preference for draped, rather than cuirassed, portraiture was particularly evident among silver *denarii*, which were struck in the greatest number and featured images of the young co-emperor represented in this way in 65% of obverse portraits. Only high denomination gold *quinarii* and *aurei* featured cuirassed portraiture on the majority of types (70%). It is possible that the decision to place a cuirassed imperial portrait upon higher denomination pieces reflected their use as pay for soldiers at the time when they were honourably discharged, and that the military portrait of the emperor was therefore created for the benefit of the military as a specific social group. Overall, however, drapery rather than a military cuirass appears upon the majority of Caracalla's portrait busts produced during Severus' reign. His 'civilian' aspect was also emphasised by the appearance of his visage and hair in cuirassed portraits. In these, his cheeks are full, his skin smooth and unlined, his hair styled in the well-defined waves also worn by his father Septimius Severus, and the 'stepped' locks on the nape of his neck may be compared with those favoured by other imperial princes.

Figure 5: Caracalla, Rome, denarius, AD 119

Obverse: IMP CAES M AVR ANTON AVG. Bust of Caracalla, laureate and draped, right.

Reverse: IVVENTA IMPERII. Emperor standing left with Victory on globe & spear, captive at feet.

(RIC 4a Caracalla 20, Image courtesy of Wildwinds http://www.wildwinds.com/coins/sear5/s6812.html [accessed 15/08/2017])

Caracalla's portrait underwent a significant 'militarisation' in years that followed of Geta's death (212- 217 CE) (Table 2):

Obverse Portrait Busts of Caracalla–Sole Reign (total 275)		
Draped Bust (gold)	Draped Bust (silver)	Draped Bust (base metal)
15 (22%) of gold denomination coins	40 (36%) of silver denomination coins	25 (26%) of base metal denomination coins
Cuirassed Bust (gold)	Cuirassed Bust (silver)	Cuirassed Bust (base metal)
53 (78%) of gold denomination coins	69 (64%) of silver denomination coins	73 (74%) of base metal denomination coins
Overall Percentage: Draped Bust: 80 (29%); Cuirassed Bust- 195 (71%)		

This presentation of the imperial portrait continued without change until the end of Caracalla's reign. By this time 195 obverse portrait busts (71%) had represented him with a cuirassed bust, while only 80 portrayed him with a draped bust without a cuirass (29%). The proportion of cuirassed portraits also became relatively equivalent across all gold, silver and base metal denominations; this suggests that a militarised image of Caracalla emerged as the dominant form of obverse portraiture and was not directed at a specific social group.

The military associations communicated by depictions of Caracalla as sole emperor wearing the cuirass were heightened by the inclusion of additional military features in his hair, visage, posture and expression. His curly hair and beard were now shown roughly shorn close to the skin (Figure 6).[18] Furrows creased his forehead, neck and the skin between his eyes, which were narrowed into a wary squint. He now seemed hostile and vigilant and, although only twenty-three years old, seemed weathered by years on campaign. Together, the inclusion of such details served as an 'iconographic sign system,' that created a formulaic emphasis which heightened the overall impression of militarism

18 A literary description of Caracalla's short haircut appears in Herodian with a somewhat amusing explanation. Caracalla arranged for the funeral of his freedman Festus to be celebrated in the manner of the Greek hero Patroclus. This ceremony required the family and close friends of the deceased to cut their hair and lay it upon the burning funeral pyre. "Since he was almost entirely bald, he made himself ridiculous when he wished to place his curls upon the blaze; he did, however, shear off what little hair he had." (Herodian, *History of the Empire* 4.8.5).

and personal involvement with the Roman army suggested by the cuirassed portrait that appears upon these coins.

Figure 6: Caracalla, Rome, aureus, AD 214

Obverse: ANTONINVS PIVS AVG GERM. Bust of Caracalla, laureate, draped and cuirassed, right

Reverse: P M TRP XVII COS IIII P P, Caracalla standing left, sacrificing before the Temple of Vesta, two Vestal virgins standing before, child between them, two togate men standing behind

(RIC 4a *Caracalla* 249v. Image Courtesy of the British Museum. http://www.britishmuseum.org/collectionimages/AN00659/AN00659014_001_l.jpg [accessed 15/08/2017])

The emperor's military haircut, weathered face and severe expression were not limited to numismatic portraiture. Instead, they also served as the characteristic features of Caracalla's public image in contemporary sculpture. Busts of the emperor discovered in Rome portray his hair and beard as closely cropped (Figure 7). They also emphasise the stern expression and weathered countenance shown in coin portraiture, and depict his 'frown' as knitted brows and a pair of deep creases on his forehead. Several accentuate the impression of vigilance and hostility created by the coin portraits in that they depict the emperor with his head cocked to one side, creating the impression that the viewer has caught him in the momentary action of looking over his shoulder.[19] This transitory pose (although since it appears at a time when a cult of the great Greek hero Alexander the Great was represented in art with his head slightly bent to one side [Plutarch *Life of Alexander* 4.1-4], it may also have been intended to link the emperor with this famous figure of the past), lent immediacy to Caracalla's weathered countenance, so that his severe expression now seemed hostile and suspicious.[20]

19 E.g. Bust of Caracalla from Altes Museum Berlin, Sk 384; Kleiner 2004, 324

20 Kleiner 2004, 324

Figure 7: Rome, portrait bust, marble, AD 212, Naples National Archaeological Museum. Accession number Inv. 6603.

Caracalla's military image must have bolstered his claim to sole imperial authority, which he acquired with the support of the army, in the aftermath of his brother's death. The association between the emperor and the army was expressed in a numismatic context by the presentation of him with a military haircut, weathered features and a posture that suggested wariness. However, this mode of representation presents such a radical break from numismatic precedent that it raises questions of whether it was real or idealised – either veristic, following the emperor's actual appearance, or employing a new form of idealism, that consciously roughened the young emperor's features in order to communicate his military involvement.

Roman coin portraiture up to that time had drawn upon two established stylistic traditions: verism, a 'warts and all' style, favoured during the Late Republican period, and classicising idealism, established by Augustus in the early years of the Roman Empire.[21] In the late republican period, veristic portraiture that emphasised the lined neck and hollow cheeks of Caesar, or the protuberant chin and shaggy hair of Antony, enabled numismatic imagery to communicate the personal nature of the triumvir's power.[22] This allowed his coinage to express political authority in an age more accustomed to group governance. Augustus broke from the veristic portrait style in favour of classical Greek models that rejected short hair, age and wrinkles in favour of a neutral, ageless countenance, one that also bore a hint of a resemblance to Apollo, the god whom he claimed had supported him when he defeated his opponents at the battle of Actium.[23]

21 King 1999, 130
22 Examples- RSC 22 and BMC 264; King 1999, 128
23 King 1999, 128

This mode of representation created an impression of timelessness, and thus remoteness, which allowed the portrait of the emperor to become a blank canvas, able to present him as a leader favoured by the gods, the dispenser of liberalities, a rightful successor and a successful general, while still remaining recognisable.[24]

Idealism continued to be employed by emperors who wished to project a particular political image with all the ideological resources at their disposal. Portraits of the adopted family of the Antonine emperors adjusted the shape of their skulls, chin and noses to create the familial resemblance expected of biological fathers and sons, and ageing emperors such as Augustus and Nerva maintained an ageless quality in imperial portraiture in their later years.[25]

A return to verism occurred upon the conclusion of the civil wars that followed Nero's death, and again in the third century AD, with the rise of 'soldier emperors.'[26] It can hardly be considered a coincidence that veristic portrait styles emerged as a dominant form of official representation in such periods, or that Caracalla stands as the tipping point between the generals who rose to power in the second century and the phenomenon of 'soldier emperors' that occurred during the third. The same veristic portrait styles that had enabled coins to express the personal nature of triumviral power in an age that had glorified group rule allowed these coin portraits to establish a clear association between the emperor and military activity. The image of a rugged soldier emperor would allow coin portraiture to bear witness to his personal involvement in the daily business of war, and thus give him full credit for a victory or justify a protracted absence from Rome. Further, it allowed an emperor whose power rested upon the influence of the army to publicly align himself with the social group to which he owed his accession to power. Militaristic imperial portraiture could be more effective than the vague allusions to Victory, *virtus* and military security that had come to serve as a standardised aspect of imperial identity during the imperial period.[27]

It is also notable that this emphasis upon military representation did not create an iconographic precedent; wearing a cuirass became very common only from the first 'proper' coin-series struck for Aurelian and later.[28] This suggests that this mode of representation was not idealistic, but rather was based on each emperor's actual activities.[29]

24 Zanker 1988a, 98-100; King 1999, 128-129, 131

25 Hekster 2015, 81

26 Nodelman 1993, 17; King 1999, 128

27 Hedlund 2008, 93

28 Ibid

29 A parallel is presented by Hadrian, the first Roman emperor to wear a beard, who was faithfully depicted with facial hair. That the imperial mint chose to represent him as he appeared, rather than 'shave the emperor' in order to follow imperial convention, presents a compelling precedent for veristic portraiture during the second century (Hekster 2015, 81)

Conclusion

It seems clear, therefore, that the imperial mint depicted Caracalla after he became sole emperor in a highly militaristic manner, even though this style of representation broke with imperial precedent, because it accorded with the emperor's wishes. The men responsible for initiating the tone of the coinage were either the mint masters (*tres viri monetales*) or slaves or freedmen of the emperor who held administrative positions, and they may sometimes even have chosen the types without consulting the emperor himself. Levick offers an interesting further interpretation of this process. She suggests that the people for whom coins were produced were not the only audience for the imperial images they bore; in her view, coin types might also address, cultivate and flatter the emperor by basing their representation of him on his own view of himself.[30] In this way, coins could then communicate the emperor's preferred image of himself to the people who used his coinage, and this would play an important role in shaping or changing the perceptions of the public.[31] In this sense, the portraits of Caracalla as a military man that appeared upon, and were propagated by, imperial coinage, were intended to flatter the emperor as well as communicating his martial associations to the people that used them.[32] This new way of representing him when he became the sole ruler, with a new prevalence of cuirassed obverse portraiture, and the inclusion of a military haircut, weathered features and a wary look, sent a strong message to the Roman people.

About the Author

Charlotte Mann is completing a doctorate at the University of Warwick and Macquarie University. She has held a Junior Fellowship at the Australian Centre for Ancient Numismatic Studies and has completed an internship at the Coins and Medals Department at the Fitzwilliam Museum, Cambridge.

Thanks

I thank the anonymous reviewers of the JNAA for providing many helpful comments and suggestions, and my Masters supervisor Dr Clare Rowan, who guided my study of the emperor Caracalla at the University of Warwick.

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30 Levick 1999, 44
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The iconography from the mint of Antipatris: the representation of architecture and religion

Rachel Mansfield[1]

Abstract

In this paper I discuss the use of iconography on the coins minted at Antipatris during the Severan Age. This coinage has been chosen largely due to the mint only operating during a single period under Roman Emperor Elagabalus, c.218-222 CE. The iconography on the coins differs from the 'norm' as represented by coinage from other provincial cities, in that it shows a clear connection to the worship of a river god. This is an uncommon theme in the area of Syria-Palestine, leading me to consider the background of the city and its common worship and iconography, alongside parallels with coins minted in Rome. This mint has hitherto received little attention. While there have been publications of handfuls of these coins, there has not been a comprehensive collection and publication of the coins of Antipatris. This paper draws conclusions between the iconographical representations on the coins themselves, discussing how the city of Antipatris came to choose these images as well as possible motivations for the minting.

Keywords

[Elagabalus] [Syria-Palestine] [Antipatris] [Aphek] [Israel] [third century CE] [Severan Period] [Severan Age]

Introduction

The first study of the numismatics of Antipatris (a paper published in 1990 in the Israel Numismatic Journal [*INJ*] and repeated in the excavation report of Aphek-Antipatris ten years later) was completed by Kindler.[2] In this, he identified eight iconographical types of the mint of Antipatris and was the first discussion of the iconographical traits of the mint. In 1999, Meshorer published a 'new type' from the mint and increased the total to nine.[3] More recently, Dario Calomino has also been working on these coins as well as those of other provincial mints from the Royal Provincial Coinage (RPC) which will be published soon.[4] In addition to this, my Master's thesis, from which this paper

1 This work could not have been successfully completed without the tireless efforts of my anonymous editors, and the many influential people surrounding my studies, namely Donald Ariel, Ken Sheedy and Gil Davis.

2 Kindler 1990; 2000.

3 Meshorer 1999.

4 Collaboration was taken with Dario on the Masters project and catalogues and data have been shared.

stems, reviewed the coinage of Antipatris, together with the catalogue I created from a study of the collections of multiple museum and private collections. This resulted in the discussion of 65 known coins from collections and museums around the world. These 65 specimens with two obverse types were separated into nine different reverse types, with a total of six obverse and fourteen reverse dies observed.[5] This paper, however, discusses the common trend between five different types of the mint of Antipatris, and argues for a thematic connection between them. In order to place Antipatris in its wider sphere of scholarly understanding, this paper will briefly review previous research of the coins of Antipatris. In addition, a brief introduction to the geographic and political influences of this city will attempt to place the society which minted these coins into the milieu of third century CE Syria-Palestine. This thesis shows that the mint of Antipatris opened in approximately 221 CE, when the city was raised to the status of a *polis* and the coins of Antipatris were struck from the second year of Elagabalus' reign for the following three or four years.[6]

During the rule of Elagabalus many cities in Phoenicia and Palestine minted bronze coins, including some, such as Antipatris, that struck coins for the first time.[7] Major studies of the mints of this area have been few in number, with the most prominent studies being based around the coins of the Decapolis, with less attention paid to the many provincial mints of Syria-Palestine. The two main works which attempted to provide an in-depth study of provincial and Decapolis mints are Spijkerman 1978 and Lichtenberger 2003. The northern city of Antioch, located in modern day Syria has been well covered by the work of Butcher in 2004 and 2005. Though these works attempted to discuss local coinage trends of the wider area, there was no attention given to the smaller mints in central Syria-Palestine. As a result there has been a gap in the scholarship of coinage production and circulation in this period. Studies in the area of the Southern-Levant closer to Antipatris include the major mints of Jerusalem, Gaza, Nysa-Scythopolis and Caesarea Maritima. These cities' prominence is demonstrated as their influence over minting in the area can be seen in the iconographical trends through the years.[8]

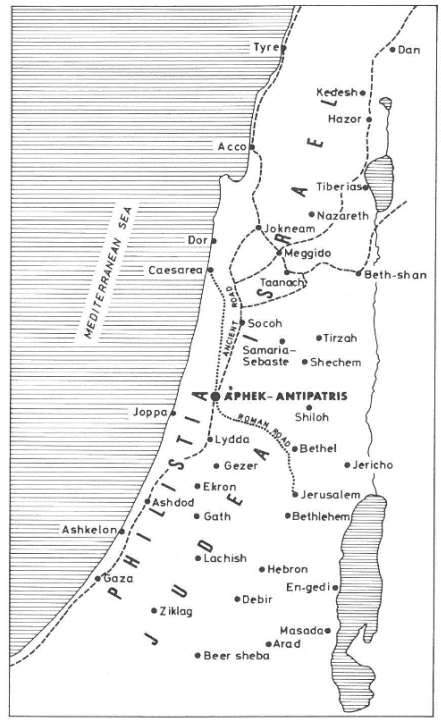
Geographical Location, Political and Economic Factors of Antipatris

During the Severan Period, the *polis* of Antipatris was included within the Roman province of Syria-Palestine, which covered approximately 4,400 sq. km.[9] This consisted of the Judean highlands (the mountains to the west of Jerusalem), the ridges of the

5 Mansfield 2017, 105 especially.
6 Meshorer Bijovsky & Fischer-Bossert 2013, 126.
7 Sutherland 1967
8 Ariel 2002; Ecker 2010; Barkay 2003; Berman 2015; Farhi 2017; Kindler 1990, 60; Mazor & Atrash 2015; Meshorer 1985; Meshorer et al 2013.
9 Ofer 1997, p. 253.

Jordan and Jezreel valleys and the central coastal plain. The main cities in this region, during the third century CE, were Jerusalem, Hebron, and the three major port cities of Joppa, Caesarea Maritima and Gaza. While Jerusalem is at the heart of the province, the topography made it difficult to access. The Benjamin and Judean highlands, which are located to the north and west of Jerusalem, range from approximately 600 m to 1020 m above sea level.[10] These are the steepest of the highlands, notoriously inhospitable and extending down the length of the province of Syria-Palestine.[11] To the south and east of the province lies the Judean Desert, covering a large area of 1150 sq. km.[12]

Antipatris was located on important trade and travel routes. The city lies on cross roads which, east to west, connect the main city of the area, Jerusalem, with the Mediterranean world (via Nicopolis and Jaffa). The north-to-south route connects the Mesopotamian world to Egypt travelling through many major cities such as Caesarea Maritima, Jaffa and Gaza, known as the *Via Maris* (way to the sea). [13]This trade route was important due to the safe travel it enabled between the empires in the far north, those of Mesopotamia, and Egypt in the south.[14]



Map 1: General Map showing the position of Aphek- Antipatris (Kochavi 2000:2 fig 1.2)

10 Isaac & Roll 1976; Ofer 1997, 253.
11 Kleiman 2015; Ofer 1997, 253.
12 Ofer 1997, 253; Roll 1983.
13 Avi-Yonah 1950, 55-57; Isaac 2015, 4; Roll 1983; Tsuf 2011, 271-272.
14 Roll 1996.

Political Administration

The political and economic administrations of the province were closely linked. The Romans allowed local governorship; their main concern was the safety of Romans, commerce and an assurance that taxes be collected to support the government framework, including the army and those protecting the empire from foreign threats.[15] Following the Bar Kokhba revolt in 132-135 CE, the Praetorian province of Judaea was included in the newly created province of Syria-Palestine and remained as such until the rule of Diocletian.[16]

Several important cities in Judaea influenced their surrounding areas. The work of Eusebius is especially helpful in understanding this. During his lifetime he used his access to the government and military records held at Caesarea and established an understanding of the area in the third century CE.[17] Eusebius describes six major territories.[18] During the reign of Septimius Severus (193-211 CE) Eleutheropolis was established and went on to dominate its surrounding area. Aelia Capitolina likewise controlled its surroundings of approximately 190 acres.[19] These major cities were discussed by Avi-Yonah, who attempted to identify their spheres of influence. In his list, Eusebius identified what he believed were the important settlements; the port of Joppa (Jaffa), for example, was omitted.[20] Neither was Antipatris mentioned.

While the southern area of Judah remained Jewish, the population of the cities in the northern area consisted mainly of Romans, Greeks and Samaritans. This was explained by the death of many Jews under Hadrian and dispersion of remaining populations into the Diaspora.[21]

Economic Administration

Many roads were built under Hadrian, Marcus Aurelius and Septimius Severus, most likely during their campaigns against the Parthian Empire.[22] These roadworks are dated from the surviving milestones.[23] While these roads conferred an immediate benefit in mobilising the Roman Army, they also helped to connect the provinces and increase trade.[24] These roads aided the growth of the economy of the province of Syria-Palestine.

15 Hall 1997, p.319.
16 Avi- Yonah 1950, 59; Millar 1993, 108; Ofer 1997, 256.
17 Isaac 1998, 287.
18 Isaac 1998, 299.
19 Avi-Yonah 1977, 115; Ofer 1997, 257.
20 Avi-Yonah 1977; Isaac 1998, 299.
21 Eusebius *Onomasticon* IV.6.3; Avi-Yonah 1977, 114, 121; Ofer 1997, 257; Schwartz 1984, 36.
22 Schwartz 1984, 46.
23 Isaac & Roll 1976, 47-60.
24 Schwartz 1984, 29.

The topography of the interior of Judaea meant that farm plots were small, with the exception of holdings in wealthy/arable areas like Jezreel and the lower Jordan Valley.[25] While taxation was collected by the Romans in the form of coinage, the economy of Judaea in the early third century CE was largely an agrarian one.[26] Josephus, *Against Apion* I. 12-60, describes the economy of the Jews as one which is devoted to the cultivation and production of the country, suggesting that the Jews were not involved in maritime trade.[27]

The coastal plain of Judaea, in which the city of Antipatris is located, is a well-watered and fertile area.[28] It provided an opportunity to cultivate all manner of grain, wine, fish, fruit and even animals, such as goats, for meat and milk.[29] Due to the proximity of the rich coastal region with the path of the *Via Maris*, another economic activity was the taxes charged to passers-by and other trade by merchants in different cities.[30] Tombstones found in excavations in Jaffa indicate the diversity of trades, with various named occupations, including: bakers, a dealer in textiles, a dyer, a trader in old iron, a cumin seller, a laundryman, a fisher and a paint worker.[31]

The Coins

The mint of Antipatris seems to have minted for a very short span of three or four years during the reign of Elagabalus, c. 221-223 CE.[32] This is an abnormally short time, especially for the area.[33] However, the highly debated reasons for the beginning and end of minting of coins in this area will not be discussed here. Instead, I will focus on a selection of the few coin types which have survived. From a collection of only 65 known coins from collections and museums throughout the world, there are fourteen different reverse types, many with sub types, and nine obverse types.[34] The latter are represented in Table 1. This large number of variants in such a small sample would suggest a high turnout of coins using dies in any combination necessary. Of these reverse types, though, this paper intends to discuss the interconnected importance of five thematically connected reverse types, which, to date have not been considered together.[35]

25 Schwartz 1984, 42.
26 Butcher 2004, 143; Crawford 1983, 40-8; Schwartz 1984, 39.
27 Avi-Yonah 1977, 188.
28 Avi-Yonah 1977, 195; Schwartz 1984, 38.
29 Avi-Yonah 1977, 196; Schwartz 1984, 38, 86.
30 Avi-Yonah 1977, 196
31 Avi-Yonah 1977, 197.
32 Eitan, Beck & Kochavi 1993, 71; Kindler 1990, 65; Meshorer, Bijovsky & Fischer-Bossert 2013, 22.
33 Meshorer 2010, 112.
34 See the catalogue of Mansfield 2017 for further information.
35 Kindler in 1990 and 2000 looked at the coins individually; later in 1999, Meshorer studied two of the coin types in consideration with each other.

