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# Perth Mint Proof Coins 1955–1963

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Perth Mint pre-decimal proof coins of 1955–1963 present a surprisingly complex area for detailed numismatic study. Unlike the earlier Perth Mint Proof Record coins analysed by John Sharples in Volume 8 of this Journal<sup>1</sup>, the majority of the 1955–63 proofs were specially struck for collectors under provision of the Commonwealth Treasury, with a premium of two shillings above face value charged per coin. From this revenue, the face value was paid into the Treasury and the premium went to the Mint.<sup>2</sup> The coins are perhaps the most distinctive pre-decimal proofs issued by any modern mint, with those of 1957–63 showing clear evidence of specially altered dies followed by individual post-strike hand processing to give them their characteristic high squared-off rims. They are unlike any previous proof coinage and, because of the labour intensive way they were produced, it seems unlikely that proofs like these will ever be made again. Careful study has revealed that besides their unique rim treatment and distinctive dies, the process by which they were made evolved significantly, with the greatest changes occurring on coins dated 1957, culminating in the impressive high rim proofs with frosted fields of the 1960s.

In contrast, pre-decimal bronze proof coins of Elizabeth II produced by other mints are typical modern proofs, that is, they are highly uniform, premium examples of

the coins produced for general circulation. These proofs are similar in appearance whether struck at the Melbourne Mint, Royal Mint in London (coins of Great Britain, New Zealand, Jersey, etc.) or Pretoria Mint (coins of South Africa). They exhibit standard rims and are very well struck (typically twice) using specially prepared dies with polished flans. While these are without doubt premium quality coins, they lack the unusual hand-worked character and distinctive die and rim treatment of the later pre-decimal Perth Mint proofs of 1957–63. Whilst purists may consider the Perth Mint proofs to be somewhat crude in appearance, it is precisely their unique and instantly recognisable character that I find so appealing.

This study of the Perth Mint proofs began in 2000 as a quick attempt to clear up a few details concerning rim treatment on 1957 Perth Mint proofs. It rapidly grew into a lengthy project which still seems incomplete, although by now over 180 Perth Mint proofs have been subjected to detailed microscopic examination, including the proofs in Museum Victoria which houses the collection of the former Melbourne Mint. Other more cursory inspections were made of Perth Mint proof coins in the archival collection of the Perth Mint itself, the British Royal Mint, the Powerhouse Museum in Sydney and the British Museum, as well as proofs in

dealers' stocks, auction lots and private collections. I was especially fortunate in being able to talk to key personnel who were working at the Perth Mint when the proofs were being produced. These included George Knight, who was in charge of both making and inspecting the proofs, and George Williams, former Deputy Master (officer-in-charge) of the Perth Mint and employee there since 1946. Whilst information from the published Royal Mint annual reports<sup>3</sup> has been especially valuable for this study, a search of numismatic literature dealing with 1955–63 proofs was of limited value. A sustained effort to locate detailed Perth Mint records relating to 1955–63 proof coin production and documentation of the arrangements with the Commonwealth Treasury was unsuccessful, although a few highly important details were discovered in the Perth Mint's die account book<sup>4</sup> and in recently uncovered correspondence to Syd Hagley.<sup>5</sup>

A brief summary of some of the key findings of the present study is given in the paragraph below. More detailed discussion follows in separate sections under the headings: Production Methods, Die Types, Overview of Proof Die Types, Analysis of Proof Die Types, Mintage Figures for Proofs, and, Insights and Conclusions. This presentation is designed to allow the non-specialist reader to skim over much of the detailed descriptions in the section on Analysis of Proof Die Types and instead examine some of the photographs to gain a feeling for the types of observable features that can be used to identify the different dies.

Perhaps the most surprising finding was that at least 69 different obverse and

reverse dies were prepared for striking the 1955-63 Perth Mint proofs. This very large number of dies gives an average of fewer than 500 coins struck per die. The proofs from these dies clearly show an evolution in the treatment of rims and fields, which began in 1957. By the 1960s the rims were strongly enhanced by a sharp step-up from the border beads, with the fields frosted from sandblasted dies. Post-strike processing is also a feature of these coins, with the rims typically finished by hand grinding to remove any extruded 'knife edge'. Occasionally, proofs have portions or all of the rims left un-ground revealing turning marks which show that the rims of the dies were typically cut down using a lathe to enhance their height on the coins. Furthermore, the coins exhibit many other minor but distinctive features which vary from die to die, making it possible to identify individual proof working dies by small flaws, die scratches and doubling on the coins. A detailed listing of these follows under Analysis of Proof Die Types.

Royal Mint annual reports reveal that Perth Mint proofs were generally struck quite late, usually during the year following the date on the coin and sometimes two years afterwards. In a few cases, die-linkages are observed where the *same* obverse die is paired with different reverse dies, including some with *different* dates. Such die-linkages can provide valuable numismatic insights, helping to clarify the difference between 'proof', 'selected' and 'specimen' coins referred to in the Royal Mint annual reports. For example, an obverse die linkage observed between 1954 and 1955 proof halfpennies demonstrates that proof coins struck for collectors (on which a premium was

charged) and specimen coins struck for official use were identical. Recently uncovered correspondence from the Perth Mint to Syd Hagley also directly addresses the issue of selected coins which are revealed to be proof coins with imperfections (struck from the same dies) which carried a smaller surcharge over face value.<sup>5</sup> This suggests that the mintage totals listed in standard catalogues for Perth Mint proofs are understated and should probably be revised upwards. A final surprise is that Perth Mint records show that five proof penny dies of 1955–56 were transferred to the coining department for striking circulation coinage and that during February and March of 1957 four of these were used in striking some 334,800 pennies dated 1956.