Reverse types found with obverse of Elagabalus	
Type 1: Two Tetrastyle temples	Mansfield 2017, Cat. *Ant*. 1
Type 2: Temple on Acropolis	Mansfield 2017, Cat. *Ant*. 2
Type 3: Tyche in Tetrastyle Temple	Mansfield 2017, Cat. *Ant*. 3- 15
Type 4: Bust of Zeus	Mansfield 2017, Cat. *Ant*. 16
Type 5: Bust of Sarapis	Mansfield 2017, Cat. *Ant*. 17, 18
Type 6: Emperor in Military Dress Sacrificing	Mansfield 2017, Cat. *Ant*. 19-21
Type 7: Pallas Athene	Mansfield 2017, Cat. *Ant*. 22
Type 8: Reclining River God	Mansfield 2017, Cat. *Ant*.23
Reverse types found with obverse of Julia Maesa	
Type 8: Reclining River god	Mansfield 2017, Cat. *Ant*. 24
Type 9: Three Temple	Mansfield 2017, Cat. *Ant*. 25

Table 1: The Reverse Types of Antipatris.

The Importance of Iconography

Iconography is not static, and constantly adjusts and readjusts, being part of a living society.[36] Various media could contain symbolic references to imperial power and present a particular picture of the emperor.[37] Imperial and provincial coinages, reliefs and imperial portraits, literary and administrative texts, texts of law, petitions, votive inscriptions, games and imperial apperances together convey a visual program presenting imperial ideology.[38] The study of coins can provide information about a city which no longer exists, and can identify public buildings and deities worshipped.[39] In the 1990s, scholars began to approach sculptures and reliefs as having a metaphorical text, and Levick noted how this could be easily transferred into the study of numismatics.[40]

The symbolic role of iconography allowed the provinces to present 'a self-defined and constructed cultural and social identity'.[41] This iconography could have Roman undertones but have a different perceived meaning to local peoples.[42] Lichtenberger has recently stated that "coins are official statements of the cities and expressions of collective religious identity".[43] This identity is, therefore, chosen and constructed by people with regard to their historical context. Iconography on coinage is never arbitrary; coins are the most deliberate symbols of public identity.[44] While a symbol may be transferred

36 Hekster 2002a, 10; Manders 2012, 26.
37 King 1999, 123; Levick 1999, 44; Zanker 1990.
38 Levick 1982, 197; Manders 2012, 29.
39 Howgego 2005, 13; Kindler 1974, 127.
40 Levick 1999, 43-44.
41 Horster 2013.
42 Hekster 2007, 349; Kemmer 2006, 223-242; Manders 2012, 32.
43 Lichtenberger 2017, 198.
44 Howgego 2005, 1; Millar 1993, 230; Preston 2001, 87.

across cities, symbols mean different things to different people.[45] There was no point in presenting new coin types and iconographic symbols if the audience did not understand the meaning.[46]

Discussion of Iconographical Features

The reverse types presented in this paper are: (i) the temple atop the acropolis of Antipatris; (ii) the double temple type; (iii) the triple temple type; (iv) the reclining river god type; and (v) the emperor sacrificing on an altar type. These reverse types will be introduced with a description and a discussion of similar coin types minted in the wider area. Finally, the types will be discussed together in the context of their similar thematic representation.

The most remarkable types of the city depict architecture.[47] There are three types of the mint of Antipatris which present only architectural features on the coins. Unfortunately, there is not yet evidence of any of these buildings or structures in Antipatris, and thus discussion of the certain identification of these temples is not possible.[48] This is mainly due to the city being razed in the Ottoman period and much of the archaeology of Antipatris in the third century CE being removed.[49] With that in mind, the discussion of the temples of Antipatris is all the more significant, as the representation of these temples indicates their importance to the citizens of Antipatris and thus speculation surrounding them is only useful in the discussion of the history of the province of Syria-Palestine.

Temple atop the Acropolis

The reverse type of the temple atop the acropolis depicts a single tetrastyle temple, facing to the right, with a stairway to the entrance and a side door, all situated atop a hill, the symbolic depiction of the acropolis of Antipatris.[50] The obverses depict the bust of a young Elagabalus. (Figure 1) This reverse type is known from a single specimen type, located in the collection of the Studium Biblicum Fransiscanum in Jerusalem, and is depicted in multiple publications.[51] This single specimen comes as an As of 9.44 grams.[52] The depiction of the hillock temple of Antipatris is similar to that on the coinage of Neapolis.[53] Closer to the date of minting of the coins of Antipatris, again the mint of

45 Butcher 2005, 146-7.
46 Hekster 2002b, 20-35; Howgego 1975, 47; Kemmers 2005, 39-49; Lummel 1991; Manders 2012, 6, 36.
47 Kindler 2000; Lichtenberger 2017, 199; Meshorer 1999.
48 Eitan, Beck & Kochavi 1993, 63.
49 Kochavi 1997, 151.
50 Kindler 1990, 69; Meshorer 1999, 68.
51 Kindler 1990, coin 5; 2000, coin 5.
52 Kindler 2000, coin 5.
53 Kindler 1990, 66.

Neapolis produced this reverse type under Macrinus who ruled before Elagabalus in 217-218 CE.[54] This reverse was also minted during the reign of Elagabalus.[55]

Figure 1: 9.44g, 26mm. See Kindler 1990 5; Mansfield 2017 cat. Ant. 2 p. 54.

Two Tetrastyle Temples

In Antipatris, there is one coin which represented the highest denomination, a sestertius weighing 18.35 grams. (Figure 2) This coin has the image of the two tetrastyle temples facing each other, connected by an arch, and each temple has a frail staircase or ladder, indicating a podium(?).[56] To date, this coin is the only evidence of a sestertius being minted in Antipatris. It has been published many times.[57] Meshorer also later published a smaller denomination.[58]

Figure 2: 18.35g, 27mm. See Kindler 1990 1; Mansfield 2017, cat. Ant. 1 p. 54.

Three Temple Type

The triple temple reverse type is a more intricate design with the two temples again depicted facing one another, with an arch connecting them and stairs. However, in this reverse type the temple upon the hillock of Antipatris is also seen in the top centre of the die. (Figure 3) The obverse of these coins is only, to date, known to depict Julia Maesa, Elagabalus' grandmother. Though it is uncommon for new types (previously unseen reverse types) to be issued under a female in the Emperor's family, it is not a cause for concern in this mint. Only two examples of the triple temple type have been discovered, and thus it can be logically assumed that these reverse types were also present on coins which bore the obverse of Elagabalus, even though the evidence of

54 Meshorer, Bijovsky & Fischer- Bossert 2013, 54 pl. 50 no 83-85.
55 Meshorer, Bijovsky & Fischer- Bossert 2013, 55 pl. 51 no 91-99.
56 Kindler 2000, 49.
57 Kindler 1990, coin 1; Kindler 2000, coin 1; Meshorer 1985, coin 150, 54, 116, 150.
58 Meshorer 1999

these is lacking. The two coins are dupondius, the second largest coin denomination from Antipatris, and have an average weight of 12.05 grams[59] and an As.[60]

Figure 3: 13.02g, 23mm ↑. Meshorer 1999 2; Mansfield 2017 cat. Ant. 25, p. 60

Temple Discussion

The two reverse types which depict the double and triple-temple types are very rare.[61] However, this was a common way to depict temples on the coins of the region of Syria in the early part of the third century CE.[62] The temples, which are seen in three-quarter view, have been associated with a larger architectural complex that is typical of *fora,* with several temples.[63]

Representation of the buildings themselves, whether representing real or idealised buildings, raises the question of why they even appear. [64]Attempting to align these findings with the actual architecture at sites is problematic.[65] This is truly the case in Antipatris, where identification of the major temples displayed on the coins has been attempted, although there is no archaeological evidence to support this.[66] Temples on coins are an important representation of the religious and cultural identity of cities.[67] The practice of depicting temples on coinage was a Roman invention; their use on coinage from the provinces is a reflection of trends from Rome.[68]

Emperor Sacrificing on Altar

The reverse type of the emperor sacrificing on an altar depicts Elagabalus, clad in military dress, sacrificing on an altar, and a fish on the top left field. This iconographical representation is frequently used on coinage minted during the reign of Elagabalus, with the image of Elagabalus sacrificing appearing on 27-coin types minted at Rome.[69] Therefore, it is of no surprise that the image was copied in provincial mints. This

59 Meshorer 1999, coin 2.
60 Meshorer, Bijovsky & Fischer- Bossert, coin 9.
61 Kindler 1990, 70; Lichtenberger 2017, 199; Meshorer 1999, 87.
62 Kindler 1990, 70; Price & Trell 1977, 60.
63 Kindler 1990, 71; Lichtenberger 2017, 199.
64 Burnett 1999, 138; Lichtenberger 2017, 197-8.
65 Lichtenberger 2017, 198.
66 Kindler 2000, 54; Lichtenberger 2017, 198-9.
67 Elkins 2015; Howgego 2005, 4; Kindler 1990, 71; 2000, 66.
68 Burnett 2011; Howgego 2005, 4.
69 Manders 2012, 148.

imitation, however, is significant in demonstrating how imperial 'global' types were made more accessible and local through the provincial mints.[70]

According to Rowan there was never an official decree regarding the depiction of the god Elagabal, but coins of this type, from both Roman and other provincial mints depict Elagabalus sacrificing to his patron god, Elagabal, sometimes in addition to a city deity.[71] On the coins of Antipatris, there is a clear difference: Elagabal does not appear in the worshipping scene and instead Elagabalus is depicted in the typical sacrificing pose but sacrifices only to the patron god of the city of Antipatris, represented by the addition of a fish in the upper left field. (Figure 4) This representation of the fish as a symbol of the Yarkon River is represented also alongside the reclined river god. This fish is argued here to be representative of the cult of the river god as well as of the economic importance that the river held.

Four coins of this type have been discovered. One is of the denomination of the As,[72] one is of the denomination of a Half Semis,[73] and two are of the denomination dupondius.[74]

Figure 4: 11.23 g 26.2mm ↑. A badly worn dupondius obv. and rev. Kadman Museum, Tel Aviv K65224; Mansfield 2017, cat. Ant. 21, p. 59.

Reclined River God

The reverse type of the reclined river god is known from the catalogue of Antipatris with multiple specimens. This reverse type is the only one from the collated group from Antipatris that was studied which bear both obverses of Elagabalus and Julia Maesa. This reverse type depicts a river god in a reclined position. The deity appears to be laureate and draped from the waist. The figure faces left and holds a reed in his left hand, while his right is extended toward his bent right knee, where a fish can be seen approaching him. Below his left elbow, upon which he is leaning, there is a stream within which two more fish are depicted swimming. This seems to be the personification of the god of the Yarkon River, connecting the city with their patron deity.[75] The representation of the fish may be an indication of both the cult of the Yarkon River and the economic value of the river to Antipatris, with evidence suggesting that the Yarkon

70 Butcher 2005.
71 Rowan 2012, 182.
72 Meshorer, Bijovsky & Fischer- Bossert 2013, coin 2.
73 Van Der Vliet 1950, coin 11.
74 Kadman collection, Erets Israel Museum, Tel Aviv K65224; Kindler 1990 coin 3; 2000 coin 3.
75 Kindler 1990, 69; Meshorer Bijovsky & Fischer-Bossert 2013, 22.

River was being fished from as early as the Iron Age II (1000-587 BCE).[76] There are two denominations in which the coins of this type were minted. Two are dupondii,[77] and the remaining four coins are half-semis.[78]

Figure 5: 12.98g. obv. rev. See Meshorer 1999 1; Mansfield 2017, cat. Ant. 23, p. 59

Figure 6: 8.67g. obv. rev. See Meshorer 2013 *Antipatris* 8; Mansfield 2017, cat. Ant. 24, *p. 60.*

The image of a reclined river god is relatively rare on coins of Syria-Palestine.[79] However, there are known examples from Akko-Ptolemais during the reign of Severus Alexander (222-235 CE) the type is much the same as that from Antipatris; it includes the fish below, and the stream to the right of the god who reclines facing right. Similar reverse types of a reclining river god can also be seen on coins of Eleuthropolis minted during the reign of Geta (198-209 CE).[80] In this depiction, the reclined river god holds a reed in his left hand and a cornucopia in his right hand. A reclined river god facing left can also be seen on coins from Adraa, minted under Septimus Severus (193-211 CE).[81] Here he leans on an amphora, from which a stream flows, similar to that of the coins of Antipatris, below the left elbow of the river god, a theme known in other cities (e.g. Nilus and Tiber) but an uncommon representation in the province of Syria-Palestine. The type of the reclined river god is also similar in terms of its iconography to the type from the mint of Antioch which depicts Tyche reclining, with the river god of the Orontes swimming at her feet.[82]

76 Eitan, Beck & Kochavi 1993, 68; Kochavi 1997, 150; Negev & Gibson 2001, 39.

77 1: Meshorer 1999, coin 1; Meshorer, Bijovsky & Fischer-Bossert 2013, coin 1; 2: Kindler 1990, coin 8; 2000, coin 8.

78 1: Kadman collection, Erets Israel Museum, Tel Aviv K652440; 2: Rosenberger 1972, coin 3a; 3: Rosenberger 1972, coin 3b; Meshorer, Bijovsky & Fischer-Bossert 2013, coin 8.

79 See *RPC* online 463.2.

80 Meshorer, Bijovsky & Fischer-Bossert 2013, 110, pl. 102 no. 23.

81 Meshorer, Bijovsky & Fischer-Bossert 2013, 145, pl. 127 no. 8.

82 Butcher 2005, 149.

Conclusion

There are six obverse types and nine reverse types identified from the mint of Antipatris, though it is not uncommon for a type to be only represented in the entire corpus by a single specimen. Most of the coins were poorly minted and are now badly worn.[83]

In general, iconographic trends in the coinage from Rome, and in mints from the provinces of Syria-Palestine, were followed at Antipatris. However, there is also evidence that the minting authority of the city commissioned rare types, specifically, the reclined river god. This study of the iconography on the coins of Antipatris supports the recent arguments by scholars such as Icks, Manders and Rowan, that Elagabalus did not intend to make Rome and her provinces monotheistic, and instead allowed the worship of a wide variety of deities in Rome and the provinces.[84]

The coins of Antipatris demonstrate clear links to the mints of surrounding cities in the same minting period during the rule of Elagabalus. The people of Antipatris selected, and identified themselves with iconography used in surrounding mints, thus creating an identity which was able to be understood in the surrounding area. This can be seen through the consideration of the five types presented in this paper. What is the common theme in such different reverse types? It is argued here that this connection is representative of the most important aspect of the identities of the peoples of Antipatris, namely the cult of the personification of the Yarkon River. The coins show representations of the god and symbols alluding to him and the fertility of the Yarkon River. The river was an important economic resource, and therefore it is not a leap to conclude that the city was famous for their river, especially during the boom of economic growth in the city during the early 200s CE. The economic importance of the Yarkon river is demonstrated though the reclining river god type, who rests his left arm on an amphora, from which the river flows. This is a close iconographic representation to a similar type in the city of Eleuthropolis which also had a strong economy due to their river.[85] This claim also has evidence from the archaeological record, as the river was a main economic exploit as early as the Iron Age II (1000-587 BCE).[86] In addition to this, there is clear evidence of this economic growth in the iconographical representations of the main temples being represented on the three reverse types: the temple on the acropolis, double temple, and triple temple. In addition, the arch, which appears interchangeably with the fish on the coins of the military armour-clad Elagabalus sacrificing over an altar, also appears within the temple facades and thus connects the temples to the Yarkon River.[87] While

83 Meshorer Bijovsky & Fischer-Bossert 2013, 22.

84 Compare Gourmont 1903, 7; Halsberghe 1972, 80; Hay 1911, vi-vii; Thompson 1972, 161 to the likes of Icks 2012; Manders 2012; Rowan 2012, 139-49.

85 Meshorer Bijovsky & Fischer-Bossert 2013, 110, pl. 102 no. 23.

86 Eitan, Beck and Kochavi 1993, 68; Kochavi 1997, 150; Negev and Gibson 2001, 39.

87 Meshorer 1999, 87.

it is certain that the city of Antipatris was not monotheistic, the use of the temples on the coins, especially the temple on the acropolis which appears in two types, indicates the importance of these particular temples. The connection of these temples to the representation of the river cult is understood through symbolic iconography of images which were also included on other coins examined in this article.

Though the minting period of the mint was a very short period of three or four years, it is clear that Antipatris incorporated and adapted iconographical types from surrounding mints and used them to express the city's own identity and place in the economic sphere of the province of Syria-Palestine in the third century CE.

Author

Rachel Mansfield is a PhD candidate at Macquarie University. Her passion for numismatics began with the studies of the coinage from the First and Second Jewish Revolts. This paper is a presentation of part of her Master's thesis, which focused on two local mints, Antipatris and Nicopolis, which were unique in that they only minted coinage under a single emperor and neither had been published. Her PhD project is investigating the reasons why coinage was minted in the Ancient Near East during the Severan Age, and what the various connections are between the three Syrian provinces, both numismatically and archaeologically.

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Uneasy lies the head: the isolated head type on Tarentine coins

Bridget McClean

Abstract

Due largely to the lack of accompanying attributes, the isolated head types that appeared on Tarentine stater issues between c. 470 and c. 450 B.C. are yet to be decisively identified as belonging to a particular figure. Isolated heads without any accompanying attributes were also a popular decorative motif in both Attic Italian imports and locally produced ware from South Italy; motifs which are directly comparable with the Tarentine numismatic imagery. Isolated heads that feature on vases without any accompanying attributes tend to be identified as non-specific individuals. However, the appearance of isolated heads in a Tarentine numismatic context suggests that the figure (or figures) to whom the head belongs was recognisable to the Tarentine locals. This is because it seems impossible that an anonymous male or female figure would have featured on their issues. Although a comparison between the vase motifs and numismatic iconography does not make it possible to identify the Tarentine head types with a particular mythical or historical figure, highlighting the similarities between the two better situates the isolated head types in their broader cultural context.

Keywords

[Taras] [Magna Graecia] [South Italian coinage] [Vase motif] [Isolated head]

Introduction

The Tarentine issues depicting an isolated head in profile enclosed within a circular line border have been the subject of much scholarly debate surrounding the identity of the figure to whom the head belongs. This type featured on the reverse of staters produced by the Spartan settlement between c. 470 and c. 450 B.C. and fractions sporadically continuing down to the 420s, as well as on gold coins of the second half of the fourth century, where the head can easily be identified as, or at least compared with similar depictions of Hera (Brauer 1986, 37-8; Fischer-Bossert 1999, 79; *HNI* 94-103). The heads of Apollo, Heracles, Athena and Zeus also appear on smaller gold denominations at this time (see *HNI* nos. 951; 984; 987; 990). Through a comparative study of the numismatic imagery and vase motifs, this paper will place the earliest stater types, produced between c. 470 and c. 450 B.C. in their cultural context. Vase motifs, comparable to the numismatic imagery, feature on both Attic Italian imports and locally produced ware from South Italy. In highlighting the problems associated with the

identification of the Tarentine head type, it will be argued that the similarities between the two visual formats suggest a connection between numismatic imagery and material culture, thereby indicating how numismatics can be used to further understand the relationship between coin imagery and cultural identity.

The Numismatic Iconography

The profile head on Tarentine issues raises two questions: firstly, whether the head is male or female, and secondly, to whom the head belongs (Evans 1889, 3 n. 5; Brauer 1986, 37-8; Cahn 1968, 70; *HNI*, 94). Although this article will be restricted to a focus on the stater types, it is must be noted that fractional issues showing an isolated head were produced at Taras between c. 473 and c. 325 B.C. (*HNI* 94-8). The isolated head appeared in manifold depictions on drachms (Figure 1), litrae (Figure 2), half litrae (Vlasto no.1183), obols (Vlasto no. 1201), hemiobols (*HNI* no. 923), tritemorion (*HNI* no. 924), hemilitron (*HNI* no. 841) and possibly hexas issues (*HNI* no. 842).

Figure 1: Reverse of a Tarentine drachm c. 473 – 450 (SNG Aus., Gale pl. 10, 188).

Figure 2: Reverse of a Tarentine litra c. 470-450 (© Noble Numismatics, sale 99, lot 3294, 19 April 2012).

On the first series of stater issues – identified by Wolfgang Fischer-Bossert (1999) as Group 5 and dating to c. 470-465 B.C. (Fischer-Bossert 1999, 79)), the type shows a head in profile, facing left, enclosed within a circular line border (Figure 3).[1]

Figure 3: Reverse of a Tarentine stater c. 470-465 B.C. (© Numismatica Ars Classica NAC AG, auction 82, lot no. 4, 20 May 2015).

The figure's hair is either short and secured with a taenia (Figure 4 A-B),

A

B

Figure 4: Reverse of Tarentine staters c. 470-465 B.C. (A: © Numismatica Ars Classica NAC AG, auction 40, lot no. 211, 16 May 2007; B: © Classical Numismatic Group, Inc. Triton VI, lot no. 30, 14 January 2003).

or tied to sit in the nape of the neck (Figure 5 A-B). On the issues in figure 5, beading is visible just above the base of the neck, possibly suggestive of a necklace.

1 For the purposes of this article Fischer-Bossert's dating will be followed (see HNI, 14 n. 72).

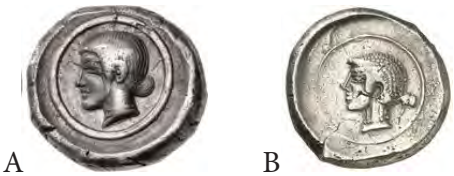

Figure 5: Reverse of Tarentine staters c. 470 – 465 B.C. (A: © Classical Numismatic Group, Inc., auction 93, lot no. 12, 22 May 2013; B: © Gorny & Mosch GmbH, auction 220, lot 1051, 11 March 2014).

In the second series of issues (Fischer-Bossert's Group 7), dating to c. 465-455 B.C., only two dies survive – one depicting the head facing right, while one continues to face left (Fischer-Bossert 1999, 79). The head on the right facing die becomes more obviously feminine, with hair bound and the bun positioned above the fillet (Figure 6). The encircling border of the right facing die is dotted (figure 6). The left facing head in this group (Fischer-Bossert 1999, no. 114, R 76) closely resembles the issue in figure 1 in style, design of the hair, and border.

Figure 6: Reverse of a Tarentine stater c. 465-455 B.C. (Fischer-Bossert 1999, no. 112, R 75). © Brooke Pyke.

In the final series of stater issues (Fischer-Bossert's Group 9), which began to be produced c. 450 B.C., the isolated heads faced right (Fischer-Bossert 1999, 79). While two dies maintain the circular line border (Fischer-Bossert 1999, nos. 90 and 90' (Figure 7)), the feature is absent from one type (Figure 8). Another is enclosed within a wreath (Figure 9).

Figure 7: Reverse of a Tarentine stater c. 450 B.C. (Fischer-Bossert 1999, pl. 8, no. 131, R 90). © Brooke Pyke.

Figure 8: Reverse of a Tarentine stater c. 450 B.C. © Classical Numismatic Group, Inc., Electronic Auction 409, lot no. 14, 8 November 2017.

Figure 9: Reverse of a Tarentine stater c. 450 B.C. (Fischer-Bossert 1999, pl. 8, no. 130, R 89). © Brooke Pyke.

A.J. Evans (1889, 3) and Ross R. Holloway (1978, 38) tentatively identify the isolated heads (or some of the heads in Evans' case) on the stater issues as male and suggest that it depicts either Phalanthos or Taras. Ancient sources record that the Lacedaemonian Phalanthos was the leader of the Partheniai, a disenfranchised group of Spartans who reportedly founded the Tarentine settlement in c. 706 B.C. (Antiochus *FGrH 555* FI 3; Diodorus Siculus, *Library*, 8.21; Strabo 6.3.2; Pausanias, 10.10.6; Cerchiai, Jannelli and Longo 2002, 144). Taras is thought to be the eponymous hero of the settlement (Antiochus *FGrH 555* FI 3; Pausanias, 10.10.6 *cf.* Dionysus of Halicarnassus, *Roman Antiquities,* 19.1, 17.1-2; Servius *ad* Virgil *Aeneid* 3. 551; 6.773).

Where the head is thought to be female, it has been suggested (Evans 1889, 3, n. 5; Cahn 1968, 70; *HNI* 94) that it could belong to the nymph Satyra, mother of the hero Taras (Pausanias 10.13.10; Probus, ad. Vergil, *Georgics*, 2. 197; Kraay 1976, 175; Brauer 1986, 38; Rutter 1997, 54). H.A. Cahn (1968, 70) lists other possible female identities as Phalanthos' wife Aithra (Paus. 10.10.6); Thetis, Artemis, Aphrodite, or Persephone – the main goddesses whose cults were attested at Taras.[2]

Although scholarly identification of this head varies, these studies agree that the individual depicted was associated with the local cultural beliefs and/or myth-history of the settlement. However, Kraay (1976, 175) notes that the absence of any additional attributes accompanying the head on Tarentine coins makes it impossible to draw decisive conclusions.

Vase Motifs and Numismatic Iconography

The depictions of isolated heads on South Italian vase painting is directly comparable to the numismatic iconography. The Apulian pelike dated to c. 370 B.C. in the Museo Provinciale at Lecce (no. 956) attributed to the Truro Painter shares similarities with the types produced in the first series of issues (e.g. Figure 3) and the left facing issue in Group 7. (*CVA* Lecce Museo Provinciale 2 (Italy 6) pl. 40, 12; 24; *RVAp I* 5/121, 117). The vase motif depicts the head of a woman, facing left. Her hair is bound and tied in a bun at the nape of her neck; unlike the coin type, wisps or curls escape the bun. The style of hair, straightness of the nose, thickness of the chin and small line of the mouth are features common to the left-facing depiction of the woman on both the pot and the coins.

2 See also, Nafissi (2009, 247, n. 15 ff.)

Figure 10: Detail of an isolated head that appears on an Apulian amphora, Buncrana Group, c. 330 B.C., Meo-Evoli collection, L. 154, © Brooke Pyke.

The female heads shown in Figure 4 (A-B) shares features with that depicted on an Apulian amphora dating to c. 330 B.C. (Figure 10). Despite the chronological gap between the coin and the vase image in each case we see a left-facing, short haired head, wearing a hair band. The style of the eyes and overall shape of the heads are directly comparable and, additionally, the iconography of the head in Figure 4 (A) suggest some attempt has been made to depict the individual strands of hair, something which is also evident in Figure 10.

The reverse type shown in Figure 5 (B) bears a close resemblance to a female head on a dish recorded by Trendall and Alexander Cambitoglou (1991) as being 'once on the New York market' (Figure 11). They do have different styles of headwear, but the dotting on the hair of the coin die suggests that some attempt has been made to represent the curls (which are also apparent on the vessel's female head).

Figure 11: Detail of a dish described by Trendall and Cambitoglou (1991, pl. IX, 3) as 'once New York market' © Lauren Murphy.

The right facing reverse type (Figure 6) belonging to the second series of issues, can be compared with the vase motif that appears on the Paestan bell-krater attributed to the Aphrodite Painter (Figure 12) (Heuer 2011, xxxiii). The vase motif shows the hair similarly bound and tied into a bun at the back of the woman's head, rather than in the nape.

Figure 12: Detail of an isolated head that appears on a Paestan bell-krater, Aphrodite Painter, c. 360-350 B.C. Paestum museum no. 21481, © Brooke Pyke.

The hairstyle of the type shown in Figure 7, which belongs to the final series of stater issues, is directly comparable to a black figure style Athenian lip cup fragment found in Italy.[3] The cup, now in the British Museum (no. 1836,0224.263), is attributed to the Sakonides Painter and dates to c. 575-525 B.C.[4] The woman appears on the cup in profile, facing left. On both objects she wears a fillet, with her hair hanging down loose over her shoulders and tied again just below the neck, with her ear clearly visible. Because of the chronological gap between the coin and the lip cup and the stylistic similarities between the two, it is possible that the numismatic iconography has deliberately archaized; something which is arguably supported by the overall style of the type and considering the appearance of the other types produced in the final series of issues.

The imagery of the reverse type in Figure 8 is unique in that it is the only Tarentine type of an isolated head depicted wearing an earring and not enclosed within a border. The hair bindings and jewellery of the head shown on this coin share similarities with the Campanian lekanis lid (Capua no. 7813; *CVA* Capua 1 (Italy 11) pl. 49, 12,18; 23). The lekanis lid shows a female head facing right, her hair bound with a broad fillet at the front and tidied into a large bun at the back, and with her ear clearly visible. The lid dates to the late 4th century B.C., making it contemporary with the later fractional types. The reverse type shown in Figure 9 is the only wreathed issue, with a similar style of wreath encircling the female head that appears on the Apulian red-figure plate, produced between c. 330-320 B.C. (Figure 13). Although the vase image post-dates the Tarentine type shown in Figure 9, the vase imagery is contemporary with the heads that feature on fractional types (such as *HNI* no. 950, issued in c. 314 (*HNI* 99-100)). As well as this, in South Italian vase painting isolated heads often appeared accompanied by, or emerging from foliage (see Curtius 1937, 113, Jastrow 1946, 74; Schauenburg 1957, 205; Schmidt, Trendall, and Cambitoglou 1976, 39). The broad style of fillet shown on the coin type

3 Vases depicting this style of isolated head are mainly found in Etruria or central Italy (such as: Antikensammlungen, J12; Museo Civico, 291; British Museum, 1836.2-24.263; British Museum, 1867,0508.973) possibly suggesting that the vase motif held relevance for the non-Greek inhabitants. That the type also appears on Tarentine coins, suggests that it was also relevant to the Tarentines.

4 http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=399369&partId=1

can be likened to that worn by the woman on the Attic lip cup in the British Museum (no. 1836,0224.263, see note 4). The hairstyle of the coin type varies from that of the vase motif, shown turned up and tucked under the fillet, rather than hanging down over her shoulders.

Figure 13: Apulian red-figure plate, c. 330-320 B.C. © Worthington Galleries (*https://worthingtongalleries.com/shop/gorgeous-4th-century-b-c-apulian-red-figure-plate-depicting-lady-of-fashion/*).

The identity of the isolated heads that appear in South Italian vase painting is something that has also troubled scholars of South Italian vase painting (Heuer 2011, 2). The majority of scholars have identified the isolated heads on vase painting as belonging to divinities or mythological figures (see Jastrow 1946, 73-4; Trendall 1955, 104-105; Schauenburg 1957, 205; Trendall and Cambitoglou 1982, 648; Heuer 2011, 2 cf. Furtwängler 1912, 32). However, in all cases this identification was based on the accompanying attributes of the figures, such as tendrils and flowers (Curtius 1937, 113, Jastrow 1946, 74; Schauenburg 1957, 205; Schmidt, Trendall, and Cambitoglou 1976, 39), Phrygian caps (Schmidt 1975,130-2; Kossatz-Deissmann1990, 517-520) or wings (Smith 1976, 5, 126-132, 151-157, 185-188, 197-213, 26-261) – all of which the Tarentine coins lack.

Isolated Heads in South Italian Vase Painting

On vase painting, the choice of subject matter and style of depiction was influenced by popular taste as well as the social, cultural, and political institutions and events (Oakley 2009, 614-17). Although men also feature, the depiction of an isolated female head in profile is one of the most common decorative motifs in South Italian vase-painting, appearing as a decorative motif in just over one-third of the published corpus (Heuer 2011, 1). The discovery of kiln-dump material at the South Italian settlement of Metapontum has revealed that the Achaean settlement was a primary producer of Early Lucanian red-figure pottery (see Thorn and Glascock, 2010, 777). Although no such evidence has been discovered at Taras, the settlement is considered one of the major centres of Italiote vases (Trendall 1989, 94, 170; Schmidt 1996, 447 cf. Carpenter 2003, 5–6). It is in the region of Apulia, to which Taras belongs, and it is in Apulian

vase-painting that the isolated head motif retains the greatest longevity and popularity (Heuer 2011, 42).

It is thought that the motif was transferred from Athens to South Italy along with the red figure technique during the third quarter of the 5th century B.C. (Heuer 2011, 40; Mertens 2011, 25). Although it had appeared on vase painting produced in the Greek mainland and Aegean since the late Geometric period (Heuer 2011, 18-19), the isolated head motif only became popular in South Italian vase painting during the second quarter of the 4th century B.C. (Lehnert 2011, 45; Heuer 2011, 18, 40). This increased utilization of the isolated head motif coincided with a divergence in local styles from the Attic model thanks largely to a steady decline in Athenian exports in the aftermath of the Peloponnesian War (Trendall 1989, 17 *ff.*; Schmidt 1996, 444; Heuer 2011, 40). This decline promoted the expansion of South Italian workshops (Trendall 1989, 7; Schmidt 1996, 443; Heuer 2014, 64).[5]

In South Italy, vases depicting an isolated head, appeared in a context that referred to funerary beliefs and cult practices. Other vases employed in these contexts carried scenes of myths and legends involving death and depictions of the underworld (Heuer 2011, 18). Vases with isolated heads have been found in graves belonging to both the Greek inhabitants and native population, suggesting that the imagery had wide ranging significance to all parts of the market in Magna Graecia (Lehnert 1978, 47; Mertens 2011, 25; Heuer 2011, 1, 42). Non-Greek interest in the motif is further demonstrated by the fact that nearly three quarters of the Attic vases found in Italy come from Italic and Etruscan contexts (Heuer 2014, 63). As well as this, the majority of 4th century South Italian vases were produced and used in areas that are considered to be outside of Greek control (Heuer 2014, 63). Heuer (2011, 18-19) notes that isolated heads are absent from vases depicting comic scenes and those showing the symposium or gymnasium. The class of vase depictions that the isolated heads are absent from arguably suggest that they are deliberately removed from scenes of everyday life, perhaps because the image was in some way chthonic, or associated with a higher divine-like realm.

Although the isolated head reached its pinnacle of popularity in South Italian vase-ware after the appearance of the imagery on Tarentine coins, the appearance of an isolated head in numismatic imagery could suggest a move away from this chthonic association. The isolated head's depiction on coinage, a functional, everyday item, could indicate that the imagery possessed inherent cultural meaning, implying that its appearance in a funerary setting was an extension of this expression. The isolated head's depiction on coinage, a functional, everyday item, should indicate that the imagery possessed a complex cultural meaning which was not confined to funerary contexts.

5 Heuer (2011, 40-41) notes that the increased use of the motif in vase painting on the Greek mainland vases during the 4th century B.C. seems to have been unrelated to the use of heads on South Italian vases.

Because it is held that isolated heads on vases do not all represent the same divinity (Schmidt 1975, 131; Schauenburg 1989, 36-37), scholars who concern themselves with the identities of the isolated head motif find themselves at much the same problem as numismatists attempting to identify the Tarentine head coin type. Cambitoglou (1954, 121) and Schauenburg (1974, 149) suggest that in most cases it was probable that isolated heads were viewed as abbreviations of full figures, which did not have any religious connotations. Similarly, Trendall and Cambitoglou (1982, iii) suggest that in many cases, the isolated heads on smaller vases probably had 'no particular mythological or religious significance.' Schmidt (1975, 39; trans. Heuer 2011) similarly postulates that it is possible that 'the Apulians themselves used the motif ambiguously.'

Given that the numismatic imagery must have had a significance to the local population (Brauer 1986, 18), the appearance of the head on various Tarentine denominations for an extended period (from c. 470 B.C. until the second half of the 4th century B.C.) suggests that the isolated head held relevance to a broad social sector. The popularity of the isolated head in South Italian vase painting reflects a similar cultural significance of the motif for the South Italian inhabitants.

Conclusion

This study of the unidentified isolated head types that appeared on Tarentine stater issues between c. 470 and 450 B.C. has shown that the various types find a near identical parallel with isolated heads that feature on vases either found or made in Italy, which serves to suggest something of its identity. Despite isolated heads as vase motifs that appear without any accompanying attributes being identified as non-specific individuals, the appearance of an isolated head on various Tarentine denominations suggests that the imagery was relevant to the Tarentine locals as it seems impossible that an anonymous male or female head would be chosen as a coin type; the minters and their immediate audience must have recognized the identity of this figure. Because of the absence of any discernible attributes accompanying the isolated heads that appear on Tarentine issues it is not possible, I believe, to identify the head types with a particular mythical or historical figure. It is perhaps not possible to conclusively say that the head is always that of a woman but I believe that this is most likely, the figure is certainly female in Figures 8 and 9, both of which belong to Fischer-Bossert's Group 9. A comparison with the motif of the isolated head on South Italian vase-painting underlines the broader cultural importance of this motif. Here it appears that the head is very often that of a woman. The archaeological evidence would seem to indicate firstly that pots depicting an isolated (female) head were commonly used in a funerary context and that those involved in these rites might be either Greeks or natives. I am not suggesting that the isolated head shown on both coins and vases has the same identity. Rather, I am

pointing to the popular use of this motif in the art of the region, and suggesting that this popularity is a feature of the visual culture of the diverse inhabitants of South Italy.

Acknowledgements

This article was written while undertaking a Junior Research Fellowship at the Australian Centre for Ancient Numismatic Studies (ACANS), with funding provided by ACANS and La Trobe University.

The author would like to thank Associate Professor Kenneth Sheedy, Dr. Gillian Shepherd and the anonymous reviewers for their helpful comments and suggestions, Charlotte Mann and Lauren Murphy for their feedback and encouragement – both of whom greatly improved the final piece, Brooke Pyke and Lauren Murphy for their illustrations, and Steven Morrice for his continued patience, support and understanding.

Author

Bridget McClean is currently studying a Master of Arts by research at La Trobe University Her thesis focuses on the coinage produced by the Greek settlements in Magna Graecia.

Abbreviations

CVA Lecce = Romanelli, Pietro 1927, Corpus *Vasorum Antiquorum: Lecce, Museo Castromediano 2,* Italy 6, Bestetti & Tumminelli, Milan.

CVA Capua = Mingazzini, Paolino 1935, *Corpus Vasorum Antiquorium: Capua, Museo Campano 1,* Italy 11, Libreria dello Stato, Rome.

RVAp = Trendall, A.D. and Cambitoglou, A. 1978, *The Red-Figured Vases of Apulia, Volume I,* Clarendon Press, Oxford.

HNI = Rutter, N.K., Burnett, A.M., Crawford M.H., Johnston, A.E.M., Jessop Price, M. (eds.), 2001, *Historia Numorum: Italy,* The British Museum Press, London.

Vlasto 1977 = Ravel, O.E. 1977, *Descriptive Catalogue of the Collection of Tarentine Coins Formed by M.P. Vlasto,* Obol International, Chicago.

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Diving into history: The Richmond 'Dick' Eve Collection

Jeremy McEachern

Abstract

Richmond 'Dick' Eve was a prominent Australian diver of the early 20th century. A Gold medallist at the 1924 Paris Olympic Games and five-time dual Australian and NSW state champion, Eve was a dominant presence in the pool both domestically and internationally. This article provides a biographical account of Eve's life and aquatic career presented alongside a collection of sporting medals donated to the National Sports Museum by the Eve family.

Keywords

[Olympics] [Eve] [Diving] [Sport] [Medal]

In September 2015 the National Sports Museum acquired a collection of sporting medals and other items relating to the life and career of Richmond 'Dick' Eve. Winning Gold at the 1924 Paris Olympic Games and claiming numerous state, national and international titles, Eve was Australia's most successful diver of the early 20th century. The collection represents an almost complete biographical illustration of Eve's career, allowing us to chart his rise from youthful prodigy to Olympic champion.[1]

A Family Affair

If family history is anything to go by, Eve's success was assured the moment he came into this world. Born in Parramatta in 1901, his father Albert Sydney Eve was manager of the Manly Baths and naturally took a keen interest in the aquatic development of his sons, Dick, Jim and Allen. His mother Fredda came from illustrious stock. An accomplished swimmer and diver in her own right, her father was the man known as the 'professor of swimming' Frederick Cavill. Alongside his six sons and three daughters, Cavill did much to promote Australian swimming around the world.[2]

Under his parents' tutelage, Eve quickly developed into one of the finest junior swimmers and divers in Australia, winning the New South Wales junior diving title in 1913.[3] In 1915 the family relocated to California when Eve's father took up a position as manager

1 All medals referred to in this article were kindly donated to the National Sports Museum by Mrs. Joyce Eve on behalf of the Eve family.

2 http://adb.anu.edu.au/biography/eve-richmond-cavill-10685, accessed 29 November 2017.

3 *The Telegraph,* 31 January 1925, 19.

of a beach resort in Alameda, east of San Francisco.[4] Whilst in the United States, he continued to excel in the pool. In a letter published in the Australian press, their father reported that 'our youngsters are making quite a name for themselves by winning all events to date. Both Jim and Dick have beaten the boy champion of San Francisco on four occasions and have won two very nice silver cups and a number of medals'.[5]

Figure 1: Winner's medal – 50 Yards 105lbs Boys Race – San Francisco Panama Pacific International Exposition, 1915.

Figure 2: Columbus Day medal – San Francisco Panama Pacific International Exposition, 1915.

Surviving from this haul are a winner's medal awarded for the 50 yards 105 lbs boys race at the San Francisco Panama Pacific International Exposition (Figure 1), a Columbus Day medal from the same event (Figure 2), and a second place medal for the 50 yards race at the junior championships of Oakland (Figure 3). Despite finding success in the pool, the family's stay in the United States was short-lived and they returned to Australia in November of 1915.[6]

Figure 3: Second place medal – 50 yards race – Junior Championships of Oakland, 1915.

4 *The Referee,* 24 November 1915, 16.
5 *The Express and Telegraph,* 9 September 1915, 7.
6 *The Referee,* 24 November 1915, 16.

Domestic Dominance

The following years witnessed Eve move from strength to strength as he transitioned from junior competition to the adult ranks. He regained the NSW junior diving championship in 1917 (Figure 4), 1918 and 1919 and was Manly Amateur Swimming Club diving champion in 1920 (Figure 5).[7] In the same year, he placed second at the senior NSW championships in a performance that *The Referee* described as "exceptionally good and [which] was loudly cheered".[8]

Figure 4: Winner's medal – Under 20 Diving Championship – NSW Amateur Swimming Association Championships, 1917/18

Figure 5: Winner's medal – Diving Championship - Manly Amateur Swimming Club Championships, 1920.

Figure 6: Winner's medal – Men's High Dive – NSW Amateur Swimming Association Championships, 1921.

It was in 1921 that Eve first achieved the feat of holding both state and national senior titles simultaneously. He claimed his first NSW state title (Figure 6) in January at the Domain Baths, defeating the previous year's winner R. Provan with a score of 93.8.[9] He

7 *The Sun,* 14 March 1920, 11.
8 *The Referee*, 7 January 1920, 18.
9 *Newcastle Morning Herald and Miners' Advocate,* 24 January 1921, 3.

put in an even more impressive performance to triumph at the Australian Amateur Swimming Championships in Melbourne later in the year – the first time that diving had been included on the program (Figure 7). *The Sydney Mail* was fulsome in its praise when it stated: "the event…gave ample evidence (with one exception) of the absence of good divers in this country. The exception was the young Sydney diver, Richard [sic] Eve, who, in winning the event, showed himself to be far superior to any other diver in Australia."[10]

Figure 7: Winner's medal – Men's Plain High Dive – Australian Amateur Swimming Association Championships, 1921.