## PRODUCTION METHODS

Perth Mint proofs are markedly different from all other pre-decimal proofs such as those from the Melbourne Mint, as illustrated by the close-up photograph in Figure 1, which compare the reverse rims of 1961 Perth and 1956 Melbourne proof pennies. The Perth penny on the left has the characteristic enhanced high rim that has been ground smooth after striking and exhibits a textured or frosted field from sandblasting the die. In contrast, the Melbourne penny on the right has a standard rim with evidence of an extruded knife edge on the outside and a smooth (polished) field. While the thickness of the rims and the texturing of the fields may vary significantly from die to die due to differences in die preparation and post-strike processing, the Perth Mint proofs of 1957–63 are sufficiently distinct to be recognised at a glance by their characteristic rims.

The numismatic literature has had relatively little to say about how Perth Mint proofs were produced, being mostly focused on the characteristic appearance of the proofs from different years, especially their colour, and on investment advice.<sup>6–10</sup> However, the early use of ‘dressed up’ or ‘tarted up’ dies for Perth Mint proofs is mentioned<sup>6,8</sup>, as well as the fact that specially prepared proof-only dies were used beginning with Type II, 1957 Perth penny proofs struck in 1959.<sup>6,8,10</sup> Peter Hutchison also claims that to preserve their finish after striking, the Perth Mint spray-lacquered their proof coins, and briefly alludes to (but does not explain) the use of specially cut dies and sand-blasting.<sup>8</sup> Surprisingly, no direct mention is made of their unusual rim treatment.

Based on the present study, it is now possible to deduce important details about how the Perth Mint proofs were produced and how production methods evolved. It shows that two important innovations were developed at the Perth Mint and reveals how these were used to produce the characteristic features of the now ‘classic’ proofs of the late 1950s and early 1960s. The first was alteration of the dies used for proofs, by cutting down the rims so that the coins struck from them had significantly higher rims. This facilitated hand grinding of the rims on a flat abrasive surface to remove any extruded knife edge from the proof striking. The second innovation was sandblasting the fields or flat surface of the dies. This resulted in struck coins with a microscopically rough or frosted finish in the fields rather than the smooth mirror-like fields characteristic of typical modern proofs. Since the devices or raised elements of the design such as the portrait and

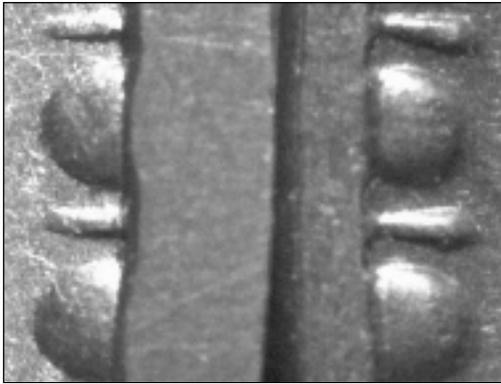


Figure 1. Close-up comparison of the ground rim of a 1961 Perth proof penny (left), and the standard rim of a 1956 Melbourne Mint proof penny (right).

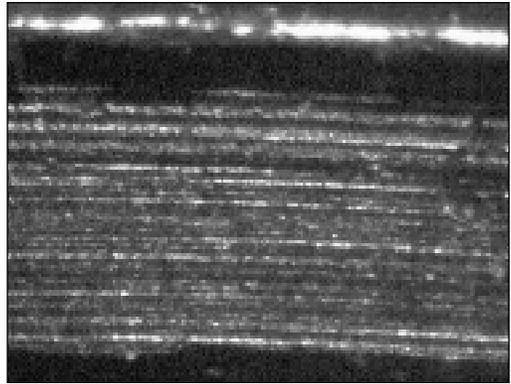


Figure 2. Close-up of the un-ground rim of a 1958 Perth Mint proof penny showing raised lines from turning down the rim of the die on a lathe.

legends were typically left bright, this resulted in a dramatic ‘reverse cameo’ effect on Perth Mint proofs.

The first clear sign of post-strike rim grinding appears on Perth Mint proofs of 1956, with deliberate enhancement of the rims from die alteration appearing on proofs dated 1957 and later. The use of hand grinding on a flat surface with abrasive (such as a ‘charged plate’) is apparent from variations between coins and measured variation in the thickness at the rim on individual coins. It also seems likely that a somewhat coarser abrasive may have been used initially, followed by a finer one for finishing. The primary purpose would have been to remove any extruded knife edge at the rim, which is also called ‘wire rim extrusion’, ‘knife rim’, ‘wire edge’, or ‘fin’. Such extrusion of metal is normally only seen on a portion of the rim and is common on proof coins due to the coins being double struck at high pressure. The use of rim grinding would improve the appearance of these coins by ‘squaring-off’ the rims.

Fortunately for the numismatist, rim grinding on Perth Mint proofs is sometimes incomplete, revealing numerous raised lines and other evidence showing how the rims on the dies were cut down to increase their height on the struck coins. In a few instances post-strike grinding was omitted altogether and all the underlying rim details remain clear, such as those shown in Figure 2. In this extreme close-up of the un-ground rim of a 1958 proof penny, a distinct pattern of raised lines can be seen below the extruded knife edge at the outside of the rim. These parallel lines clearly show that a lathe was used to turn down the rim of the die. Variability in the height and occasional positioning errors of the lines suggest that the tool was positioned by hand.

In a few cases the rims of dies were *filed down by hand*, as seen on the extreme close-up of the 1957 proof penny obverse in Figure 3. Here, instead of a series of parallel lathe-turned raised lines around the rim, an irregular pattern of straight raised

lines is visible on the rim where they were not obscured by later hand grinding. That these are from the die itself is demonstrated by their identical locations on more than one proof coin. This is confirmed by the presence of a pair of fine (crossed) raised file lines in the beading (not shown) which are apparently accidental marks left on the surface of the die when the file 'slipped' while filing down the rims.

Where such details can be observed on Perth Mint proofs, the rim will be described as 'turned' rim when a pattern of raised lines parallel to the rim is seen (as in Figure 2), 'irregular-turned' rim when the lines from turning are curved but sometimes cross or otherwise exhibit confusion, and 'filed' rim when there are numerous straight lines which cross (as in Figure 3). The height of the rims also varies significantly. Beginning with coins dated 1957 the height of the rims was enhanced by cutting them down on the proof dies. This presumably made post-strike grinding easier and enhanced the appearance of the coins. These will be referred to as 'enhanced' rims. On a few 1957 dated proofs and most later ones the height of the rims was substantially increased, producing a sharp 'step down' from the rim to the border beading. These will be termed 'high' rims.

Some confirming measurements have been made on Perth Mint proofs. This included weighing some 41 penny proofs of 1957–63 on an analytical balance and combining their weights with the recorded weights of 16 proof pennies from Museum Victoria. Results for these 57 coins show an average weight of 9.313gm or about 1.5% less than the nominal 9.450gm weight for

standard penny planchets. This result is consistent with a loss of mass from rim grinding. Measurements were also made of the thickness of Perth Mint pennies at the rim. Measurements on 50 uncirculated 1964 Perth Mint pennies gave an average thickness of 1.83mm. Results for high rim penny proofs of 1958–63 showed an average thickness at the rim of 1.90mm (after grinding), or about 4% greater.

Because proofs coins are typically struck twice at higher pressures any small flaws on the surface of the dies will be especially apparent. A comparison of Australian pre-decimal bronze coins struck for circulation shows that generally such minor flaws and surface irregularities seem to be more common on Perth Mint coins than those from Melbourne, and are virtually absent on the 1951-PL coins struck in the UK. It now appears that the Perth Mint experimented with texturing the surface of the dies to hide these flaws by sandblasting the fields of the dies for some 1957 proofs, resulting in frosted fields on the coins. The origin of this approach is revealed in recently uncovered correspondence from the Perth Mint to Syd Hagley, which states that the early issues of 1957 proofs 'were rather unpopular with dealers in the U.S.A. as they were accused with selling polished uncirculated coins', and that consequently the Perth Mint decided to switch to a matte finish for these coins.<sup>5</sup>

Previous matte finishes on proof coins were produced only *after* the coin had been struck, usually by 'pickling' the coin in acid or by sandblasting it. Under high magnification the resulting matte surface would exhibit minute pits in the surface of

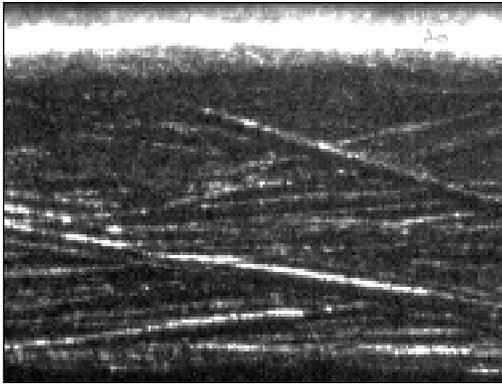


Figure 3. Rim of a 1957 Perth Mint proof penny showing raised file marks.

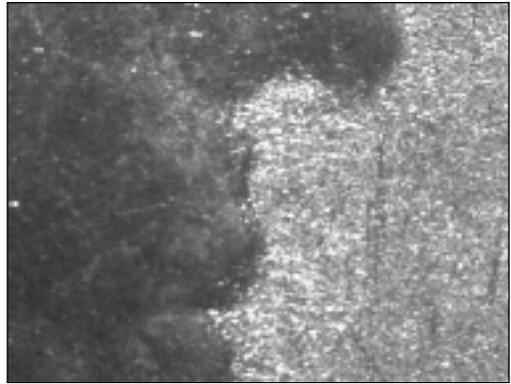


Figure 4. Tiny raised dots from sandblasting the obverse die of a 1957 proof penny.

the coin. This contrasts with the procedure employed at the Perth Mint where it was the dies that were subjected to sand (or grit) blasting, producing pitting on the dies and thus tiny raised dots on the surface of the struck coins. This is clearly revealed by microscopic examination of the coins, especially where particles hit outside their intended target area (as seen in Figure 4). A search of the literature and inquiries made of leading numismatists and dealers did not reveal any previous use of frosted fields on proof coins before those produced at the Perth Mint.

Examination of Perth Mint proofs also suggests that a wire brush was used in cleaning up the dies after sandblasting, leaving behind occasional arc scratch marks on the surface of the dies or scratch lines radiating outward from the devices. Since these are scratches, they appear on the coins as raised lines making it easy to distinguish them from post-strike damage. An example of such raised die scratches is shown in Figure 5 which features a portion

of the numeral 9 in the date of a 1961 proof penny. Because the proofs seem to have been developed for unaided vision, there appears to have been no special effort to avoid these marks as the use of frosted fields tended to visually obscure their presence. They occur on proofs from 1957 to 1963. However, under a microscope with the correct lighting they are readily seen and provide a wonderfully detailed ‘fingerprint’ for the identification of individual proof dies.

It seems that the Perth Mint officials were satisfied with the results of their experiments in enhancing the rims and sandblasting the fields. After a search of the archives a single colour slide of Perth Mint pre-decimal proofs was found with the caption reading: ‘Two pennies November 1958’.<sup>4</sup> The image shows a pair of 1957 proof pennies struck from dies with sandblasted fields. That this slide was specially prepared suggests that the experiments were considered a success, and this interpretation is supported by the fact that

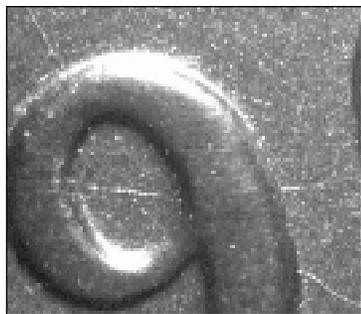


Figure 5. Raised die scratches on the reverse of a 1961 proof penny.



Figure 6. The colour slide of two proof pennies from the Perth Mint archives.

Perth Mint proofs with frosted fields became the standard type and were produced in Perth until the end of 1963 (see Figure 6).