Figure 8: Winner's medal – Men's High Dive – NSW Amateur Swimming Association Championships, 1922.

Figure 9: Winner's medal – Men's Plain High Dive – Australian Amateur Swimming Association Championships, 1922.

Eve's performances during the 1921 season marked the start of an incredible run of success at domestic level – success which would ultimately pave the way for his Olympic title. He regained both his NSW state title (Figure 8) and the Australian championship (Figure 9) in 1922 – the latter despite another competitor, T.W. Morris of Victoria, being electrocuted prior to the event.[11] 1923 proved no different for Eve, with success at state

10 *The Sydney Mail,* 1 June 1921, 32.

11 *The Sun,* 22 January 1922, 5. Morris recovered to finish in third place.

level in diving (Figure 10), as well as both the 440 yards scratch race (Figure 11) and the 880 yards team race (Figure 12), to go with another national championship (Figure 13).

Figure 10: Winner's medal – Men's High Dive – NSW Amateur Swimming Association Championships, 1923.

Figure 11: Winner's medal – 440 Yards 1st Grade Scratch Race – NSW Amateur Swimming Association Championships, 1923.

Figure 12: Winner's medal – 880 Yards Teams Championship – NSW Amateur Swimming Association Championships, 1923.

Figure 13: Men's Plain High Dive - Australian Amateur Swimming Association Championships 1923.

On the World Stage

With the 1924 Olympic Games in Paris fast approaching, Eve's fourth consecutive year of holding both the NSW state (Figure 14) and Australian national titles (Figure 15) propelled his case for selection. Competition for places was fierce, particularly for the aquatic events, with only six places available for swimmers and divers on the Australian team. Ultimately, Eve was ranked second in order of preference by the selectors, and was the only diver picked to make the journey.[12]

Figure 14: Winner's medal – Men's High Dive – NSW Amateur Swimming Association Championships, 1924.

Figure 15: Winner's medal – Men's Plain High Dive – Australian Amateur Swimming Association Championships, 1924.

For the team of 37 athletes and officials, the five-week journey on the RMS *Ormonde* was hardly conducive to a full-time training program.[13] Indeed, with only a 3x3 metres canvas pool on board, Eve's preparations must have been near on non-existent.

Despite his status as Australia's premier diver, Eve was still regarded as an outsider heading into the competition due to his lack of international experience. He was also battling a persistent ear ache – one which had hampered his performance at the 1924 NSW championships and had failed to abate over the course of the journey to the Games.[14] His early form in the practice rounds drew admiring praise from the Australian press, yet it was clear that his ear was bothering him.[15] Unfortunately, it forced his

12 *The Sydney Morning Herald,* 23 February 1924, 18.

13 Harry Gordon, *From Athens with Pride: The Official History of the Australian Olympic Movement 1894-2014* (St Lucia: University of Queensland Press, 2014), 65-66.

14 *The Sun,* 17 July 1924, 1.

15 *The Advocate,* 2 July 1924, 3.

withdrawal from the fancy highboard event, and contributed to a disappointing fifth-place finish in the springboard. It was in the plain highboard event that Eve would write his name into the history books as the only Australian to win an Olympic diving Gold medal in the 20th century (Figures 16, 17, 18). He snatched victory by a single point from Sweden's Karl 'John' Jansson and Britain's Harold Clarke with his final effort – a perfectly executed swallow dive.[16] Back in Australia, the press was fulsome in its praise for Eve's performance, stating that he was "superior in every test".[17] Eve's victory completed a hat-trick of Gold medals for Australia – and for the Sydney suburb of Manly – alongside Anthony 'Nick' Winter in the triple jump, and Andrew 'Boy' Charlton in the 1500m freestyle.[18]

Figure 16: Participation medal – 1924 Paris Olympic Games.

Figure 17: Gold medal – Men's Plain High Dive – 1924 Paris Olympic Games.

Following the completion of the Games and the success of the Australian team in the pool – a Silver and two Bronze medals had also been secured – Eve and the swimmers were in high demand across Europe. After attending a carnival in Brussels, the team manager Oswald Merrett made the then unusual decision to charter a plane to fly the team to Britain.[19] This innovative decision paid dividends for Eve, enabling him to compete in the National Graceful Diving Competition at Highgate Pond in London.

16 *The Age,* 17 July 1924, 9.
17 *The Sydney Morning Herald,* 17 July 1924, 9.
18 Kevin Berry, 'The Manly Triumph of 1924', *Journal of Olympic History,* vol. 8, no. 2 (May 2000), 49.
19 Gordon, *From Athens with Pride,* 68.

In what *The Referee* described as an 'easy' victory, Eve triumphed by 23 ½ points over a field which included fellow Olympian and previous year's champion, Englishman Albert Dickin (Figure 19).[20]

Figure 18: Competitor's badge – 1924 Paris Olympic Games.

Figure 19: Winner's medal – National Graceful Diving Competition – Amateur Diving Association, 1924.

The next stop for Eve and the Australians was Dublin for the Tailteann Games. Created in 1922, the Irish Free State was in the process of emerging from a brutal civil war. A revival of the ancient Tailteann Games – whereby athletes from across Ireland would compete in a variety of sporting events – was seen as a way to assert a national identity, while also attracting international athletes and visitors.[21] The Australians were based at St. Patrick's Training College in the north of the city, with the press reporting that the team were 'supplied with their own bread, vegetables and milk in unlimited quantities' and enjoying 'motor trips every day, and other entertainments each night'.[22] These perks failed to distract Eve, who continued the fantastic form that had been evident the moment he arrived in Europe. He won both the fancy and plain diving events "by a big margin of points" from his nearest rivals.[23] He also teamed up with Boy Charlton, Ivan Stedman and Ernest Henry to easily win the 400m teams' race by 60 yards (Figures 20, 21, 22).[24]

20 *The Referee,* 17 September 1924, 14.
21 http://www.theirishstory.com/2011/02/23/the-tailteann-games-1924-1936/#.WiXS1HllNaQ, accessed 5 December 2017.
22 *Southern Cross,* 15 August 1924, 14.
23 *The Referee,* 20 August 1924, 11.
24 *The Daily Mail,* 17 August 1924, 5.

Figure 20: Winner's medal – 1924 Tailteann Games.

Figure 21: Winner's medal – 1924 Tailteann Games.

Figure 22: Winner's medal – 1924 Tailteann Games.

A Hero's Welcome

Eve and the Australian team returned to Sydney on the RMS *Tahiti* on 4 October to a hero's welcome.[25] *The Register* reported that "many motor launches and other small craft, gaily decorated, and crowded with enthusiasts, met the steamer. The passage up the harbour was a veritable triumphal procession… [while] the strains of "See the Conquering Hero Comes" and "Back Again to Dear Old Aussie" were crashed forth by the Fire Brigade Band, and shouts of welcome rent the air."[26] Eve and the other Manly Gold medallists, Charlton and Winter, were afforded a lavish dinner organised by the mayor and alderman of Manly at which they were praised for having put the 'village' on the map.[27]

25 Gordon, *From Athens with Pride,* 69.
26 *The Register,* 7 October 1924, 7.
27 *The Sydney Morning Herald,* 7 October 1924, 9.

Eve's status as a world champion ensured that crowds flocked to witness his appearances at swimming carnivals across NSW–an estimated 5000-6000 people attended a demonstration at Tamworth that he participated in alongside Charlton.[28] Unsurprisingly, he retained both his NSW state title (Figure 23) and the Australian championship (Figure 24) in 1925. He quite clearly had not lost his form from the European tour six months prior. *The Telegraph* described his performance at the latter event as "perfection itself", while also opining that "it would be hard to image a human being improving on some of the dives he accomplished."[29]

Figure 23: Winner's medal – Men's High Dive – NSW Amateur Swimming Association Championships, 1925.

Figure 24: Winner's medal – Men's Plain High Dive – Australian Amateur Swimming Association Championships, 1925.

An Unexpected End

Unexpectedly, 1925 marked the final time that Eve would hold either the state or national title. In November 1926, he was appointed to his father's old position as manager of the Manly Baths at a salary of £6 per week including accommodation.[30] Both the NSW Amateur Swimming Association and the Australian Amateur Swimming Association deemed this to be a breach of his amateur status and subsequently stripped him of his right to compete.[31] The decision to class Eve as a professional caused widespread discussion in the press over the coming years, with most journalists seemingly sympathetic to his plight. *The Referee* in particular took up his case, memorably outlining that he was "no

28 *ibid,* 24 February 1925, 12.
29 *The Telegraph,* 26 January 1925, 5.
30 *The Sun,* 10 November 1926, 15.
31 *The Sydney Morning Herald,* 12 November 1926, 12.

more a professional swimmer than an usher at a theatre is a professional actor."[32] Despite talk of a reprieve as late as 1931, it would never come.[33]

In the years immediately following his ban, Eve cycled through a number of jobs. He managed the municipal baths at both Singleton and Moree, followed by a stint as a publican in Sydney and Wagga.[34] By 1931 he had returned to Sydney and was working as a woolclasser, while also teaching swimming lessons. He died in Sydney in 1970.[35]

Today, Dick Eve's medals proudly reside in the Australian Gallery of Sport and Olympic Museum Collection, cared for by the National Sports Museum as a living testament to his place amongst Australia's finest athletes.

Author

Jeremy McEachern is an Assistant Curator at the National Sports Museum and Melbourne Cricket Club. He holds a Bachelor of Arts (Hons) in history from Monash University and a Masters of Cultural Heritage from Deakin University. His primary areas of interest are military history and Australian sporting history, with a particular focus on cricket, soccer and rugby union.

32 *The Referee,* 10 August 1927, 14.
33 *ibid,* 4 November 1931, 20.
34 *The Sydney Sportsman,* 29 October 1929, 12.
35 http://adb.anu.edu.au/biography/eve-richmond-cavill-10685, accessed 21 December 2017.

The story behind Uganda's 1981 Charles & Diana commemorative coin

Barrie M Newman

Abstract

Uganda's 1981 coin issue commemorating Prince Charles' and Lady Diana Spencer's engagement was summarily cancelled by the Government of Uganda just days after the first initial striking and most of the coins were withdrawn from sale. This article explains the reason for the cancellation, some of the related ramifications, and provides a more accurate figure on the number of coins actually issued.

Keywords

[Ugandan coins] [1981] [Prince Charles and Lady Diana Spencer] [Engagement] [commemorative coins] [The Singapore Mint] [Ugandan High Commission in Australia] [Dr. John Kibukamusoke] [CHOGM 1981 Melbourne] [Dr. Milton Obote] [maximum mintages]

Introduction

The engagement of Lady Diana Spencer to Prince Charles in 1979 not only excited the world but also provided the opportunity for many British Commonwealth countries to issue special coins commemorating the occasion and to provide them with an important source of revenue from their sale to collectors around the world.

The Adelaide Mint (known then as Pacific Promotions Pty Ltd) had contracts at that time to issue commemorative coins for the Governments of Western Samoa, Tokelau, Fiji and Nepal. The company's Directors, Nelson Eustis, an international stamp authority and consultant, E.W. (Ted) Roberts, stamp and coin designer and Barrie Newman, international coin and marketing consultant, immediately started preparing designs, getting authorisations from Buckingham Palace, finalising the appropriate legalities with these countries and arranging the production of the various coins to suit the occasion and the countries concerned.

This was also an opportunity to gain contracts from other countries hitherto considered unapproachable or unattractive to coin collectors. The Directors set about considering approaching other British Commonwealth countries which could also benefit from the royalties that such coin sales would generate. The South Australian organisation was competing with much larger players such as the British Royal Mint, Franklin Mint and

Pobjoy Mint, which were well connected and geared to produce commemorative coins for most of the well known coin issuing countries.

New country

There was one country which the Directors thought might not yet have been approached– the previously war-ravaged country of Uganda. Under the dictatorship of Idi Amin, the country had been torn apart by sectarian violence and bloodshed for many years, and was only just getting back on its feet. Now under a stable democratic government, Uganda had re-joined the British Commonwealth and desperately needed funds to help with the rehabilitation of the country and its peoples.

Speed was the essence of the project. Not only was it necessary to get an agreement signed by the Government of Uganda authorising the Mint to undertake the issuance of the Diana/Charles commemorative coin before another organisation did so, but it was also necessary to have the coins struck and available to the public before the event became stale and collectors lost interest.

Who in that government could be approached to expedite matters? The first port of call was the Ugandan High Commission in Canberra. The Directors telephoned and asked to speak to the High Commissioner, Dr. John Kibukamusoke. He immediately came to the phone and showed great enthusiasm for the venture. He asked that a proposal and draft agreement be sent personally to him in Canberra. He would arrange the necessary Government approvals and would expedite the arrangements forthwith. He was advised that the issue had to be gazetted as official coinage of Uganda with a face value in Ugandan shillings and with the Ugandan coat of arms on the obverse. The reverse, of course, would feature the approved effigies of Prince Charles and Lady Diana.

He acknowledged all this and said he fully understood the procedures necessary to finalise all arrangements, noting that he had full authority to approve and sign such an agreement on behalf of his government.

Preparation

A few days later, proposal documents were sent to Canberra. The High Commissioner returned the agreement duly signed under the seal of the Government of Uganda together with artwork for the Ugandan coat of arms. He advised that his copy of the agreement had been sent over to his government in Uganda for ratification and for the gazetting of the coin issue as required. It was agreed that the issue would comprise gold proofs, sterling silver proofs and cupro-nickel uncirculated coins with maximum mintages of gold: 1500, silver: 5000 and Cu-Ni: 10000. Face values and specifications were:

Gold proofs – 1000 shillings, metal 12 carat gold, weight 10 g, diameter 28 mm,

Silver proofs – 100 shillings, metal .925 sterling silver, weight 1 troy oz, crown size (diameter 38 mm),

Cupro-nickel uncirculated – 10 shillings, crown size (diameter 38 mm).

The designer was E.W. (Ted) Roberts.

The High Commissioner advised that the royalties from the sale of the coins were to be credited directly into a Ugandan Government bank account in Canberra and he provided the necessary account details. He also advised that he had received confirmation that the coin issue had been approved and gazetted by his Government.

As Buckingham Palace had approved the submitted designs, arrangements were now able to be finalised. The Singapore Mint was contracted to produce the dies and strike the coins on behalf of the Ugandan Government. Advertisements were placed promoting the issue in World Coin News, other numismatic magazines and Australian newspapers. Orders were received from large dealers who usually supported such issues. Photos of the plasters were sent to Adelaide by the Singapore Mint for approval and, with orders coming in from dealers as well as individuals from around the world, approvals were given to the Singapore Mint to strike an initial quantity of 150 gold proofs, 250 silver proofs as well as 500 cupro-nickel uncirculated.

Figure 1: Obverse of Uganda 1981 cupro-nickel 10 shillings, showing Uganda coat of arms.

Figure 2: Reverse of Uganda 1981 cupro-nickel 10 shillings, showing Buckingham Palace approved images of Prince Charles and Lady Diana Spencer.

Figure 3: Reverse of Uganda 1981 cupro-nickel 10 shillings showing coin within its hard plastic box.

Royalties

With funds from sales coming in, the first royalty payments were credited to the arranged Ugandan Government bank account in Canberra. Everything seemed to be proceeding quite satisfactorily. Barrie Newman and his wife even entertained Dr. Kibukamusoke and his wife at a top Adelaide restaurant when they visited Adelaide shortly after the first payment had been made to the special Ugandan bank account, and the Newmans were highly impressed by the enthusiasm and demeanour of the High Commissioner and his wife.

Special publicity opportunity

The Directors realised that Ugandan Head of State, Dr. Milton Obote, would be attending the Commonwealth Heads of Government Meeting (CHOGM) in Melbourne around the same time as the first coins would be produced. They decided it would be an ideal opportunity to gain some valuable publicity by presenting the first gold proof coin to him while he was in Melbourne. The Singapore Mint was advised to ensure that the production schedule was to be strictly adhered to and that it was intended to present the first gold proof to President Obote.

Dr. Kibukamusoke was telephoned and advised that Director, Barrie Newman, would be travelling to Melbourne to make the presentation to Dr. Obote and that the necessary arrangements were to be made for him to present the President with the first gold proof in the presence of the media.

Dr. Kibukamusoke seemed very agitated upon hearing this and, in a very high pitched and strident voice, advised, "Under no circumstances will anyone be given permission to present a coin to MY President at CHOGM." Despite giving all the reasons and benefits why it would be important for the presentation to be made to Dr. Obote, the High Commissioner was adamant that such an activity would not be allowed to break into the President's full and important agenda in Melbourne.

Although disappointed, the Directors decided to wait until the first supply of coins became available, and then to make another approach closer to, or during the CHOGM event, to try and make the presentation to President Obote.

The first supply of the Uganda Prince Charles and Lady Diana commemorative coins arrived in Adelaide the day before CHOGM and Barrie Newman decided to telephone the High Commissioner again at the High Commission in Canberra. He was informed that the High Commissioner was, in fact, in Melbourne hosting a reception for President Obote that evening and he was given the telephone number of the reception venue. When he rang and asked to speak to the High Commissioner personally, Dr. Kibukamusoke came to the phone and in a most abusive toned stated, "How dare you ring about this. You will not be allowed to meet the President as his security is paramount. You cannot present any coins to him!" and he hung up. It seemed that a wonderful opportunity of getting important publicity for this coin issue had been lost.

Initial supply

In the meantime, while President Obote and Dr. Kibukamusoke were attending the CHOGM in Melbourne, orders were coming in and the coins were being packaged for distribution to collectors. Some orders for dealers were to be sent direct to them from the Singapore Mint to save time and double handling, and a second royalty payment was made directly into the arranged Ugandan Government account in Canberra, with a confirmation note being sent to the High Commissioner in Canberra.

Unsettling news

It was a Friday afternoon (the last day of CHOGM) when Barrie Newman received a telephone call from the First Secretary of the Ugandan High Commission in Canberra asking, in a very quiet voice, could he come to Adelaide the next day (Saturday) to personally and urgently speak with the Adelaide directors. It was arranged that Messrs Newman, Eustis and Roberts would meet with the Secretary at 11.00am on that Saturday in their Adelaide city office.

The Secretary duly arrived, apologising for being dressed in tennis gear, but advising that his visit was so secret that he had to make it appear that he was out playing a game of tennis and could not be been anywhere near Adelaide! He informed the Directors that,

while the High Commissioner was in Melbourne, he, the Secretary, had found some bank statements purporting to be for an official Ugandan Government bank account about which he knew nothing, with certain deposits being made into it from Adelaide. He was concerned that a fraud was being perpetrated by the High Commissioner. As the Directors had always understood that the commemorative coin issue was fully approved and authorised by the Government of Uganda they told the Secretary the full details of all the arrangements they had made and the status to date. The Secretary then asked that all distribution arrangements and payments be stopped until he had clarification from his Government in Uganda. Under no circumstances was the High Commissioner to be informed of this meeting or of the changes being made. The Secretary then left to take his clandestine flight back to Canberra.

A few days later the Secretary telephoned Barrie Newman and asked if they could meet privately in Canberra in two days' time. Barrie Newman agreed and at the same time arranged for a meeting with the Deputy Chief of Protocol at the Australian Department of Foreign Affairs in Canberra to discuss the matter, and its implications for his Company.

Cancellation of issue

The meeting with the Ugandan First Secretary was another cloak-and-dagger affair with the meeting being conducted at night, in darkness, in the garden of the hotel where Barrie Newman was staying. The Secretary advised Newman that the High Commissioner was being immediately recalled to Uganda and was leaving Canberra the following morning by air. He advised that the Government of Uganda had decided to cancel the issue of Prince Charles and Lady Diana commemorative coins arranged by the High Commissioner and that all coins produced were to be withdrawn and destroyed. A letter confirming this would be sent from Uganda.

The next day Barrie Newman called on the Deputy Chief of Protocol at Foreign Affairs in Canberra and explained all the circumstances to him. The Deputy Chief of Protocol commented that it was a political matter because the High Commissioner had applied for asylum in Australia, and there was little that could be done. The Australian Government had granted Dr. Kibukamusoke political asylum and the aircraft with him on board was making a sharp return to Sydney. Newman found it difficult to understand why such a fraudster would be allowed political asylum in Australia.

Corollary

As a corollary to this:

1. The Singapore Mint was immediately instructed not to strike or dispatch any more coins as the issue had been cancelled by the Government of Uganda.

2. All planned future advertising was cancelled and all undelivered or new orders and their payments received from dealers and collectors, were returned to the senders.

3. It was impossible to recall the coins already sent to the dealers by the Singapore Mint, or the few collectors who had already paid for and received them in the first dispatch from Adelaide prior to the meeting with the Ugandan High Commission's First Secretary. No other coins were supplied or dispatched after the Government of Uganda cancelled the arrangements.

4. Of those coins received in Adelaide from the initial striking, all the remaining gold coins were personally delivered and returned to the Singapore Mint by Director, Ted Roberts, for refund, for their gold content. The sterling silver coins were melted down into ingots in Adelaide for use in other coin issues for other countries, and the cupro-nickel uncirculated coins, which have minimal metal value, are still held by The Adelaide Mint.

5. The production costs for the plasters, dies, initial stocks from the Singapore Mint, including freight and duties, and all advertising expenditure, as well as the so-called "royalty" payments made to the High Commissioner, were borne by Pacific Promotions Pty Ltd in their entirety.

6. These commemorative coins are listed in the *2018 Standard Catalog of World Coins 1901-2000*, 2239-40, but have the incorrect mintages shown for each denomination. Unfortunately, all the records for this commemorative coin issue were required to be destroyed and actual mintages issued from the initial gold and silver striking can only be estimated at gold 30 and silver 50. The actual mintage for the cupro-nickel coins can be confirmed at 500.