Whether any other types of post-strike processing were employed on Perth Mint proofs of 1955-63 has been an open question. For example, it has been suggested that the Perth Mint spray-lacquered their proofs after striking, to preserve their finish.<sup>8</sup> However, microscopic examination of proofs in the collection of Museum Victoria (including known Proof Record coins from the Melbourne Mint collection) did not show any obvious signs of lacquered coins. This, together with an absence of such lacquering on proofs in my own reference collection, would seem to rule out the possibility that the Perth Mint routinely used this on their proofs. Since some Perth Mint proofs are known to be lacquered, it seems probable that these were privately done after leaving the mint. The possibility of post-strike polishing of the devices (portrait, legend, etc.) of proofs by the Perth Mint can also be considered.

Again, if this were routinely used by the Perth Mint one might expect all coins of a given year or type to show signs of post-strike polishing. Since this does not appear to be the case it seems unlikely that this was done at the mint.

### Die Types

Numismatic analysis shows that all dies for the Perth Mint proofs of 1955-1963 were derived from the same master die types used for circulation coinage, and furthermore, that they were prepared using the same tools that were used to produce ordinary working dies. In the case of the reverse dies, these were fully dated and mintmarked punches. Any thorough understanding of Perth Mint proofs logically begins by considering the source of the tools used to fabricate them.

Production of modern coinage dies, whether for proofs or circulation coins, begins with master tools such as the master dies and punches sent to Perth from the Royal Mint in London. The master tools

themselves are too valuable to be used for striking coins, but once hardened they can be used to make derivative tools. For example, a reverse master die can be used to make a punch (carrying a complete copy of the design as a positive image), which, with the final date numeral(s) ground off, can then be used to prepare an undated copy of the master die. The final date numeral(s) and dot mintmark can then be added to this copy of the master die using hand punches. The result is a fully dated and mintmarked derivative master die which can be used to make dated working punches for routinely producing dies for circulating as well as proof coins. This sequence of tool production shows how a nearly unlimited number of coins derived from the same master die can be produced over many years, while allowing for periodic changes to the date.

Table 1 shows the origin of halfpenny master tools, supplied by the Royal Mint in London to Perth, which were involved in the production of proof dies. The date the tool was prepared in London is shown, followed by a brief description of the tool, and the obverse or reverse type as defined in volume 9 of this Journal.<sup>11</sup> In the case of Perth Mint proof halfpennies, two obverse and two reverse die types were employed.

The Reverse B master tools, from which the 1955 halfpenny dies were derived, were among the first to be used during the transition to working die production at the Perth Mint in 1951. Unlike the 1951 halfpenny dies supplied by Melbourne, these lacked the mintmark dot after the Y of HALFPENNY.<sup>11</sup> This lack of a mintmark

dot on the dies prepared in Perth seems likely to have been accidental due to the fact that the fully dated 1951 tools supplied by the Royal Mint came without the dot. While a mintmark dot was added to the halfpenny dies produced in Perth, after the A of AUSTRALIA for 1952–53 and after the Y of HALFPENNY for 1954, it is a mystery why it was again omitted on 1955 halfpennies. An unusual doubling of the first numeral 5 in the date (see Figure 7) shows us that a single 1955 dated reverse punch was used to produce the dies for both circulation and proof coinage.

The newer Obverse 6 type employed for the 1960–63 Perth Mint halfpennies was developed directly from the same reduction punch used for British halfpennies and adds F:D: to the legend. For the 1960–62 coins the original Reverse B type can be traced back to the reduction punch of 1939 which was used for all proof and circulation halfpennies minted in Australia from 1940 to 1962. There is an interesting story regarding the new Reverse E halfpenny tools supplied to Perth in late 1962. Some dissatisfaction with halfpenny Reverse B, which was now being paired with Obverse 6, was expressed in a letter of 8 June 1962 from the Deputy Master of the Perth Mint to the Commonwealth Treasury:

*The 1951 reverse halfpenny punch was probably designed for a George VI obverse and would not give an impression worthy of the new obverse. I would therefore be obliged if you could obtain a matching reverse halfpenny punch and matrix.<sup>4</sup>*

Date of Tool	Notes	Type
21 Feb 1951	'Kangaroo' reverse preparatory punch from spare soft punch of master die of 10 January 1939. Punch finished with numerals cut away to alter date to read 19__.	
14 Mar 1951	Reverse punch from master die of 14 March. Sent to Perth, April	Rev B
30 Mar 1951	Reverse master die dated 1951 from punch of 21 February. Sent to Perth, April 1951.	Rev B
6 July 1951	Reverse master die from reduction punch of March 30 dated 1951, with PL added by hand.	Rev B
23 July 1951	Reverse prep. punch 'B' (PL) from master die of 6 July.	Rev B
21 Apr 1953	Obverse reduction punch in 5/8 relief from Australian modified Int. Model of 19 March, sized for halfpenny	
5 June 1953	Obverse master die (P) from punch of 21 April, beaded and letters deepened.	Obv 5
18 June 1953	Obverse punch 'A' (P) from master die (P). Sent to Australia.	Obv 5
30 May 1956	Obverse reduction punch of 19 November 1953, revised inscription master die from U.K. Beaded and finished. Sent to Australia June 1956.	Obv 6
12 June 1956	Obverse punch 'A' from master die of 30 May. Sent to Australia June 1956.	Obv 6
22 Oct 1962	Reverse master die from 23 July 1951 punch 'B' with beads ground off. Dated 196_, re-beaded and finished. Sent to Australia, October 1962.	Rev E
26 Oct 1962	Reverse working punch dated 196_ from master die of 22 October. Sent to Australia, October 1962.	Rev E
26 Oct 1962	Obverse punch 'B' from 30 May 1956 master die finished. Sent to Australia, October 1962	Obv 6

Table 1. Australian halfpenny master tools prepared at the Royal Mint, London from 1951 to 1962.

The Royal Mint's response to this request was to produce the Reverse E tools shown in Table 1. It should be pointed out that this was not *really* a new reverse. They had taken one of the old Reverse B type halfpenny punches dated 1951 with the PL mintmark, ground off the date, border beads and mintmark, and used it to produce a new master die (matrix). The *new* Reverse E type die of 22 October 1962 was thus simply a re-beaded version of the *old* die type, re-dated 196\_, and used for both proof and circulation halfpennies dated 1963. This die type can be distinguished from Reverse B by differences in the position of the border beads.<sup>11</sup> There is no

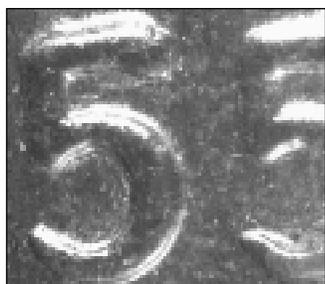


Figure 7. Unusual doubling of the first numeral 5 in the date of a 1955 proof halfpenny.



(a)



(b)

Figure 8. 1955 Perth Mint Penny types showing (a) the 'close 55' and (b) the 'wide 55' date numerals.

indication in surviving records that the Perth Mint realised how this *new* reverse die type was produced or that there was any dissatisfaction with it.

Table 2 shows the origin of penny master tools sent by the Royal Mint to Perth where they were involved in the production of proof dies. This provides the date the tool was prepared in London, a brief description of the tool, and the obverse or reverse die type using a *revised labelling* system analogous to that used for the halfpennies in Table 1. This revised system employs consecutive numbering of obverse die types and consecutive letters for the reverse die types beginning with George VI pennies. For Elizabeth II obverses this means adding 5 to the previous number, and for the reverses the letter should be increased by three (see Appendix I for details).

It can be seen from Table 2 that the Reverse G (formerly Rev D) master tools from which the 1955 penny dies were derived came from the 1951 dated reverse master die with PL mintmark. Interestingly,

this same master die was originally intended for Perth but was instead 'borrowed' by the Royal Mint for the PL mintmarked coinage, as shown in a letter of 4 September 1951, stating that: 'we had to use the 1d matrix then being made to supply to you, for our own purposes...' (see volume 10, this Journal, for more details).<sup>12</sup> For 1955 dated penny dies, two different fully dated Reverse G punches were prepared in Perth, resulting in circulation coins with 'close 55' date numerals (Dean P55B,<sup>13</sup> Skinner B67A,<sup>14</sup> Clarke 121a<sup>15</sup>), as well as the more common 'wide 55' date numerals (Dean P55C, Skinner B67, Clarke 121) shown in Figure 8. Evidence suggests that after initial use, the close 55 type was later replaced by the wide 55 type which has the date numerals more evenly spaced. The existence of coins with different die cracks on each die type demonstrates that these types were created from dated and mintmarked punches.

A detailed study of 1955–56 coinage at the Perth Mint (in volume 12 of this Journal) shows the first batch of Obverse 9

<b>Date of Tool</b>	<b>Notes</b>	<b>Type</b>
7 June 1951	Reverse master die dated 1951 with PL mintmark from de-dated reduction punch of 13 October 1937. Date completed, beading and PL added. Transferred to Royal Mint collection, 1964.	Rev G
28 June 1951	Reverse working punch 'B' dated 1951 as above with PL removed. Sent to Perth.	Rev G
27 Apr 1953	Reverse reduction punch dated 19__ in 3/8 relief to facilitate coining with new obverse. Last two figures of date removed. Transferred to Royal Mint collection, 1964.	
5 Sep 1955	Reverse master die dated 1956 from reduction punch of 27 April 1953. Dated completed and beading added. Intended for Perth but not sent as form unsatisfactory.	Rev I
16 Sep 1955	Reverse working punch 'A' dated 1956 from master die of 5 September. Sent to Perth, October 1955.	Rev I
21 Sep 1955	Obverse master die from United Kingdom reduction punch of 7 December 1953, but not considered suitable for Perth.	Obv 9
3 Oct 1955	Obverse working punch 'B' from master die of 21 September. Sent to Perth, October 1955.	Obv 9
27 Oct 1955	Obverse prep punch from master die of 21 September. Edge lowered to give flatter profile.	Obv 9
27 Oct 1955	Reverse prep punch dated 1956 from master die of 5 September.	Rev I
9 Nov 1955	Reverse master die dated 1956 from prep punch of 27 October and therefore already beaded. Sent to Perth, December 1955.	Rev I
9 Nov 1955	Obverse master die from prep punch of 27 October and therefore already beaded. Sent to Perth, December 1955.	Obv 9
28 Nov 1955	Reverse working punch 'A' dated 1956 from master die of 9 November. Sent to Perth, December 1955.	Rev I
29 Nov 1955	Obverse working punch 'A' from master die of 9 November. Sent to Perth, December 1955.	Obv 9
27 June 1962	Obverse working punch 'B' from master die of 9 November 1955. Sent to Perth.	Obv 9
27 June 1962	Reverse working punch 'B' from master die of 9 November 1955. De-dated to 19__ and sent to Perth.	Rev I

Table 2. Australian penny master tools prepared at Royal Mint London from 1951 to 1962.

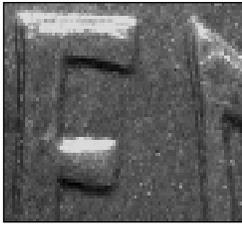


Figure 9. Wide date reverse 1955 Perth Mint circulating penny showing doubling of the word PENNY.



(a)



(b)



(c)

Figure 10. Perth Mint circulating 1957 penny reverse types showing (a) 'wide date' (b) 'thick 7' and (c) 'thin 7'.

dies was not made until 1 March 1956, and that this new obverse was used for striking only a few wide 55 type pennies in April and May before the transition to 1956 dated pennies.<sup>16</sup> This implies that the more common wide 55 type reverse had become the preferred type. But 1955 proof pennies with Obverse 9 are all of the close 55 type. These proofs were apparently struck around the time that regular coinage of 1955 pennies ceased in May. This is shown by a letter to SV Hagley from the Perth mint dated 1 June 1956, which states that the 1955 dated proofs ordered by him in February were 'now ready for delivery.'<sup>12</sup> Why the close 55 type reverse die was selected for these proofs when the wide 55 type was being used for circulation coinage is not clear. But all wide 55 type pennies are observed with pronounced doubling of the letters PENNY (see Figure 9), doubling which must have come from the fully dated punch itself, as many of these pennies have die cracks in different places. Proof coins struck from dies made with this punch would have shown this doubling clearly. Because of this the Perth Mint may have chosen the close 55 type for proof coins, even though the date

numerals are less uniformly spaced. It should be pointed out, however, that the close 55 type itself exhibits less pronounced doubling just below the top bar of the numerals 55 (see Figure 8a).