7. In January 1998, Dr. John Kibukamusoke was jailed for eight years by the ACT Supreme Court for defrauding Medicare to the tune of almost $1million. (See *The Advertiser* article dated 10 January 1998, Figure 4).

Amin's former doctor jailed

Medicare cheat gets eight years for $995,000 fraud

By MATTHEW HORAN
in Canberra

THE former personal physician to Ugandan dictator Idi Amin has been jailed for eight years for ripping off Medicare to the tune of almost $1 million.

John Kibukamusoke launched a four-year assault on the Medicare system, making $966,273 worth of false claims.

The 63-year-old general practitioner and kidney specialist lodged 15,443 fraudulent claims between February, 1992, and April, 1996 – more than 10 every day.

It is the biggest case of Medicare fraud in Australia.

Kibukamusoke was Amin's personal physician for two years in the early 1970s before the dictator turned on him.

He fled Uganda in 1973, leaving behind all his assets, and later became the country's high commissioner to Australia after the Amin regime was toppled.

But yesterday his new life came tumbling down when he was given an eight-year jail term, with a four-year non-parole period, by Justice John Gallop in the ACT Supreme Court.

He pleaded guilty to 414 charges of fraud.

He regularly forged patients' signatures to claim Medicare refunds and, to get more cash, even claimed some healthy patients suffered heart illness.

Kibukamusoke's Medicare claims almost doubled from 1991 to 1992, when he claimed $242,945.

But as he became bolder, he claimed more and more cash from the system, eventually claiming $400,158 in 1995.

Kibukamusoke was nabbed only after the Health Insurance Commission noticed a large number of claims on the NSW South Coast, when the doctor's practice was in Canberra.

The commission interviewed 11 of the patients, who all denied having seen the doctor since 1991, when he left Bega.

Justice Gallop said the harsh sentence took into account the increased burden Kibukamusoke had placed on taxpayers.

"Taxpayers contribute to the Medicare system with a levy of 1.5 per cent," he said.

"Defrauding Medicare is really robbing other taxpayers. To defraud the Commonwealth of almost $1 million over a period of four years with a multiplicity of claims is about as serious as one can imagine.

"The offences form part of a course of conduct consisting of a series of criminal acts of the same or similar character.

"The accused has not really shown any contrition for the offences."

Kibukamusoke has repaid just $16,200 of the money, claiming the rest had gone to pay debts on several properties he owned.

FALSE CLAIMS: John Kibukamusoke ... found guilty of Medicare fraud.

THE ADVERTISER, SAT JAN 10 1998 p.9

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Figure 4: *The Advertiser*, Saturday, January 10, 1998, page 9

8. Dr. John Kibukamusoke died in Sydney on 13 August 2009. His eulogy talked of him in glowing terms but made no mention of his 'recall' to Uganda or of his jailing in Australia. His ashes were returned for traditional burial in Uganda.

Reference

2018 Standard Catalog of World Coins 1901-2000, 48th Edition, T. Michael & T.L. Schmidt (eds), Krause Publications.

Author

Barrie Newman is Executive Director of The Adelaide Mint, PO Box 2183, Kent Town, South Australia 5071. He is a Past President, Fellow and currently Secretary of The Numismatic Society of South Australia Inc. He received the 2017 Paul Simon Memorial award and medal for outstanding contribution to Australian numismatics.

Email: adelaidemint@bigpond.com

The numismatic interests of Isidore Kozminsky (1870-1944)

David J Rampling

Abstract

The state of Victoria had a numismatic dealership as early as the beginning of the second half of the nineteenth century. Coins formed part of the stock of Messrs. S. Kozminsky & Co. Isidore Kozminsky, the son of the firm's founder and a subsequent partner in its operations, had numismatics amongst his many interests, and oversaw the company's dealings in coins during the early years of the twentieth century. This paper relates what I have been able to learn of this enigmatic figure, and the perspectives he brought to the significance of coins and medals.

Keywords

[Kozminsky] [numismatics] [coins] [coin dealers]

Introduction

The recent closure of the *KOZMINSKY* Bourke Street store in Melbourne,[1] ended an era of 160 years during which time the firm had offered its clientele the finest in jewellery, antiquities and works of art. Less known is the fact that during its early years and up to the 1920s, the Kozminsky name was also associated with numismatics, primarily through the activities of the founder's son, Isidore Kozminsky (Fig. 1).

Fig. 1 Isidore Kozminsky 1870-1944

1 The closure took place on 10 February, 2017.

The known and uncertain details of the Kozminsky family's history have been recounted in *A Break in the Chain – The Early Kozminskys* by Tangea Tansley, Isidore's grand-daughter. Styled a 'novel', the book is essentially biographical, augmented by an imagination informed through family ties.

The dating of Kozminsky's inaugural business is uncertain. Simon Kozminsky, Isidore's father, is thought to have arrived in Australia from Prussia, on the *Black Swan* in 1856. Simon began his business in the Victorian country town of Mortlake, later acquiring a somewhat rundown business in Melbourne selling curios, precious stones and coins.[2] He sold the country store and moved to the city sometime after Isidore's birth in 1870. Isidore assisted his father in the business from an early age, and appears to have been more fully involved subsequent to the new store opening in 1887 at the corner of Elizabeth and Bourke Streets (Fig. 2).[3] He remained active in the business along with other family members, and later in his own 'Commercial Gallery',[4] until the Depression of the early 1930s caused S. Kozminsky & Co. to go into voluntary liquidation and the sale of Isidore's Gallery. During the family's ownership of the Melbourne firm, Isidore had several sojourns overseas or interstate, departures both work-related in the case of overseas travel, and family-driven in the case of his four or five years in Sydney shortly after his marriage to Eileen in 1907.

Fig. 2 Kozminsky's Store, 1887-1910

2 Simon probably initiated his son's interest in numismatics. His authorship of a letter dated 2 April, 1889 addressed to the Deputy Master of the Melbourne branch of the Royal Mint, prefigures concerns raised by his son many years later (spelling as per original) – *Sir, I have received 4 Gold Jubilee Camemaration Medals of our Queen & the Custum department regard them as a dutible artickle of Commerce & I think them as a work of Art especially designd for the Jubilee of Queen Victoria. Would you kindly favour me with an expression of your opinion, which I will deem a favour. You will excuse me for troubing you but as this is an especal case, I remain your obl. Sernt., Simon Kozminsky, Corner of Bourk & Elizabeth St.* (Royal Mint Melbourne records, PROV, correspondence VPRS 643/P0000/68)

3 In 1910 the business moved to the Block Arcade in Collins Street. A further move to Little Collins Street occurred under new owners following the Great Depression, and again in 1975, some years after a further change of ownership, to the corner of Bourke and McKillop Streets. (www.jewelleryworld.net.au/2008/11/19/kozminsky-the-jewel-in-melbournes-crown/)

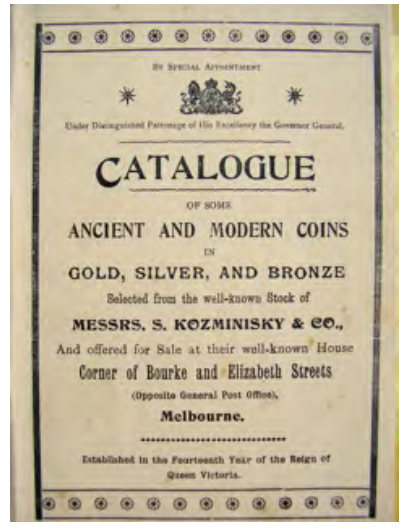
4 Isidore established what he called his 'Commercial Gallery', in 1925 at Collins Gate, 377 Little Collins Street.

Gaps in Isidore's personal history derive in part from a lack of primary material. He apparently burnt many of his private papers and degree certificates when overcome by emotions aroused by the family's antipathy towards his marriage.[5] Nevertheless, he was sufficiently productive as a writer and newspaper correspondent on numismatic topics, for us to surmise that he made a significant contribution to this field of endeavour.

Isidore's numismatic pursuits may be conveniently grouped under three broad headings: commercial trade, literary works and contributions to the 'Common Good'. These categories are not mutually exclusive and there is much overlap. All Isidore's activities were infused with his wide learning and interest in ancient, esoteric, and Jewish culture.

Commerce

An appreciation of Kozminsky's retail trade in coins and medals is provided by a catalogue of numismatic items for sale compiled by Isidore, and published around the turn of the century (Fig. 3).[6] In eleven pages of double column, densely packed type, 470 coins are described and priced, interspersed with references to large quantities of unlisted stock. The range of material is impressive, extending from ancient Greek and Roman coins, through mediaeval hammered pieces to modern coinages, with gold, silver and bronze all represented.


By Special Appointment

Under Distinguished Patronage of His Excellency the Governor General.

CATALOGUE

OF SOME

ANCIENT AND MODERN COINS

IN

GOLD, SILVER, AND BRONZE

Selected from the well-known Stock of

MESSRS. S. KOZMINISKY & CO.,

And offered for Sale at their well-known House

Corner of Bourke and Elizabeth Streets

(Opposite General Post Office),

Melbourne.

Established in the Fourteenth Year of the Reign of Queen Victoria.

Fig. 3 Sale Catalogue c. 1902

5 Tansley informed me that this event was witnessed by her father.

6 *Catalogue of some Ancient and Modern Coins in Gold, Silver, and Bronze, Selected from the well known Stock of Messrs. S. Kozminisky & Co., And offered for Sale at their well-known House, Corner of Bourke and Elizabeth Streets (Opposite General Post Office), Melbourne.* The catalogue is undated, but an inspection copy was sent to *The Australasian* newspaper and acknowledged in their issue of May 10, 1902, informing its readers that the catalogue "is published to give persons interested in such matters an idea of the value of ancient and recent pieces of the kinds usually inquired after". The atypical spelling of the firm's name on the cover of the catalogue is unexplained.

Each series of coins is prefixed by a few introductory comments. Under the heading 'Coins and Tokens of Australasia', Isidore tantalizingly records that "as it is our intention to devote a special catalogue to the coinage of Australasia, all that is necessary here is to briefly notice some few of our numerous specimens in stock …". To my knowledge a 'special catalogue' was never published, and so we must be content to wonder at the abbreviated list, which included an Adelaide Gold Ingot at £50, a Holy Dollar at £5, a Dump for £1, a pair of 'Adelaide Sovereigns' first and second issues for £8, and various tokens from sixpence upwards.

Isidore must have been one of the first in this country to take an interest in Oriental numismatics. The final page of the sale catalogue records "A unique collection of ancient coins of China dating from 1250 B.C. comprising Cloth Merchant, Temple Garment, Knife, Key and other money … and some pieces of extreme rarity …". The terms used to describe the early spade coins are in keeping with Isidore's singularly poetic nomenclature evident on other pages of the Catalogue. As a postscript to a listing of eighty Roman bronze coins, he notes: "These firm metallic leaves are of great assistance to the student of Roman history".

An appreciation of beauty and romance are also much in evidence. In describing a tetradrachm of Antiochus he lyricises "the graceful nude female, sitting on the cortina, marks the reverse as one of the most beautiful and artistic ever produced on a coin". And again, introducing a listing of coins of Bactria, "This ancient kingdom, for centuries lost to the world, has a wild and fascinating history".

While Isidore's skill as a writer was obviously engaged in the service of enticing the interest of potential customers, his enthusiasm for coins was undoubtedly genuine. In her book, Tansley notes that he "had thought of himself as a dealer in antiques, but in truth he was a collector". Nevertheless, the need to operate a viable business is conveyed in a couple of sentences on the last page of the Catalogue – "Orders for less than five shillings respectfully declined", and "Cash must accompany all orders."

Kozminsky's entrepreneurial zeal was extended to wooing institutions. In March 1912, he corresponded with Alfred Chitty, then recently appointed numismatist of the Public Library Museum and Art Gallery of South Australia, sending him coins on approval, as possible purchases for the collection. His hand-written letter accompanied the coins.

210 Clarendon Street *March 5, 1912*
East Melbourne

Dear Mr Chitty

I am sending for approval the 30 pieces I wrote to you about. They are all carefully classified and priced as low as I can get them. Several pieces are very rare as you will see and one or two not in the British Museum. The 30 pieces come to £24-3-6 at reduced prices for a public institution – of course, if it is not desired to take the collection, a selection can be made. I am in a position to guarantee the coins to be absolutely genuine without the shadow of doubt.

Yours in sincerity
Isidore Kozminsky

It is noteworthy that 1912 was the year Isidore published his book *Numbers – Their Meaning and Magic*, numerology being one of his many interests. It may be stretching credulity, but do the "30 pieces" twice designated and the rather odd amount of £24-3-6 have some esoteric meaning? Certainly the 'thirty pieces' betrayal, of Biblical significance, would have been familiar in Isidore's Jewish upbringing, and to his interest in religion. He writes of the number 30 that it "must be regarded as 3", giving his reasons, and that 3 "is the number of highest wisdom and worth, of harmony and action, perfect love … and … plenty, fruitfulness and exertion", perhaps aspirations he hoped would facilitate a sale. And is there an unconscious tension between these laudable ends and a 'betrayal' of the coins of which he was undoubtedly fond, perhaps also signified in the composite number of 15, this being the added value of the numerals in £24-3-6, and noted in his book as representing evil and "the temptation of man"?

Attached to the letter is a listing of thirty Greek coins. In a Memorandum, to the Accessions Committee, Chitty notes that "these coins would not make any great show being very small; still they would be desirable in the collection. Should the committee decline to purchase the lot, it would be well to secure Nos …". Chitty lists six coins amounting to an expenditure of just under six pounds.

Literature

Isidore was a Fellow of the Royal Numismatic Society from 1901 to 1932, and was elected to a number of other learned societies, but I am unaware of his having published numismatic papers in their journals. His numismatic writings were, however, widely distributed in Australian newspapers, and offered to a more select readership in *The Antiquarian Gazette*, a monthly, then quarterly publication that he founded and edited between 1906 and 1911.

The first issue of *The Antiquarian Gazette*, stated its founder's intention in typically poetic prose, "to include…articles from known writers on the world of yesterday, illustrated by objects which have passed through the night of years to behold the light of day", adding by way of his commercial interest that "not the least important department will be that devoted to…articles offered for sale at the office of *The Antiquarian Gazette*". True to his intention, Isidore regularly included a listing of coins of comparable scope and quality to those offered by British and European dealers. The various issues of the *Gazette* include articles on a range of topics, the numismatic contributions including essays by Alfred Chitty and Dr Arthur Andrews. One correspondent, having come across a holey dollar amongst "some old coins in a shop window" wondered about the cutting process that produced them. Isidore's editorial comment, as in other issues of his journal, showed his appreciation of a notable provenance, mentioning that he "had a number of ancient pieces from the well known cabinet of the Marquis of Strozzi of Florence, which had anciently been cut into halves and quarters".

His interest in Chinese coins is conveyed in a short article with accompanying photographs published in *The World's News* in November 1904. He describes ancient knife and spade coins as "razor money" and "garment money", further qualifying the latter as illustrative of trousers, a shirt and an overdress. He also includes, for comparison, a photograph of a tetradrachm of Alexander the Great, "one of the most beautiful coins I have seen … The Chinese can claim the invention of the first metallic currency, but they never conceived anything more lovely from an artistic point of view than this".

Twenty-five years on, he was still contributing informative articles to the press. A lengthy essay entitled "Pieces of Eight – Once the World's standard coin" appeared in *The Argus Camera Supplement* of 15 June 1929. The article detailed the welcome and use these coins achieved in Australia, the West Indies and elsewhere. Perhaps, not surprisingly, with the reader's attention drawn to Spanish doubloons, tales of buried treasure featured in the follow-up correspondence.

Common Good

Numismatic queries to the press were frequently forwarded to Isidore for a response. An excerpt from one lengthy reply under the heading 'Old Coins Identified' and published in *The Australasian* of 9 July 1898, conveys a sense of his commitment and knowledge:

Of the four rubbings submitted, three are taken from coins of the Seleucidae, the Greek Kings of Syria; therefore, I take the liberty of describing them a little out of the order given.

No. 2 – Small bronze of King Antiochus I of Syria, 282-261 B.C.
Obverse, head of the king
Reverse, a nobly-executed naked figure of Apollo sitting on the Cortina

He then goes on to give a potted history of the reign, before giving his appraisal of the coin and its value, a style adopted for each of the four coins.

The reverse of this coin is the finest of the whole series of the Seleucidae. The value of the pieces ranges between 2/- and 4/-.

Isidore's engaging prose is evident in his other descriptions. A coin of Antiochus IV, informs the reader that the king was "a raving madman", and contrary to his eulogistic appraisal of the first coin, he describes a coin of Antiochus X as "most inartistic … composed of potin or base metal".

Spade Guineas were the subject of enquiries to *The Leader* in 1912 and again in 1915. All the coins he thought to be spurious, but suggested getting them "tested by putting under acid to see if they are gold", adding that "it is hard to tell if coins are genuine without an inspection by an expert". In an article published in *The Argus* of 1 December 1928, entitled 'Forgeries of the Antique – How collectors are tricked', he wrote: "It is astonishing how many of these fake guineas reached Australia. Some years ago, while digging … in a garden of my old home in Middle Harbour, Sydney, we turned up a quantity of them, together with some Australian tokens and part of an old sword".

He was not averse to expressing views which he believed were in the public interest and possibly his own. The following letter to the Editor was published in newspapers across several States in September 1903:

Sir, – It will no doubt come as a surprise to students of numismatics in our Commonwealth to learn that it has been decided to place an impost duty of 20 per cent. on ancient coins, which I believe are now to be classified as fancy goods! I fail myself to understand how these specimens of ancient or mediaeval art can be included in any department of fancy goods. They are works of art, metallic leaves of history, and it seems preposterous to tax art or education in any way. Most countries of the world delight to welcome art works that teach so much. Here we seem to view things in another way. – Yours, etc …

A letter signed with the pseudonym "Education" addressed to the Editor of the Melbourne newspaper, *The Argus* of 15 December 1905, dealt with an issue familiar to present day critics, namely the inadequate displaying of public coin collections. The letter prompted a response from Isidore:

Sir – "Education's" letter touches on a subject of interest to students of antiquities. It has often been a puzzle to me why the trustees of the National Museum should permit the valuable collection of coins which they have acquired to be hidden from public view, whilst a useful purpose could be served by exhibiting them. Valuable relics and antiquities are in the possession of the Museum authorities. Cannot the trustees find space to exhibit them?– Yours, &c.

He was more specific in a letter addressed to the Editor of *The Age*:

… concerning the introduction of cabinets of coins, &c., down the centre of the galleries … It would certainly be better if the trustees could allow separate space for the exhibition of coins, curios and antiquities, and so keep the departments distinct …

Other interests

It would be a disservice to Isidore's legacy not to mention some of the other pursuits in which he excelled. The *Kozminsky* establishment had, along with its coins and medals, a fine display of jewels and gems of every description as well as works by established and contemporary artists. Isidore developed a singular knowledge of gemstones, culminating in his authorship of *The Magic and Science of Jewels and Stones*, first published in 1922. It remains, according to one critic, "the finest and most comprehensive book on the subject. No one had a knowledge of jewels and stones – both in science and in superstition – to match Isidore Kozminsky. It is a work of great erudition … a beautiful book; a treasury of treasures"[7].

His interests encompassed astrology, kabbalah and other esoteric and arcane subjects, many of which formed the subject of publications. He wrote a short monograph on the occultism of the Australian Aboriginal,[8] a paper apparently so well received that he published a sequel.[9] Early in his career he had tried his hand at fiction in a short story entitled *A Jew's Revenge*.[10]

Newspaper notices regularly reported Isidore Kozminsky's activities, and convey a picture of entrepreneurial zeal across a very broad canvas.

In addition to this successful professional and public life, there appear to have been troublesome personal issues that arose from having married outside the Jewish faith. While Isidore had adopted Judaism, the fact that his mother was a Gentile does not seem to have mitigated his parents' resentment of his having repeated their example in marrying Eileen, the daughter of a prominent Victorian psychiatrist.[11] This 'break in the chain', incorporated in the title of Tansley's biographical novel, appears to have been deeply felt. It lay behind Isidore's fit of passion in setting fire to many personal documents, the couple's removal to Sydney for a number of years, their eventual emigration to England in 1935, and the strangest development of all, his decision to change his name. In 1936 he was apparently jubilant to receive from the Supreme Court of Judicature notice acknowledging that he was henceforth to be known as Francis Coton.

7 http://harpermcalpineblack.blogspot.com.au/2017/03/isidore-kozminsky-magic-and-science-of.html
8 *Introductory Address on The Occultism of the Australian Aboriginal*, J. C. Stephens Printer, Melbourne, (undated, *c.* 1898)
9 *The Occultism of the Australian Aboriginal, No. 2*, J. C. Stephens Printer, Melbourne, (undated, *c.* 1900)
10 *Jewish Herald*, 21 Feb., 1896, p. 10
11 Dr William Watkins

Numismatic pursuits do not appear to have featured in his later years, although he retained his Fellowship of the Royal Numismatic Society until 1932.

Isidore Kozminsky remains something of an enigma. His Doctor of Science degree has no known provenance, and yet seems justified by his learning. The source of his intense interest in the outer realms of science and occult knowledge had only a tenuous connection to his professional life, and his personal torment of faith and family estrangement seemed magically resolved in assuming a new name.

Mystery also surrounds his demise. According to one version he contracted pneumonia while sheltering during the London air-raids; another that he died after being knocked down an escalator on the London underground.[12]

Isidore was survived by his wife, a son and a daughter, but numismatics no longer featured within the Kozminsky pantheon.

Acknowledgements

I wish to thank Dr Tangea Tansley for her encouraging and informative replies to my enquiries about her grandfather. Her book, *A Break in the Chain – The Early Kozminskys*, has provided the necessary background for understanding the complexity of Isidore's various pursuits. I also wish to thank Peter Lane for providing me with a copy of Isidore Kozminsky's correspondence with Alfred Chitty, and Dr Vince Verheyen for acquainting me with Simon Kozminsky's correspondence with the Royal Mint Melbourne. The paper has benefited from the helpful criticisms of two anonymous referees, to whom I extend my grateful thanks.