The new Reverse I (formerly Rev F) 1956 tools from the Royal Mint arrived already dated and the punches made from these were therefore uniform and resulted in proof coins without reverse variations. While a few 1956 circulation pennies were struck using the earlier Melbourne type Obverse 8 (formerly Obverse 3), the 1956 Perth proofs shared the same 9+I pairing of die types used for the majority of the pennies struck for circulation.

For 1957, three dated reverse punches were prepared (see Figure 10). The first of these was derived from Reverse G tools (the same type used for 1955) and is distinguishable by the P of PENNY being aligned between border beads and wide date numerals (Dean P57C, Clarke 124b). The other two punches dated 1957 are both derived from Reverse I (with the P of PENNY in line with a border bead). One of these, the punch for the more commonly occurring reverse, and the punch also used

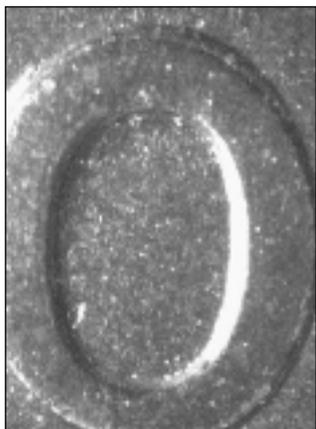


Figure 11. Doubled final date numeral on a Perth Mint 1960 proof penny reverse.

for proof dies dated 1957, has a 'thick 7' and the mintmark dot above and slightly to the right of a border bead (Dean P57A, Clarke 124). The scarcer of these Reverse I types has a 'thin 7', with the mintmark dot aligned between beads and positioned farther from the base of the Y (Dean P57B, Clarke 124a). Obverse 9 was used for 1957 dated proof and circulation coinage.

The Penny reverse dies for 1958–63 were all prepared using Reverse I tools having the same date numeral type and spacing as for circulation coins. For 1960, a dated punch with a doubled final date numeral '0' was used for preparing the dies for both proof and many circulation coins, as shown in the close-up in Figure 11. As for the halfpennies, the Royal Mint sent additional master tools to Perth in 1962. These included a back-up set of master punches prepared from the original die in 1955 and re-dated to 196\_. Obverse 9 was used for the proof and circulation pennies from 1958 to 1963; these therefore all exhibit the 9+I die pairing.

## Overview of Proof Die Types

At least 69 dies were used for striking Perth Mint proofs of 1955–1963, as inferred by two short entries in the Perth Mint's die account book.<sup>4</sup> The first entry shows that 3 obverse and 2 reverse penny proof dies (dated 1955 and 1956) were transferred on 15 Jan 1957 to the coining department for striking circulation coinage. Because 1955 proof halfpennies were actually struck in 1956 and no halfpence dated 1956–59 were struck at Perth, left over proof dies would not have been transferred since they would have been obsolete due to the addition of F:D: to the obverse legend in 1959. Beginning with 1957 dated Perth Mint penny proofs, dies were modified by cutting down the rims, thus making these and any subsequent dies unsuitable for striking circulation coins. The second entry shows that '64 Various Dies used by G. Knight for Proof Coins' were destroyed on 11 May 1964, along with some 1,050 penny and 399 halfpenny dies (see Figure 12). The care with which even obsolete dies were controlled by the Perth Mint is shown in the final line, which lists the members of the escort party to Hadfields (where the dies were presumably melted down) as Holder, Drake and Osbourne, with a final notation: 'Destroyed', signed by HG Holder, who was Superintendent of the Perth Mint. The other members of the party were also senior staff: RC Drake, Chief Technical Officer, and AF Osbourne, Second Foreman of Melting and Refining.<sup>4,17</sup> Another important feature of this entry is that it clearly documents that George Knight was in charge of producing the Perth Mint

The image shows a handwritten entry in a ledger titled 'Perth Mint Die Account book May 1964'. The entry is organized into columns and rows, with some text written in cursive. The columns are labeled 'U', 'B', 'O', and 'R'. The entry describes the destruction of 64 proof dies used by George Knight.

U	B	O	R
64	1957	1958	1959
Destruction of 64 proof dies used by George Knight			

Figure 12. Perth Mint Die Account book May 1964 entry recording destruction of 64 proof dies used by George Knight.

proofs<sup>18</sup> He is shown many years later (with the author) in Figure 13 during a July 2000 visit arranged by Anthea Harris.

The unusually large number of dies employed for striking relatively few proofs led me to carefully examine some Perth Mint proofs using a stereo microscope to see if it might be possible to unambiguously distinguish and classify different proof working dies. Once this was confirmed by direct observation, a detailed numismatic survey of Perth Mint proof dies was initiated. Some compelling information emerged early on, showing, for example, an obverse die linkage between certain 1957 and 1958 penny proofs. Furthermore, the discovery of a progression of die states of these coins made it possible to determine that some of these proofs were struck in *reverse date order* allowing unambiguous determination that certain 1957 proofs had actually been struck

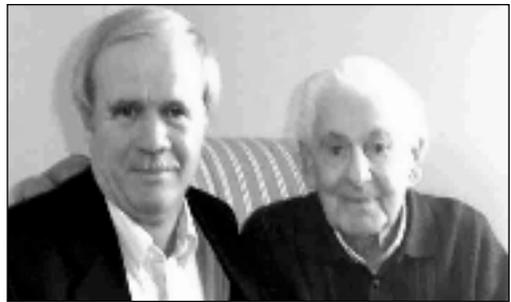


Figure 13. George Knight (right) with the author during a visit to Perth in July 2000.

during 1959. The striking of coins from dies in reverse date order is highly unusual. The author was especially attuned to this having previously discovered such a pair of die-linked British pennies dated 1860 and 1861.<sup>19</sup> Other obverse die-linkages between proof coins with different dates were also found, including a linkage between 1958 and 1959 dated penny reverses. Perhaps the most important of these die-linkages was one showing that the same obverse die was used for both 1954 and 1955 proof halfpennies, clearly establishing that the *same dies* were used for both ‘proof’ and official ‘specimen’ coins.

With so many different dies used, embarking on a survey of Perth Mint proof dies presented a daunting task. Fortunately, the condition of the proof coins themselves was not paramount, and toned, spotted or otherwise impaired coins were suitable for this research, helping to make it feasible to amass a reasonable number for study. Furthermore it later became possible to enlist the help of several other numismatists together with their collections for detailed microscopic examination, greatly expanding

the number of coins included in the survey of proof dies.

In order to tabulate the results of this survey it was necessary to devise an approach for labelling the individual obverse and reverse dies used to strike Perth Mint proofs. For this, labels for obverse dies for each year and denomination begin with a consecutive number and the reverse dies begin with an upper case letter. This is followed by another letter to indicate the denomination, using P for penny and H for halfpenny. A two digit date follows, representing the earliest date that particular die is observed on a proof coin. It should be noted that sometimes obverse dies occur on coins of more than one date, in which case the earlier date is always used for labelling the die. In other instances where a die has been used for striking proofs and is then known to have been modified to a distinctively *different* die state (or stage) and used again, a star is appended to indicate that different die states are known to exist for that die. For example, Obverse 8P57\* is the eighth obverse die observed for 1957 proof pennies, and one which is known to have been modified during use, in this case, by additional sand-blasting of the fields. To avoid confusion for the reader (while still providing details for the specialist), where different die states are known and considered to be significant the details of these die states are listed separately in Appendix II. Here, a number in parentheses is added to indicate the deduced order of die state progression, such as 8P57\*(2). While the listing order of different proof dies within a given year is necessarily somewhat arbitrary, an effort has been

made to follow a logical progression. For example, when an obverse die-linkage to another year exists, the coin is listed next to that year. Where the same reverse die is used with several different obverse dies, these are clustered together since it is likely that the coins were produced during the same period. Finally, during years where there is a clear evolution in style, such as altering dies with sandblasting in 1957, an effort is made to order the dies appropriately.

It should be noted that distinguishing individual proof working dies from different die states of the same die can be difficult, and depends entirely on the presence of observable features on the coins. Some features provide unambiguous identification of an individual working die, such as distinctive die cracks (rare on proofs) or doubled dies where the separations are wide enough for ‘split’ serifs to be observed. Other very useful features include accidental cuts or damage near the edge of the die in the border beading that have occurred while cutting down the rims on proof dies, and flaws in the field of the die which show up as raised lines or lumps. While raised die scratch marks on the proofs provide numerous and distinctive markers that can be readily observed in the identical position on many coins, these markers can be obscured if the die is taken out of service and re-sandblasted. Consequently, in a few cases there may be uncertainty as to whether a described obverse or reverse die in these listings is a truly separate die or is merely a distinctly different state of the same die; where these are separately listed, mention will be made of possible ambiguity. Fortunately, it has

<b>Date</b>	<b>Die Pairing</b>	<b>Coins Surveyed</b>
<b>1955</b>	1P55 + AP55	1
	2P55 + AP55	2
	/	
<b>1956</b>	2P55 + AP56	
	1P56 + AP56	3
<b>1957</b>	1P57 + AP57	7
	2P57 + BP57	3
	3P57 + CP57	2
	4P57 + DP57	6
	5P57 + EP57	1
	6P57 + FP57*	2
	7P57* + FP57*	5
	8P57* + FP57*	9
	/	
<b>1958</b>	8P57* + AP58	2
	1P58 + BP58	6
	2P58 + CP58	1
	2P58 + DP58	1
	3P58 + DP58	11
	/	
<b>1959</b>	3P58 + AP59*	3
	1P59 + AP59*	5
	2P59 + AP59*	15
<b>1960</b>	1P60 + AP60	2
	2P60 + BP60	2
	3P60 + BP60	3
	4P60 + CP60	1
<b>1961</b>	1P61 + AP61	5
	2P61 + BP61	5
<b>1962</b>	1P62 + AP62	3
	2P62 + BP62	2
	3P62 + CP62	3
<b>1963</b>	1P63* + AP63	9
	2P63 + BP63	2
	3P63 + CP63	1
	4P63 + DP63	1

Table 3. Perth Mint proof penny die pairings

been possible to examine at least two proofs for confirmation of listed die types in all but a few cases. Where only a single coin displaying a particular ‘type’ was available for study, the ‘strength’ of the die

markers and other numismatic features were carefully considered. Such die types are included in the listing for the sake of completeness, but with comment.

Table 3 presents the survey results for Perth mint proof penny dies using the die labelling system described above. Detailed identification information is given in the section following. Table 3 shows the date on the coin, the pairing of proof dies using the code described above, and the number of coins with each pairing observed. Most noticeable is the large number of different dies and die pairings that were used in striking Perth Mint proof pennies, especially in light of the low mintages. Obverse die linkages between different years are indicated by a vertical line. Such links are shown for proofs of 1955 and 1956, 1957 and 1958, and 1958 and 1959. Reverse die linkages are seen between proof pennies of the same year in 1955, 1956, 1957, 1958, 1959 and 1960, and an obverse die linkage in 1958. It should be noted that while the 2P55 + AP56 die pairing was not formally included in the survey coins, it has been observed in both the collection at Museum Victoria and in dealers’ stock and so is listed here to illustrate the linkage.