Author

David Rampling is a retired psychiatrist with a research interest in the historic coinage of Scotland. He has enjoyed a road less travelled in exploring the numismatic interests of Isidore Kozminsky, and the congenial correspondence that has accompanied this journey. David is a Fellow of the NSSA.

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12 Tansley informed me that her father was in no doubt that Isidore's death was a result of the incident on the London underground.
See also: https://www.astro.com/astrodatabank/Kozminsky,_Isidore

Empire of Brazil Treasury Notes

Frank J Robinson

Abstract

The Empire of Brazil was proclaimed in 1822 and lasted until 1889. Under a decree of 1833, paper money was issued by the National Treasury from 1835; these notes were initially printed in England (until 1870) and later issues were printed in the USA (from 1869 to 1889). Each time a new order of notes was placed, the designs were changed; this resulted in from four to six different designs for the English printings and up to four different designs for the American printings. The notes printed in the USA are a very different style from the English ones. This paper looks at the various groups of notes and the features that distinguish these groups.

Keywords

[Empire of Brazil] [National Treasury] [paper money] [printing groups] [Emperor Pedro II]

Introduction

This paper deals only with notes issued by the National Treasury of Brazil during the period of the Empire of Brazil.

Each time a new order was placed for notes, the design was changed; however not all denominations were printed each time. This resulted in up to nine different designs (and printings) for a particular denomination; the most designs/printings being nine for the 5 mil reis (six English and three American), followed by eight for the 2, 10, and 20 mil reis.

The two Brazilian paper money catalogues that I have covering this period,[1] list these notes by their denomination; thus all the notes of one denomination are listed before the next denomination. The *Standard Catalog of World Paper Money*[2] lists these notes first by printer, then by "estampa"; "estampa" can be translated as "print" and refers to which printing the note is of a particular denomination. However not all denominations were printed at the same time as some denominations were required more often than others. I am interested in which denominations were printed as part of a particular group. To determine each group, we need to compare the details of the designs of the notes.

1 Amato, *et al*, 2000; Seppa, 1975.

2 Cuhaj, 2008, sometimes referred to as 'Pick' from its original author.

Brief Historical Background

After Napoleon's invasion of Spain and Portugal in 1807, the British Royal Navy evacuated the Portuguese royal family to Brazil. In 1815, Brazil was raised in status from a colony to being equal to Portugal as part of the United Kingdom of Portugal, Brazil and the Algarves.

King João VI, and most of the royal family, eventually returned to Portugal in 1821, leaving Dom Pedro (his eldest son) in Rio de Janeiro as Regent. While the Royal family were on their way home, the Portuguese *Cortes* (Parliament) enacted laws to return Brazil to colonial status. When news of this reached Brazil, Dom Pedro proclaimed Brazil's independence as the Empire of Brazil, and he was later crowned as Emperor Pedro I. By 1831, after a harsh reign, Pedro I was forced to abdicate in favour of his four year old son, Pedro II. A largely benevolent reign was followed by a military coup in 1889, resulting in the abdication of Pedro II. The Empire was then replaced by a Republic.

Overview of the Paper Money of the National Treasury

The National Treasury of the Empire of Brazil was established in 1833. Under a decree of 1 June 1833, paper money was issued from 1835.

The issues for the next 35 years were printed in England by Perkins, Bacon & Petch (until 1859) and then, after a change of name, by Perkins, Bacon & Co from 1860. There were nine denominations – 1, 2, 5, 10, 20, 50, 100, 200, and 500 mil reis. [Note that "mil" means 1000, thus 1 mil reis is 1000 reis]. These issues can be divided into seven groups based on their design features and published years of issue[3]; I term these groups EE1 to EE7, with EE being an abbreviation of **E**mpire **E**nglish printings. Groups EE1 to EE4 were printed by Perkins, Bacon & Petch and groups EE5 to EE7 were printed by Perkins, Bacon & Co.

The American Bank Note Co printed notes for the last 20 years of the Empire from 1869 to 1889.[4] In addition to the nine denominations previously printed, there was also a 500 reis note. These notes can be divided into four groups which I term EA1 to EA4, with EA being an abbreviation of **E**mpire **A**merican printings.

English Printings

Table 1 lists the 41 notes that were printed in England with their catalogue numbers (from the *Standard Catalog*) along with the year of issue (in brackets). As can be seen, not all denominations were printed for each group. This comes down to the greater

3 These notes do not have any dates or years printed on them (other than the decree date of 1 June 1833); the years of issue are those published in catalogues.

4 Note that there is a one year overlap – the last English note printed was 20 mil reis in 1870 (this denomination was not included in the initial American printing group) and the first American notes (5 and 10 mil reis) were printed in 1869.

demand for some denominations over others, eg there were six issues of both the 5 and 20 mil reis, but only four of most of the other denominations.

The estampa only appears on the three highest denomination notes (100, 200, and 500 mil reis) of group EE6 and the two notes of group EE7. However, as shown in Table 1, the estampa is numbered from the first issue. Some higher denominations do not have the series ("serie" in Portuguese) shown on them due to the small number of notes printed; there were 100 000 notes per series.

Table 1: Notes – English Printings (SCWPM Nos, years of issue, and estampa[5])

Mil Reis	**1**	**2**	**5**	**10**	**20**	**50**	**100**	**200**	**500**
EE1	P-A201 (1835) (Est 1)	P-A202 (1835) (Est 1)	P-A203 (1835) (Est 1)	P-A204 (1835) (Est 1)	P-A205 (1835) (Est 1)	P-A206 (1835) (Est 1)	P-A207 (1835) (Est 1)	P-A208 (1835) (Est 1)	P-A209 (1835) (Est 1)
EE2	P-A210 (1849) (Est 2)	P-A211 (1844) (Est 2)	P-A212 (1842) (Est 2)	P-A213 (1840) (Est 2)	P-A214 (1841) (Est 2)	P-A215 (1839) (Est 2)	P-A216 (1844) (Est 2)	P-A217 (1844) (Est 2)	P-A218 (1844) (Est 2)
EE3			P-A221 (1843) (Est 3)	P-A222 (1852) (Est 3)	P-A223 (1844) (Est 3)	P-A224 (1848) (Est 3)			
EE4			P-A230 (1852) (Est 4)		P-A232 (1854) (Est 4)		P-A225 (1856) (Est 3)	P-A226 (1859) (Est 3)	P-A227 (1859) (Est 3)
EE5	P-A219 (1860) (Est 3)	P-A220 (1860) (Est 3)	P-A237 (1860) (Est 5)						
EE6	P-A228 (1866) (Est 4)	P-A229 (1866) (Est 4)	P-A240 (1866) (Est 6)	P-A231 (1864) (Est 4)	P-A239 (1867) (Est 5)	P-A233 (1867) (Est 4)	P-A234 (1867) Est 4	P-A235 (1867) Est 4	P-A236 (1867) Est 4
EE7				P-A238 (1868) Est 5	P-A241 (1870) Est 6				

These notes were printed on one side only and with a stub, like in a cheque book, from which the note was cut by hand when issued; thus the left hand margin is rarely straight.

5 Estampa is shown in Table 1 (and Table 10) as "Est" followed by a number; where this is in brackets, the estampa is not shown on the notes.

Figure 1: 1 mil reis note (P-A210)[6] of group EE2; design features to be noted are the in the centre of the left and right panels, as well as the vignette at the top centre, and the denomination in the centre; on this note, these are the decree at left, Imperial arms at right, a vignette of Commerce at top centre, and the denomination numeral in the centre. *Image Credit: Author's collection*

There are four design features that we need to pay attention to (see Figure 1), these are:

- the design feature in the centre of the left panel;
- the design feature in the centre of the right panel;
- the vignette at the top centre; and
- the denomination numeral and/or word in the centre.

In most of the first four groups, the left and right panel features are common for the group and define that group.

At the top centre there is a vignette which is usually an allegorical figure (ie attribute) or a scene, but sometimes a portrait of Pedro II.

In the centre of the note is a large numeral and/or word giving the denomination; on groups EE1 to EE4 this is a plain numeral whereas in groups EE5 to EE7 there is the denomination (as a word, or as numerals) in colour on a background made up of multiple (usually five) overlapping circles (or sometimes ovals), containing a machined pattern, in a lighter shade of the same colour; this is sometimes over the numeral (as shown in Figure 7).

6 Reference numbers in the figures are to the *Standard Calalog*

Table 2: Design Features for the seven English groups

Group	Left Panel	Top Centre	Right Panel	Centre Denomination
EE1	arms	figure or view	decree	plain numeral
EE2	decree	figure or view	arms	plain numeral
EE3	monogram or Grand Cross	figure or view	arms	plain numeral
EE4	arms	figure or view	monogram or Grand Cross	plain numeral
EE5	arms / decree	figure	decree / arms / Pedro II (sm)	word in circles background
EE6	Pedro II / engraving(s) / other	figure or view	arms / engraving(s) / other	word or numerals in circles background
EE7	figure	Pedro II & children or view	figure	word in circles background

Table 2 is a listing of these four design features for each of the seven groups. For the first two groups (EE1 and EE2), this is quite straight forward. Groups EE3 and EE4 have one denomination with a different left or right design feature to the others. The last three groups have a number of differences.

For each group, I will present a table of the notes for that group, and the distinguishing features of that group.

Group EE1

Group EE1 (see Table 3) was issued in 1835 and consists of notes of all nine denominations. All have the Imperial arms in the left side panel and the decree in the right side panel (see Figures 2 and 3). Each has a different vignette or scene at the top centre. Both the series number and the serial number have been added by hand.

Table 3: Design Features for Group EE1

Denomination	Issued	Left Panel	Top Centre	Right Panel
1 mil reis	1835	Arms	Agriculture	Decree
2 mil reis	1835	Arms	Arts	Decree
5 mil reis	1835	Arms	Commerce	Decree
10 mil reis	1835	Arms	head of boy Emperor (r)	Decree
20 mil reis	1835	Arms	Justice & Truth	Decree
50 mil reis	1835	Arms	Discovery of Brazil	Decree
100 mil reis	1835	Arms	view of Recife	Decree
200 mil reis	1835	Arms	view of Bahia	Decree
500 mil reis	1835	Arms	view of Rio de Janeiro Anchorage	Decree

As can be seen from Table 3, the Imperial arms on the left and the decree on the right are the designating features of group EE1.

Figure 2: The 5 mil reis note (P-A203) of group EE1 with the Imperial arms at left, decree at right, "Commerce" at top centre, and denomination numeral in the centre. Both the series number and the serial number have been added by hand on this group only. *Image Credit: Stephen Prior*

Group EE2

Group EE2 (see Table 4) again has all nine denominations and were issued in various years from 1839 to 1849. All have the decree in the left side panel and the Imperial arms in the right side panel (see Figures 1 and 3). Again each has a vignette or scene at the top centre, but they are on different denominations to group EE1.

Commencing with group EE2, the series number[7] is printed in the main print colour and the serial number is printed in larger black numerals (see Figure 1).

Table 4: Design Features for Group EE2

Denomination	Issued	Left Panel	Top Centre	Right Panel
1 mil reis	1849	Decree	Commerce	Arms
2 mil reis	1844	Decree	Agriculture	Arms
5 mil reis	1842	Decree	Arts	Arms
10 mil reis	1840	Decree	Discovery of Brazil	Arms
20 mil reis	1841	Decree	head of boy Emperor (r)	Arms
50 mil reis	1839	Decree	Justice & Truth	Arms
100 mil reis	1844	Decree	view of Rio de Janeiro Anchorage	Arms
200 mil reis	1844	Decree	view of Recife	Arms
500 mil reis	1844	Decree	view of Bahia	Arms

For group EE2 we have the same two designating features as for group EE1 (decree and Imperial arms) but they are on the opposite sides.

7 Where estampa and series numbers are printed on the notes, the number is followed by the letter "A" which has the same usuage as "st", "nd", "rd", "th" (for 1st, 2nd, 3rd, 4th) in English

Arms: left side panel (group EE1)
right side panel (group EE2)

Decree: right side panel (group EE1)
left side panel (group EE2)

Figure 3: arms and decree in side panels for groups EE1 and EE2. *Image Credit: Author's collection*

Group EE3

Group EE3 (see Table 5) consists of only four notes. While the 5 mil reis (see Figure 4) has a crowned monogram of Pedro II at the left, the other three denominations have the Grand Cross of the Imperial Order of the Southern Cross at the left (see Figure 6); all four notes have the Imperial arms at the right.

Table 5: Design Features for Group EE3

Denomination	Issued	Left Panel	Top Centre	Right Panel
5 mil reis	1843	crowned monogram	Agriculture	Arms
10 mil reis	1852	Grand Cross (IOSC)	Justice & Truth	Arms
20 mil reis	1844	Grand Cross (IOSC)	Discovery of Brazil	Arms
50 mil reis	1848	Grand Cross (IOSC)	Pedro II (l) in wreath	Arms

Figure 4: The 5 mil reis (P-A221) note of group EE3 with the crowned monogram at left, arms at right, "Agriculture" at top centre, and denomination numeral in the centre. *Image Credit: Author's collection*

Group EE4

There were five denominations issued for group EE4 (see Table 6). All have the Imperial arms at the left. Again the 5 mil reis has the crowned monogram of Pedro II, this time on the right (see Figure 5); the others have the Grand Cross on the right (see Figure 6).

On the 5 and 20 mil reis, letters are used for the series; on the 100, 200, and 500 mil reis, the series is not given as there were less than 100 000 notes of each printed and a series identifier was not required.

Table 6: Design Features for Group EE4

Denomination	Issued	Left Panel	Top Centre	Right Panel
5 mil reis	1852	Arms	Justice & Truth	crowned monogram
20 mil reis	1854	Arms	Peace, Agriculture & Science	Grand Cross (IOSC)
100 mil reis	1856	Arms	view of Bahia	Grand Cross (IOSC)
200 mil reis	1859	Arms	view of Rio de Janeiro Anchorage	Grand Cross (IOSC)
500 mil reis	1859	Arms	view of Recife	Grand Cross (IOSC)

Figure 5: The 5 mil reis note (P-A230) of group EE4 with the arms at left, crowned monogram at right, "Justice & Truth" at top centre, and denomination numeral in the centre. The series is shown as the letter "C". *Image Credit: Stacks Bowers Galleries–Auction:* August 2015 Chicago ANA–*Lot No* 32022

Crowned monogram (5 mil reis only):
left side panel (group EE3)
right side panel (group EE4)
Image Credit: Author's collection

Grand Cross of the Imperial Order of the Southern Cross (except 5 mil reis):
left side panel (group EE3)
right side panel (group EE4)
Image Credit: Stacks Bowers Galleries–Auction: January 2012 NYINC–Lot No 4045

Figure 6: crowned monogram and Grand Cross of the Imperial Order of the Southern Cross in side panels for groups EE3 and EE4

Group EE5

Only the three lowest denominations were issued for group EE5 (see Table 7). From this issue, the consistency of the design features of the left and right panels ceases. Starting with this group, there are multiple overlapping circles (or sometimes ovals), containing a machined pattern, with the denomination word (or in three instances numerals) within the pattern. The notes of group EE5 have five overlapping circles with the denomination word (as shown in Table 7); this is superimposed over the large denomination numeral (as on the earlier groups) (see Figure 7).

Table 7: Design Features for Group EE5

Denomination	Issued	Left Panel	Top Centre	Right Panel	Centre Denomination
1 mil reis	1860	Arms	Commerce (new)	Decree	blue "HUM" over numeral
2 mil reis	1860	Decree	Agriculture (new)	Arms	green "DOIS" over numeral
5 mil reis	1860	Arms	Justice & Commerce w. arms (new)	Pedro II (suit, small l)	red "CINCO" over numeral

On the 1 and 2 mil reis, letters are used for the series, but on the 5 mil reis numbers are used.

Figure 7: The 2 mil reis (P-A220) note of group EE5 with the decree at left, arms at right and a new vignette of "Agriculture" at top centre. The denomination word "DOIS" (two) is shown inside five overlapping circles; this is superimposed over the denomination numeral "2". The series is shown as the letters "OO".
Image Credit: Author's collection

Boy Emperor on 10 mil reis of group EE1 (also on 20 mil reis of group EE2)
Image Credit: Stacks Bowers Galleries–Auction: August 2012 Philadelphia ANA–Lot No 20054

Pedro II on 50 mil reis of group EE3
Image Credit: Stacks Bowers Galleries–Auction: January 2012 NYINC–Lot No 4046

Pedro II on 5 mil reis of group EE5 (also on 1 mil reis of group EE6) The Grand Cross can be seen under the left lapel of his suit.
Image Credit: Stephen Prior

Pedro II on 200 mil reis of group EE6 (also on 20 mil reis of group EE6 and 10 mil reis of group EE7)
Image Credit: Stacks Bowers Galleries–Auction: ANA-Session C–Lot No 30039

Figure 8: Portraits of Pedro II on English printed notes

Group EE6

All nine denominations were printed for group EE6 (see Table 8). The two main themes for the left and right design features are portraits of Pedro II (see Figure 8) and machine engravings of various designs (see Figure 9). Again the denomination (word or numerals) is printed in colour over coloured overlapping circles; while the 2 and 10 mil reis have the denomination numeral underneath (as on group EE4), the 1, 5, 20, and 100 mil reis do not (see Figure 10). Coloured numerals, instead of words, are shown in the coloured circles on the 50, 200, and 500 mil reis; this is presumably due to the length of the words for these denominations – cinqüenta (50), duzentos (200), and quinhentos (500).

Table 8: Design Features for Group EE6

Denomination	Issued	Left Panel	Top Centre	Right Panel	Centre Denomination
1 mil reis	1866	Pedro II (civ, l)	Commerce, Justice & Agriculture (new)	Arms	blue "HUM"; no numeral underneath
2 mil reis	1866	Circular engraving	Justice & Truth w. arms	Circular engraving	green "DOIS" over numeral
5 mil reis	1866	Circular engraving	Commerce, Arts & Science	Circular engraving	red "CINCO" ; no numeral underneath
10 mil reis	1864	Oval engraving	Agriculture	Oval engraving	brown "DEZ" over numeral
20 mil reis	1867	Pedro II (suit, small r)	Commerce (new)	Arms	green "VINTE" ; no numeral underneath

Denomination	Issued	Left Panel	Top Centre	Right Panel	Centre Denomination
50 mil reis	1867	Two circular engravings	Agriculture & Commerce w. arms (new)	Two circular engravings	blue "50"
100 mil reis	1867	Abundance	Discovery of Brazil	Commerce	red "CEM" ; no numeral underneath
200 mil reis	1867	Pedro II (suit, r) (t); arms (b)	Justice & Truth	Arms (t); Pedro II (suit, r) (b)	red "200"
500 mil reis	1867	Seated woman	Agriculture, Arts & Commerce (new)	Seated woman	green "500"

Circular engraving
Image Credit: Stacks Bowers Galleries–Auction: Session E–World Paper- Internet–Lot No 31123

Oval engraving
Image Credit: Stephen Prior

Two circular engravings
Image Credit: Stacks Bowers Galleries–Auction: January 2012 NYINC–Lot No 4047

Figure 9: Three of the machine engravings used for group EE6

Figure 10: The 5 mil reis note (P-A240) of group EE6 with a circular engraving at both left and right and a vignette of "Commerce, Arts & Science" at top centre. The denomination word "CINCO" is shown inside five overlapping circles, but no denomination numeral "5" underneath. The series is shown as the letter "E".
Image Credit: Stephen Prior

Group EE7

The last of the English printings were group EE7 and consisted of two notes only (see Table 9). Both have different allegorical figures at left and right. On both of these notes the coloured denomination word is shown inside the coloured overlapping circles without the denomination numeral underneath (see Figure 11).

Figure 11: The 20 mil reis note (P-A241) of group EE7 with a vignette of "Justice" at left, a vignette of "Agriculture" at right and a view of Rio de Janeiro Anchorage at top centre. The denomination word "VINTE" is shown inside five overlapping circles and ovals, but no denomination numeral "20" underneath. The series is shown as "4ª" (ie 4th) and the estampa (abbreviated to "Est") is shown as "6ª" (ie 6th).
Image Credit: Stacks Bowers Galleries–Auction: January 2015 NYINC – *Lot No* 2039

Table 9: Design Features for Group EE7

Denomination	Issued	Left Panel	Top Centre	Right Panel	Centre Denomination
10 mil reis	1868	Truth	Pedro II (suit, sm, r) (t); children & arms (b)	Justice	brown "DEZ" ; no numeral underneath
20 mil reis	1870	Justice	view of Rio de Janeiro Anchorage	Agriculture	green "VINTE" ; no numeral underneath

American Printings

Now to the American printings. Table 10 lists the 23 notes printed in the USA with their *Standard Catalog* numbers and year of issue. All these notes, except the 10 mil reis of group EA1, have the estampa printed on them; the estampa numbers are continued from the English printings.

Table 10: Notes – American Printings (SCWPM Nos, years of issue, and estampa)

Mil Reis	½	1	2	5	10	20	50	100	200	500
EA1	P-A242 (1874) Est 1	P-A244 (1870) Est 5	P-A245 (1870) Est 5	P-A257 (1869) Est 7	P-A252 (1869) (Est 6)		P-A246 (1874) Est 5			
EA2	P-A243 (1880) Est 2	P-A250 (1879) Est 6	P-A251 (1882) Est 6	P-A261 (1883) Est 8	P-A258 (1883) Est 7	P-A259 (1880) Est 7		P-A247 (1877) Est 5	P-A248 (1878) Est 5	
EA3			P-A256 (1887) Est 7	P-A264 (1888) Est 9	P-A262 (1888) Est 8		P-A253 (1889) Est 6			P-A249 (1885) Est 5
EA4		P-A255 (1889) Est 7	P-A260 (1889) Est 8			P-A263 (1888) Est 8			P-A254 (1889) Est 6	

Let's have a quick look at some of the design features of the American printed notes. These notes were printed on both sides and are very different from the English printed notes. They all have one of several portraits of Emperor Pedro II on the front (all of these portraits are different to the ones on the English notes), and have a design on the back, which on some groups have the imperial arms (see Figure 12).

Figure 12: Back of 1 mil reis note (P-A250) of group EA2; note the imperial arms in the centre.
Image Credit: Author's collection

Table 11 is a listing for the four groups of the American printings showing which portrait of Pedro II is used on the front and the type used for the back.

Table 11: Design features for the four American groups

Group	Denominations	Front	Back
EA1	all except 500 reis	Pedro II (uniform)	without arms
	500 reis	Pedro II (civilian suit, sm r)	without arms
EA2	except 100 & 200	Pedro II (civilian suit, r)	Imperial arms
	100 & 200	Pedro II (civilian suit, l)	Imperial arms

Group	Denominations	Front	Back
EA3	2, 5, 10	Pedro II (civilian suit, r)	Imperial arms
	50	Pedro II (civilian suit, r)	scene
	500	Pedro II (civilian suit, r)	Pedro II
EA4	all	Pedro II (civilian suit, l)	various

Group EA1

In group EA1 (see Table 12) the notes from 1 to 50 mil reis all have a portrait of Pedro II in uniform on the front (see Figure 14). The 500 reis was the first issue of this new lowest denomination and was the last note issued in this group; it has a small civilian portrait of Pedro II (see Figure 13).

Table 12: Design Features for Group EA1

Denomination	Left Side	Top Centre	Right Side	Back
500 reis	Arms	Pedro II (suit, small r)	Lady with globe	without arms
1 mil reis	Pedro II (uniform, r)	Ship, tree, train	Arms	without arms
2 mil reis	Pedro II (uniform, r)	Arms	Trees	without arms
5 mil reis	seated woman & cupid	Arms with ship & train	Pedro II (uniform, r)	without arms
10 mil reis	Pedro II (uniform, r)	Agriculture & Justice with arms	Trees	without arms
50 mil reis	Pedro II (uniform, r)	Abundance	Arms	without arms

Figure 13: The 500 reis note (P-A242) of group EA1. This portrait of Pedro II was only used on this note.
Image Credit: Stephen Prior

Figure 14: The 1 mil reis note (P-A244) of group EA1. The uniform portrait of Pedro II was only used on notes of this group. *Image Credit: Author's collection*

All six notes have the words "IMPERIO DO BRASIL" (Empire of Brazil), without the Imperial arms, on the back (see Figure 15).

Figure 15: The 1 mil reis note (P-A244) of group EA1. The back has the words "IMPERIO DO BRASIL" (Empire of Brazil), without the Imperial arms. *Image Credit: Author's collection*

Group EA2

The eight notes of group EA2 (see Table 13) all feature a close-up civilian portrait of Pedro II on the front (see Figure 16) and the Imperial Arms on the back with the words "IMPERIO DO BRASIL" around (see Figure 12).

Table 13: Design Features for Group EA2

Denomination	Left Side	Top Centre	Right Side	Back
500 reis	Reclining lady & arms	Pedro II (suit, r)	Seated lady & ship	Imperial arms
1 mil reis	Arms	Pedro II (suit, r)	Seated lady	Imperial arms
2 mil reis	Child & arms	Pedro II (suit, r)	---	Imperial arms
5 mil reis	Woman with wheatsheaf	Pedro II (suit, r)	Man with sheep & dog, arms	Imperial arms
10 mil reis	Liberty & arms	Pedro II (suit, r)	Goats	Imperial arms
20 mil reis	Pedro II (suit, r)	woman with tree & arms	Seated woman	Imperial arms
100 mil reis	Arms	Pedro II (suit, l)	Isabel (l) (?)	Imperial arms
200 mil reis	Tree	Pedro II (suit, l)	Arms	Imperial arms

The portrait on most of the notes shows Pedro facing to the viewer's right; the two higher values have the identical portrait showing him facing the other way.

Figure 16: The 500 reis note (P-A243b) of group EA2. The portrait of Pedro II faces to the viewer's right.
Image Credit: Author's collection

Group EA3

The five notes of group EA3 (see Table 14) all have the portrait of Pedro II facing to the viewer's right (see Figure 17). There is a mix of designs on the backs of the notes.

Table 14: Design Features for Group EA3

Denomination	Left Side	Top Centre	Right Side	Back
2 mil reis	Pedro II (suit, r)	---	Arms	Imperial arms
5 mil reis	Pedro II (suit, r)	Winged cupid	Arts, arms	Imperial arms
10 mil reis	Pedro II (suit, r)	Arms	Standing woman	Imperial arms
50 mil reis	Pedro II (suit, r)	---	Seated woman	Palace of São Cristóvão
500 mil reis	Arms	Pedro II (suit, r)	Seated woman	Pedro II

Figure 17: The 2 mil reis note (P-A256) of group EA3. The portrait of Pedro II again faces to the viewer's right.
Image Credit: Stephen Prior

Figure 18: The 2 mil reis note (P-A256) of group EA3. The Imperial Arms are at left on the back. *Image Credit: Stephen Prior*

Group EA4

The four notes of group EA4 (see Table 15) all have the portrait of Pedro II facing to the viewer's left (see Figure 19). Three of the four notes have a scene on their backs (see Figure 20).

Table 15: Design Features for Group EA4

Denomination	Left Side	Top Centre	Right Side	Back
1 mil reis	Imperial Palace	Arms	Pedro II (suit, l)	Equestrian statue Pedro I
2 mil reis	Pedro II (suit, l)	---	Carmo Church	Antiga Street, Rio de Janeiro
20 mil reis	Arms & standing figures	---	Pedro II (suit, l)	Imperial arms
200 mil reis	Beach or river scene	Pedro II (suit, l)	Arms	First Mission in Brazil

Figure 19: The 2 mil reis note (P-A260) of group EA4. This time the portrait of Pedro II faces to the viewer's left. Carmo Church (Church of our Lady of the Old Cathedral, Carmo, Rio de Janeiro) is on the right. *Image Credit: Stacks Bowers Galleries–Auction: ANA-Session C–Lot No 30042*

Figure 20: The 2 mil reis note (P-A260) of group EA4. There is a view of Antiga Street, Rio de Janeiro on the back.
Image Credit: Stacks Bowers Galleries–Auction: ANA-Session C–Lot No 30042

Portraits of Pedro II

Three different portraits of Pedro II were used on the American printed notes; these were all different from those used on the English printed notes. The uniformed portrait appears to be based on an 1864 portrait by Victor Meirelles.[8] The small civilian portrait on the 500 reis of group EA1 appears to be based on an undated portrait.[9]

Portrait on 1 mil reis of group EA4
Image Credit: Stacks Bowers Galleries–Auction: August 2015 Chicago ANA–Lot No 32025

Portrait on 1 mil reis of group EA2
Image Credit: Author's collection

Figure 21: Portrait of Pedro II in a suit as shown on notes of groups EA2 to EA4.

The portrait used on the notes of groups EA2 to EA4 (see Figure 21) appears to be based on a photograph taken during Pedro's visit to the Philadelphia Fair in 1876.[10] All the portraits of Pedro II that I have seen on the web shows that his hair is parted on his left; thus the notes showing him facing to the viewers left (100 and 200 mil reis of group EA2 and all notes of group EA4) are correct and those showing him facing to the viewer's right (500 reis to 20 mil reis of group EA2 and all notes of group EA3) have had the portrait flipped.

8 https://commons.wikimedia.org/wiki/File:Victor_Meirelles_-_Pedro_II.jpg (Wikimedia Commons)
9 https://commons.wikimedia.org/wiki/File:Portrait_de_don_Pedro_II_%C3%A2g%C3%A9.jpg (Wikimedia Commons)
10 https://cdn.4archive.org/img/5fhYDTW.jpg; https://www.pinterest.com.au/pin/538320961692806803/

Author

Frank Robinson is a retired scientist having a Diploma of Applied Chemistry. He is currently Vice President, and a past President and Honorary Life Member, of the Numismatic Association of Victoria. He is also a member of the Melbourne Chapter of the International Bank Note Society. Frank was editor of The Australian Numismatist *(the journal of the NAV) from 2001 to 2015 and editor of the* Victorian Numismatic Journal *since 2016. He has contributed a number of articles to* The Australasian Coin and Banknote Magazine *and numerous articles to* The Australian Numismatist *and* Victorian Numismatic Journal. *He was awarded the Paul Simon Memorial Award in 2016 for his outstanding contribution to organised numismatics in Australia. Frank has collected and studied the banknotes of Brazil since 1993.*

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For illustrations of paper money

- Stacks Bowers Galleries
- Stephen Prior

A metallurgical origin for surface impairments found on Australia's larger silver Q-Alloy proof coins

T Vincent Verheyen

Abstract

This article outlines an alternative explanation for careless handling, which can account for minor but problematic, surface marks found on predecimal proof coins made at the Melbourne branch of the Royal Mint. The high relief areas on proof florins typically reveal many just visible cracks, flakes and pits unlikely to be post-strike damage. Scanning Electron Microscopy probed these surface imperfections on the Queen's shoulder and adjacent field areas and confirmed many could only result from manufacturing issues. They originate from metallurgical problems associated with their blanks (as known as planchets or flans) which comprise a relatively brittle inhomogeneous quaternary alloy overlaid by a thin silver layer. These properties result in uneven metal flow and fill during impact from the dies creating surface metal stress. This stress is relieved by irregular incuse cracks and exfoliation, which contribute to roughness observed on the effigy. A small number of the proof florins were relatively free of visible defects, suggesting proof coin quality control relaxed at the Melbourne Mint during its last years. This article presents new evidence to support the view that minor marks on these proof coins should not be judged too harshly as many result from production issues and not mishandling.

Introduction

Proof coins represent the best quality that money can buy, ensuring their ongoing demand with collectors and investors. In contrast to the perfection of modern proof coinage, Australia's predecimal proofs have a somewhat quirky appearance and aesthetic reflecting the available technology and minting skills of the period. Great care was apparently taken at the Melbourne Mint in their production,[1] so one may expect any marks would have been noticed during final inspections. The Melbourne Mint production of proof sets increased markedly from a steady 1500 sets in the early 1960's to 2016 sets in 1962 and then by a further 150% for the last sets dated 1963 (5042 sets).[2] High production placed additional pressure on the Mint's limited proof (primitive by today's standards) manufacturing capability. As the problematic marks were minor and ubiquitous, it may have led to a relaxation in quality standards.

1 Willam John Mullett. *Melbourne Mint Branch of the Royal Mint The Establishment*. 39-41, 44 (1992).

2 Greg McDonald. *Collecting and Investing In Australian Coins and Banknotes*. First edn, 125-126; 317 (Coin Corner Publishing and Investment, 1990).

The larger predecimal proof coins issued as part of the "collector series" (1955-63) often exhibit multiple surface marks on their highest points. Greg McDonald first described the problem in 1990 in his classic guide.[2] After examining a significant number of proofs, Greg noted that minor but visible marks were noticeable from 1957 onwards. However, in later years particularly 1962 -1963 most florins were prone to surface defects. This article will present new research that explains how pristine proofs can appear with minor surface impediments without having been subjected to any post-strike damage.

These marks, though only just visible to the naked eye, were described as numerous and concentrated on the florin's effigy around the base of the queen's neck and shoulder area.[2] The author's examination of many proofs, including curated examples from official Mint and Museum collections concurs with Greg's initial observations. The marks are also just visible on shillings albeit to a lesser extent. Furthermore, the metallurgical flaws described here are not found on the smaller 6d and 3d denominations. That their different sized blanks are all sourced from equivalent parent alloy ingots or bars, suggests the alloy in itself is not the only factor. The direct correlation between reducing coin size and prevalence of marks provides a clue. The greater metal flow required to produce more substantial changes in relief during the striking of the florin is a likely contributing factor requiring further investigation.

The accepted explanation for the visible marks on the effigy and design is that because they are raised and hence unprotected, this visible damage is post-strike and due to careless handling, for instance from impacts with metal surfaces or packaging. These scratches, scuffs and knocks are due to:

- drawer storage at Mint
- friction with the plastic case as supplied in 1962-3
- inappropriate handling and storage by owners

However, as these coins were sold at a premium and are valuable, most would have been carefully handled. More importantly, the potential sources of post-strike damage outlined above would not have discriminated between coins of different size, so a better explanation is necessary. Naturally, surface marks due to post-strike damage will be present to some extent on many of these coins making the assignment of marks problematic. A technique used here to discriminate between marks due to manufacturing problems and those imparted later, involves the combination of Optical with Scanning Electron Microscopy (SEM).

Figure 1 illustrates a typical 1963 proof florin, which at first glance has a "speckled" mirror surfaces revealing no major problems. The key areas of interest are the raised areas on both the kangaroo and emu's back and the shoulder area near the truncation on the obverse effigy.

In this project, the focus is on the florin obverse in two areas:

1. The Queen's shoulder which is the highest point on the coin directly above the truncation. This truncation is an angled slope comprising an approx. 1 mm height difference between field and shoulder and includes the designer Mary Gillick's incuse M.G. initials. During striking, metal pushes up and expands into recesses of the die to form the shoulder in relief. This area is where the surface imperfections are concentrated creating a rough surface visible to the naked eye.

2. Below this truncation is a flat region (field) above the legend letters GR of GRATIA where, during the impact from the die, the metal had an outwards flat flow trajectory either up into the effigy or out towards the edge forming smooth flat surface revealing negligible surface roughness.

Some background on the manufacture and composition of the Royal Mint silver coining alloys is warranted.

Sterling Silver

The Royal Mint used a binary alloy comprising a mixture of 92.5% by weight silver (Ag) and 7.5% copper (Cu) known as sterling silver, to manufacture coins over several hundred years.[3] Being a homogenous solid solution, it is very suited to coining being easy to strike yet reasonably hard wearing with no change in colour. However, comprising

3 Maurice Bull. *English Silver Coinage since 1649*. Sixth edn, 286, 654, (Spink, 2015).

almost pure silver its use became prohibitive when the cost of metal approached a coin's face value.

Silver Quaternary Alloy

The Mint had to produce coins that were cheap, white and not too brittle or hard to melt or strike (wearing out the dies) and wore evenly in colour, i.e. stayed white all over. A four constituent alloy, composition by weight: 50% Ag, 40% Cu, 5% zinc (Zn), 5% nickel (Ni); and by atom fraction 37% Ag, 50% Cu, 6% Ni and 7% Zn, was developed in the Royal Mint London. It was used for their 1927 proof set, and lessons learned led to a much improved 1937 proof issues.[3] A detailed comparison of the Melbourne proofs against those two earlier London Q-metal issues is beyond the scope of this article. However, despite design differences, the London 1937 GVI proof florin and larger half-crown and crown do not exhibit the surface irregularities seen on Melbourne coins. The alloy was a far from a perfect answer (refer below) to the Royal Mints problem of reducing the blank's silver content, and London abandoned the alloy in 1947 for cupro-nickel.

Returning to the quaternary alloy, silver was to remain the base or matrix metal which would act as a "solvent" for the other components. Copper was selected to be the major diluent, but the alloy needed to be silver-white in appearance. London experimented with 10% Nickel as the whitener, but the Ternary alloy still had significant segregation and oxidation problems.[4] Eventually in 1927, a fourth metal–zinc–a known silver antioxidant was included to form a Quaternary alloy (Q-metal) which was not too hard, stayed relatively white and wore well in circulation.[5] The Q-metal is challenging to manufacture due to blending and segregation issues. Metallurgists recommended its production via three separate meltings,[4,5] but the Royal Mint developed a two-stage process. The inclusion of zinc was necessary but particularly troublesome as it was extremely volatile (Melting Point (M.P) 419 & Boiling Point (B.P.) 907°C) when in contact with molten silver (M.P. 961 & B.P. 2,162 °C). The Melbourne Mint's own furnaces were not able to achieve the extremely high melting point temperature for pure nickel at 1455°C.

Melbourne followed advice from London and prepared the alloy via a two-stage method wherein the zinc, nickel, and some of the copper was melted first by electric arc furnaces at the Department of Munitions into a preliminary base metal alloy.[1] Its composition was similar to "*German Silver*" at 50% copper, 25% nickel and 25% zinc. The coinage alloy was then completed at the Mint by sequentially charging in the required silver, additional copper and the base metal alloy. The next problem to overcome was to

4 Robert Pepping. *New Zealand History Coined–Coins of New Zealand (1933-1965)*. 1st edn, 34,52, (Robert Pepping, 2017).

5 G. P. Dyer and P. P. Gaspar, 'Reform, the New Technology and Tower Hill, 1700-1966', in *A New History of the Royal Mint*, edited by C. E. Challis, pages 492, 559-560 (Cambridge University Press, 1992).

minimise segregation of the constituent metals during cooling to prevent coloured patches due to selective enrichment of various components. The cooling regime was dependent on the size of the cast ingots or bars, which were smaller in Melbourne than London and proved difficult to replicate. After rolling and drawing to the required strip thickness, blanks were cut, annealed and blanched in a strongly oxidising acid (pickling in sulphuric acid/sodium dichromate mixture) to enrich their surface silver content by selectively solubilising the other three metals.

Experimental

Twenty Melbourne proof 1960-1963 sets were examined for surface marks and a typical florin chosen for detailed investigation. The coin was ultrasonically cleaned in hexane and dried before imaging. A modified Olympus Model MF metallurgical microscope fitted with a 2 megapixel USB digital camera created the optical images which were processed using MicroCapture software (Leuchtturm®). SEM images were acquired using a Tescan VEGA 3 LMU (tungsten filament) instrument fitted with a Thermo Scientific EDS package for elemental analysis.

Results and Discussion

The marks under consideration are not present in exactly the same position on each coin and therefore die issues are discounted. Likewise, lint marks caused by foreign material creating incuse curved lines and patches during striking are present at random positions on only a minimal number of coins. These marks occur on all denominations and could not produce the problematic surface roughness whose cause is investigated here.

Optical Analysis

Optical light enables colour which is absent from an electron beam. Light microscopy in Figure 2 confirms the problematic marks (examined later by SEM) are not flat as they catch the light. Many marks appear as irregular cracks, fissures and delaminations without the "smooth" incuse edges associated with scratches. Surface roughness is not readily discernable by SEM imaging as light to dark changes can have many causes.

Figure 2 Reveals the obverse shoulder and undamaged rim area of two proof 1963 florins and below at higher magnification are a strip of microphotographs under different lighting of the truncation area for the upper left coin. The two upper pictures reveal obvious scratches as per the red arrow were a scratch diagonally crosses over the tunic's seam. The green arrows highlight irregular surface marks, which are the focus of this article. The lower strip of 3 includes a tick shaped feature further investigated in Figure 7.

The picture on the upper right (Figure 2) highlights variations in surface reflectivity caused by factors including "cabinet friction" resulting in dullness on the exposed areas. Also, the fields of both coins are blotchy with uneven reflectivity and colour due to granularity, attributed here to microsegregation of the alloy. The three lower pictures confirm the roughness of features examined later by SEM as the same surface marks either are exaggerated or blend into the background depending on the lighting angle.

The top left picture in Figure 2 also reveals the raised "wire" on the coin's outer rim (deliberately the highest feature to offer protection to the design) is not damaged which would be the case if the coin rattled around in a steel drawer.

SEM Analysis

SEM technology provides a wealth of additional information to the numismatist, typically not at high magnification (as all coins appear extremely rough at 1000X plus magnification available with the technique!) rather the focus here being surface composition. A powerful electron beam is focused on the coin's surface, just penetrating it while interacting with its atomic structure and emitting various types of radiation. Here, the following two types of electrons and select x-rays emitted from the sample are collected and processed into images.

- Secondary Electrons (SE) are collected at an angle at the side of the chamber and are more sensitive to surface features and texture. Their imaging is most comparable to optical microscopy but with additional complexity from edge effects (e.g. edges of lettering) and charging due to non-conductive areas.
- Back Scattered Electrons (BSE) come from deeper in the coin and are more sensitive to elemental variation. Images reveal white through grey to black areas, which represent variation in electron intensity. Darker areas correspond to the detector receiving fewer electrons, here correlating with a reduction in silver (the heaviest element and rich producer of BSE)
- Energy-dispersive X-ray spectroscopy (EDX)–X-Rays characteristic of each coin element (similar to X-Ray Fluorescence (XRF) technology now becoming more common for rare coin validation) are emitted and processed into element maps. Mapping gives EDX the critical advantage over XRF of providing spatial information, i.e. changes in elemental composition with distance.

Many of the surface marks revealed by SE on the Queen's shoulder (Figure 3) are visualised by BSE as darker areas (with lower electron emission) indicating these marks have different (lighter) elemental compositions. The fields appear smooth by SE with darker areas around the lettering thought due to carbonaceous deposits not removable by ultrasonic cleaning. In contrast, BSE from these same field areas reveals multiple dark spots in accord with the blotches (granularity) observed in Figure 2. BSE imaging confirms that there is not a complete seal in the alloy's silver coating with spots and random darker grey (silver deficient) areas showing.

At higher magnification (Figure 4) the variation in elemental composition revealed by BSE is more apparent as different shades of grey across both the field and effigy regions. These differences result from the selective enrichment of non-silver alloy elements, in this case, copper – see later. Scratches and scuffs apparent in the SE image are not easily seen in the BSE version suggesting this post-strike damage does not always penetrate the Q-metal's silver surface layer. Figure 4 reveals that darker areas in the BSE are not always present as surface features (roughness) in SE but correspond to coloured blotches under optical microscopy (Figure 2).

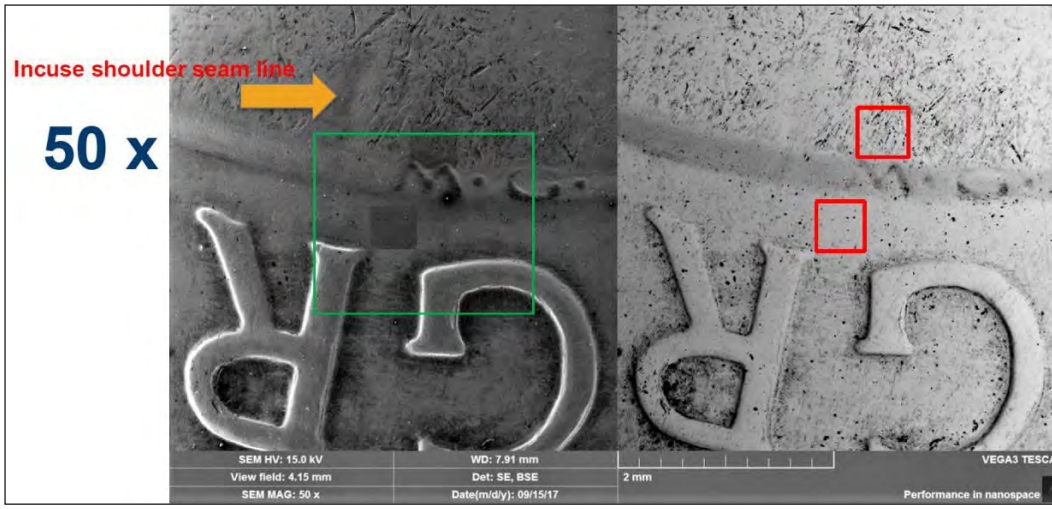

Figure 3 Presents low magnification (50X) and electron beam energy (15.0kV) SE and BSE images for the region on the 1963 proof Florin obverse presented optically in Figure 2. The green and red boxes indicate the image boundaries for Figures 4 and 5

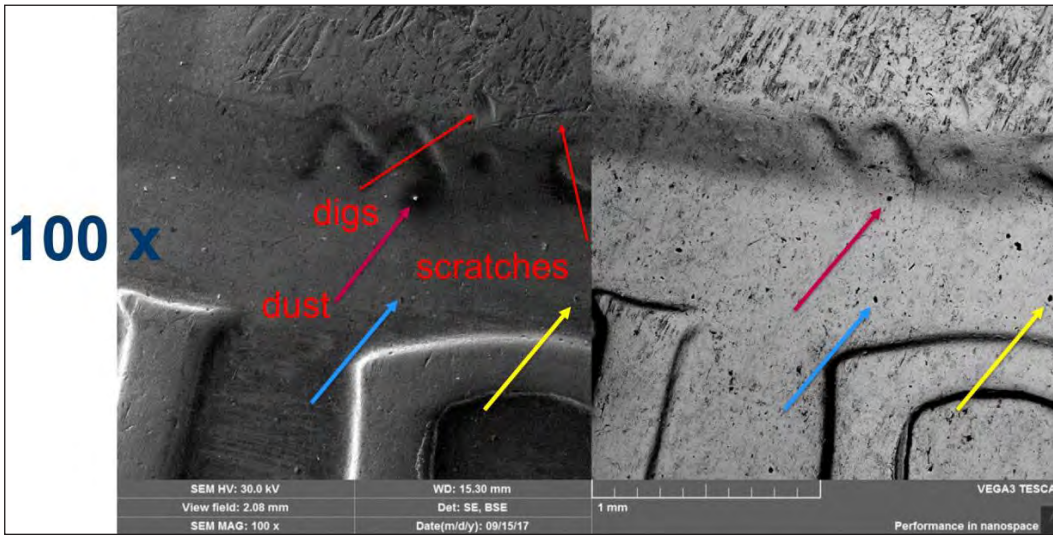

Figure 4 Reveals the green boxed region under higher 100X magnification also using a more penetrating 30KV electron beam. The different coloured arrows point to the same surface features on both images with the blue and yellow pointing to 0.1mm pits where silver is missing.

At 500X magnification, the surface roughness on the shoulder region (left images in Figure 5) is taking on a crystalline texture interspersed with irregular pitting and flakes, i.e. the alloy substrate granularity is being exposed. Fine scratches are also evident due to their clean straight edges. The surface in the field area (right images) is much smoother as expected but reveals several defects. A flake of metal in the top quarter obscures a surface crack or fracture running towards the right corner confirming this defect is not a post-strike scratch. The SE image also reveals just visible short raised metal flow lines

running parallel to each other (at 15 degrees roughly top to bottom) which are responsible for the coins subtle lustre.

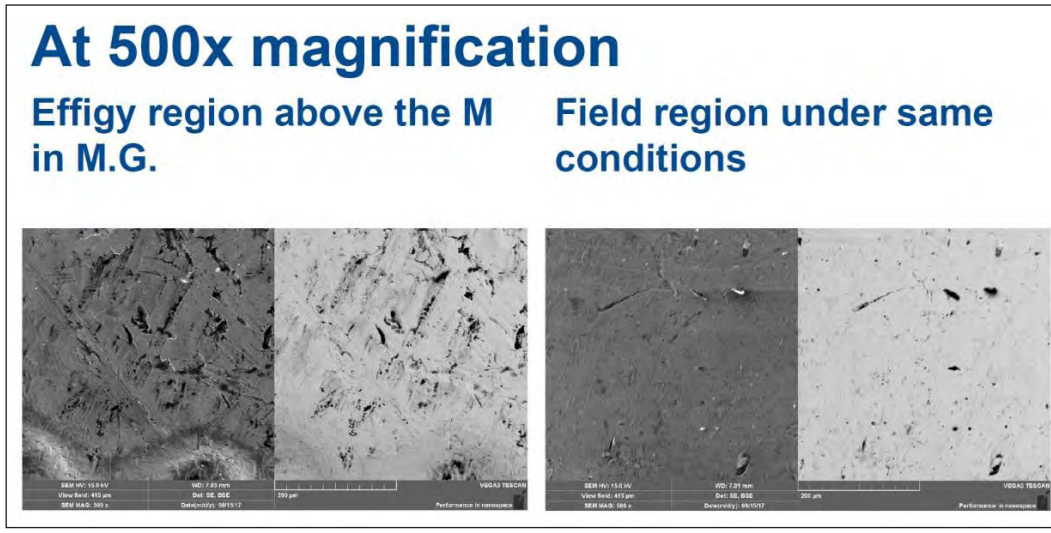

Figure 5 Presents 500X and 15kV SE and BSE images of the red boxed shoulder and field regions on the florin obverse defined previously in Figure 3.

Let us assume that before striking the blank had a homogenous distribution of alloy related surface defects (areas of differing elemental composition, fissures and delaminations). Comparing the shoulder and field BSE images (Figure 5) suggests that during striking a strong plastic deformation is occurring. The elemental surface distribution is differentially impacted in these two regions:

- by the vertical metal flow and expansion associated with forming the Queen's shoulder within the die's recess and
- compression followed by horizontal flow associated with the field area between the truncation and lettering.

Additional surface roughness in the shoulder region accentuates the same defect distribution also present in the field. Close examination of the field BSE reveals subtle changes in greyscale (electron backscatter intensity) along grain boundaries which become very obvious in the shoulder area.

EDX analysis provides a means to evaluate the changes in elemental distribution eluded to by the BSE imaging. Figure 6 reveals the Q-metal element maps of the shoulder and field regions presented in Figure 5. In accord with the blank's blanching to increase its surface silver concentration, both regions are rich in silver and surprisingly similar in the distribution of low silver (darker) areas which bear little relation to the surface texture revealed in the corresponding SE image at the top of each set (Figure 6). Copper, nickel and zinc are present in areas where silver is deficient with copper dominating

these defects. This observation is in accord with alloy inhomogeneity, that is particles of base metal alloy did not wholly disperse, (dissolve) within the coinage alloy during its fabrication at the Mint.

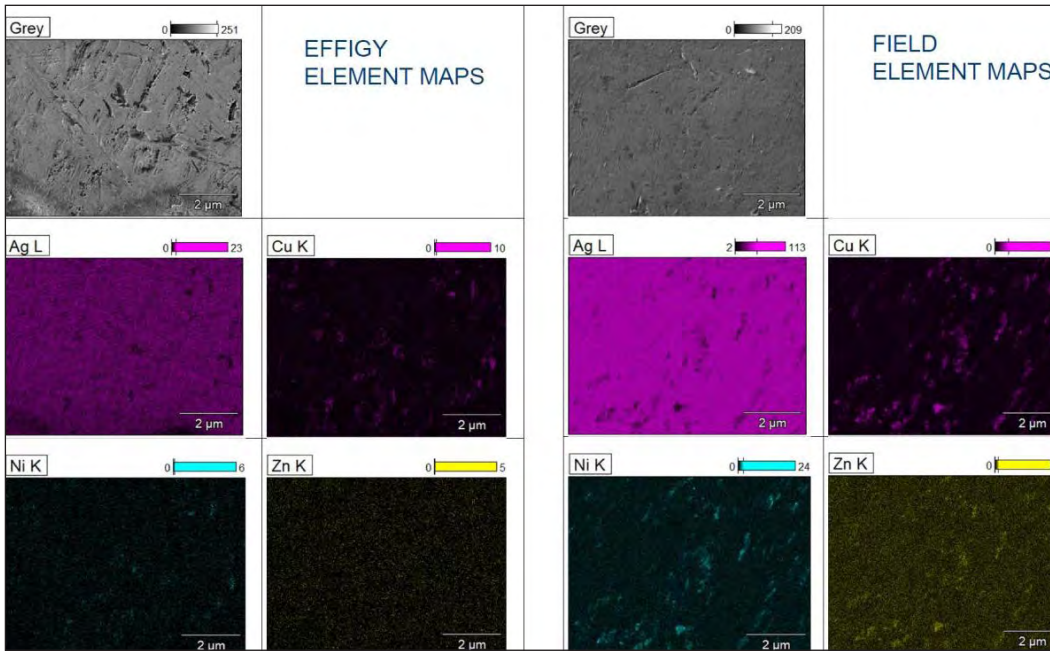

Figure 6 EDX Q-metal element maps for the shoulder and field regions shown in Figure 5. An increase in brightness reflects an increase in element concentration; however, absolute values should not be compared between the two regions due to acquisition differences.

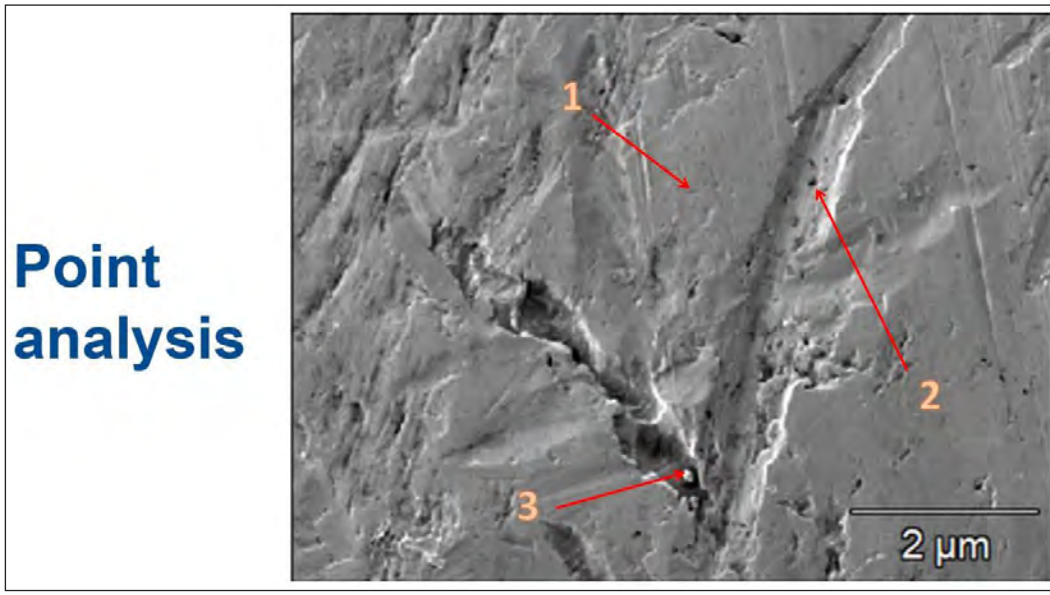

Figure 7 SEM image locations for EDX point analysis spectra, the numbered arrows point to features whose elemental composition are presented in spectral form in Figure 8. The image is of a tick shaped feature on the Queen's shoulder close to the truncation on the obverse first revealed in Figure 2.

The spectrum in Figure 8 for the smooth surface at position 1 reveals it is reasonably pure (95%) silver. The tick shaped incuse mark is a combination of a crack and scratch as revealed by their different edge and depth profiles. Embedded in the base of the scratch at position 2 is a grain of Q-metal alloy as revealed in the middle spectrum in Figure 8. This spectrum also reveals oxygen present indicating it is an oxidised granule, which may have hindered its dissolution in the melt.

Embedded within the crack or fissure at position 3 (Figure 7) is a particle whose spectrum in Figure 8 reveals it is silica, i.e. pure SiO_2. This 0.1 micron particle is likely a remnant of the polishing media applied to the proof blanks by the Mint.[1] If the crack was already present in the blank before the polishing, it is likely to have trapped the particle.

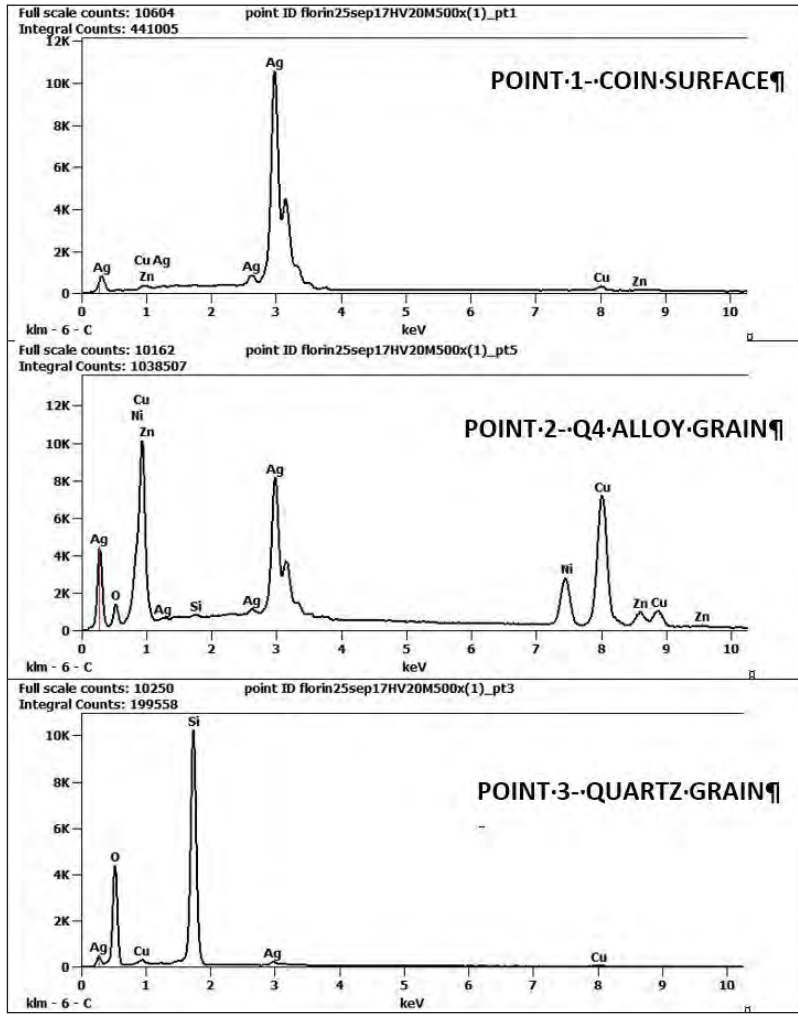

Figure 8 EDX point analysis spectra of the three image locations outlined in Figure 7. Their relative elemental compositions are presented as a spectrum with elements identified by their chemical symbols above their respective peaks. The areas of the peaks are indicative of the amount of that particular element present at that location.

The images presented here confirm a metallurgical origin for the problematic marks, as post-strike damage cannot satisfactorily account for all the features responsible for the surface roughness typically seen on these proof coins. However, any metallurgical explanation needs to account for the following:

Blanching (pickling) the alloy blanks should produce a near pure and even thickness surface film of silver providing the alloy is uniform.

Polishing the blanks would further obscure any defects in their silver surface.

Silver is very malleable and ductile. Providing this layer is sufficient, it would be unlikely that minor defects still present on the blanks would be visible on the struck coins.

Metallurgical Explanations

The following causes are presented in decreasing order of probability, and it is likely a combination of these were involved:

- Insufficient blanching treatment is leading to flaking of the surface silver layer on striking. The silver is too thin to cover the variation in metal flow properties caused by compositional irregularities in the alloy grain boundaries underneath.
- The blanks were not adequately annealed (to soften the alloy) and too hard; blows from the die could then force the blank's surface to "open up" within its recesses forming stress relieving micro cracks in the coin's raised areas.
- Alloy inhomogeneity creates grain boundaries as points of weakness were atypical alloy particles (enriched in some metals) are liberated from the alloy during striking creating incuse channels and pits.
- Foreign material such as minerals and gas bubbles incorporated during alloy and blank preparation create initial weak areas which then propagate defects from these point sources.

Conclusions

Problematic irregular shaped minor marks found in raised areas on the Melbourne Mint's larger proof coins are not just the result of post-strike damage nor due to die problems. Rather evidence presented here suggests that minor surface flakes, cracks, splits and pits primarily found on the highest regions of the larger coins are due to metallurgical issues. They originate during Q-metal alloy production and blank manufacture and are exacerbated during striking. Annealing, blanching and polishing will all affect blank surface quality. Due to their higher relief, surface stress increases in the larger coins because of more significant metal flow during contact with the dies. The thin, almost pure silver layer present on the blank's surface, despite its malleability, appears unable to compensate for the granularity and associated variable hardness underneath. Alloy inhomogeneity produces differential metal flow along grain boundaries resulting in the

minor marks observed. Their minor nature and ubiquitous prevalence, along with the need to timely fill the large number ordered would explain why the Melbourne Mint released them for sale.

Acknowledgements

The assistance of staff at the Federation University, Carbon Technology Research Centre in enabling access to the SEM is gratefully acknowledged.

Author

Vincent Verheyen's numismatic research is focused on the specimen/proof coinage made available by the Royal Mint to collectors between 1826 and 1963. He is particularly interested in the special strikes of those regular coins that would have circulated in Australia.

Ray Jewell Award Recipients

Silver Medal (for services to the NAA)

Raymond T N Jewell (posthumously), 1998
John Hope, 2003
W James Noble, 2004
John R Melville-Jones, 2011
Leslie J Carlisle, 2011
Walter R Bloom, 2013
Peter D Lane, 2015

Bronze Medal (for best article from two journals)

John Sharples. Vol 7, *Catalogue of Victorian trade tokens*.
Paul M Holland. Vol 9, *Master die types of Australian halfpennies*.
Peter Lane and Peter Fleig. Vol 12, *London private museums and their tokens*.
Richard A J O'Hair and Antoinette Tordesillas. Vol 13, *Aristocrats of crime*.
Peter Lane and Peter Fleig. Vol. 15 *William Henshall*.
Christopher Addams. Vol 18, *Counterfeiting on the Bermuda convict hulk* Dromedary.
Mark Stocker. Vol. 19, *The Empire Strikes Back.*
Helen Walpole. Vol 22, *The role of sporting medals in a sports museum.*
Peter Lane. Vol 23, *S. Schlank & Co Ltd: medal and badge makers of Adelaide 1887-1971.*

Paul Simon Memorial Award Honour Roll

The Paul Simon Award was established in 1977 by Mrs Jessica Simon of Ballarat, Victoria, in memory of her late husband, Paul Simon. The award is given for outstanding contribution to the Australian numismatic fraternity.

Special Silver Award: 1977, R T N (Ray) Jewell, Australia

Bronze Award

1.	1977, J Gartner	Vic
2.	1977, W J Mira	NSW
3.	1977, R M Greig	SA
4.	1977, R V McNeice	Tas
5.	1977, G D Dean	Qld
6.	1977, S J Wilson	WA
7.	(Allocated as the silver award to Ray Jewell)	
8.	1978, O C Fleming	NSW
9.	1978, M B Keain	SA
10.	1979, T M Hanley	NSW
11.	1979, A Ware	NSW
12.	1981, C J Tindall	SA
13.	1983, D G Sandeson	Qld
14.	1984, R L Henderson	Vic
15.	1985, L J Carlisle	NSW
16.	1986, H Powell	WA
17.	1987, N Harper	Tas
18.	1989, T W Holmes	Tas
19.	1990, D G Stevens	Qld
20.	1991, L T Pepperell	Vic
21.	1991, C Heath	Tas
22.	1993, C E Pitchfork	NSW
23.	1994, L P McCarthy	Qld
24.	1995, F S Seymour	SA
25.	1996, J Chapman	Vic
26.	1997, S McAskill	WA
27.	2001, D Junge	Vic
28.	2001, F Dobbins	NSW
29.	2001, G Farringdon-Davis	Vic
30.	2003, P Lane	SA
31.	2004, F Gare	WA
32.	2006, M C Williams	Qld
33.	2006, J A Hanley	NSW
34.	2007, G Shea	Qld
35.	2007, W R Bloom	WA
36.	2008, R Sell	NSW
37.	2008, G D Snelgrove	Qld
38.	2009, M P Vort-Ronald	SA
39.	2010, J W Cook	Qld
40.	2011, P Fleig	SA
41.	2013, B V Begley	Qld
42.	2014, S Appleton	Qld
43.	2015, T J Davidson	Qld
44.	2016, F J Robinson	Vic
45.	2017, B M Newman	SA

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