Results for proof halfpennies are presented in Table 4. Generally, these are less complex than the pennies since none were struck during the years 1956–59 when extensive experimentation with proof dies occurred. However, the obverse die-linkage between 1954 Proof Record coins and 1955 halfpenny proofs is especially important since it establishes a direct link between ‘proof’ and ‘specimen’ coins. Reverse die-linkages are known for

<b>Date</b>	<b>Die Pairing</b>	<b>Coins Surveyed</b>
<b>1955</b>	1H54 + AH55	2
	1H55 + AH55	1
<b>1960</b>	1H60 + AH60	7
	2H60 + BH60	1
	3P60 + CH60	2
<b>1961</b>	1H61 + AH61	2
	2H61 + BH61	2
	3H61 + BH61	2
	4H61 + BH61	2
<b>1962</b>	1H62 + AH62	6
<b>1963</b>	1H63 + AH63	5
	2H63# + AH63#	4

Table 4. Perth Mint proof halfpenny die pairings

1955, 1961 and 1963 halfpennies. The final listed die pairing is interesting in that the rims are un-ground on *all* the coins observed so far—indicated by the symbol #.

### Analysis of Proof Die Types

This section presents detailed analyses of the individual 1955–1963 Perth Mint proof die types identified in this study. Only die types which have been actually observed are listed here, using the labelling system described above. After each date sub-heading a shorthand summary of the known die pairings for that year is given in parentheses. Die types can be assumed to be from the same year unless otherwise indicated by a superscript (e.g. 3<sup>58</sup>+A). Die types known to occur with different die states are indicated by an asterisk. A short introduction to the proof coins of that year is then given, followed by a brief description of each proof die type which includes reference to a close-up photo-

graph highlighting a useful ‘die marker’ identifying feature.

This is followed by a listing of proof die types that have been observed in museum collections. For example, for Museum Victoria coins the code for the proof die type or pairing is followed by the Museum Victoria accession (identification) number, the source of the coin, the weight in grams, and any other relevant comment. For example, a 1958 proof penny is listed as: 8P57\*, Museum Victoria NU4871, from Melbourne Mint collection, 9.272gm. The weight is not only useful in identifying a coin but also gives an indication of its loss of mass due to rim grinding. Perth Mint proof die types observed in the collections at the Powerhouse Museum in Sydney and the British Museum are identified as such, but unfortunately it was not clear which of these coins were Proof Record coins. Regarding the descriptions and accompanying photographs, it should be noted that *all the features of interest are raised lines, dots, lumps, etc.* (that is, in relief) unless otherwise stated. Also, please note that in all of the close-up photographs in Figures 14 to 27, *obverse die types begin with a numeral, reverse types with a letter.*

### 1954 Halfpenny Obverse Die Types (Proof Record Coins Only)

The 1954 halfpenny proof obverse die type is included here because the die was also used for striking the 1955 halfpenny proofs. All three Museum Victoria 1954 proof halfpennies were from this same obverse die, as shown in Figure 14. Two of these came from the Melbourne Mint’s collection, while the origin of the third is not known. That this same obverse die was

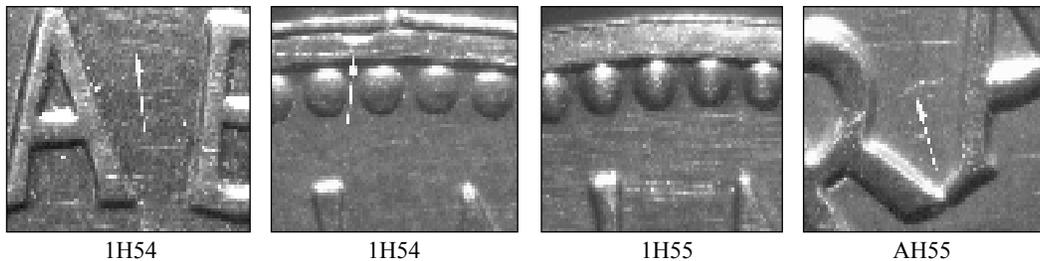


Figure 14. Close-up images of die markers for 1955 proof halfpennies (see text below).

also used for 1955 collector proof coins establishes a clear link between Proof Record coins struck for official use and proof coins struck for collectors.

**Obv 1H54** – Standard un-ground rims, smooth fields, identified by a curved line between AB of ELIZABETH, an indentation at the rim above I of REGINA, and a curved line at the top right of A of REGINA.

**1H54**, Museum Victoria NU4912, from Melbourne Mint collection.

**1H54**, Museum Victoria NU4913, from Melbourne Mint collection.

**1H54**, Museum Victoria NU5438, origin unknown.

### 1955 Halfpenny (1<sup>54</sup>+A, 1+A)

Proof halfpennies dated 1955 came from the same obverse die used for the 1954 Proof Record coins, as described above. Descriptions are given below, with close-up images shown in Figure 14.

**Obv 1H54** – (same as 1954 above). Standard un-ground rims, smooth fields, identified by a curved line between AB of ELIZABETH, an indentation at the rim above I of REGINA, and a curved line at the top right of A of REGINA.

**Obv 1H55** – Standard un-ground rims,

smooth fields, *no* clear die marks, and *no* indentation at rim above I of REGINA.

**Rev AH55** – Standard un-ground rims, smooth fields, identifiable by a thin line between RA of AUSTRALIA.

**1H54**, Museum Victoria NU5914, from Melbourne Mint collection, 5.604gm.

### 1955 Penny (1+A, 2+A)

The 1955 dated proof pennies are now known to have been struck in 1956 using the newer Perth Obverse 9 die used for most 1956 pennies, coupled with the scarce 1955 Reverse G die with closely spaced date numerals 55. Three collector coins were observed to be from two different obverse dies and the one reverse die. In the Museum Victoria collection a 1955 proof coin and two 1956 Proof Record coins from the Melbourne mint collection are from Obverse 2P55 (see Figure 15).

**Obv 1P55** – Standard un-ground rims, smooth fields, identifiable by a line in the beads above RA of GRATIA.

**Obv 2P55** – Standard un-ground rims, smooth fields, identifiable by a slanting line from G of REG;; also faint lines from the upper left of the letters R and E.

**Rev AP55** – Standard un-ground rims, smooth fields, identifiable by a line

between the beads below the kangaroo's tail and a thin line above; also lumps in the triangle of the last A of AUSTRALIA.

**2P55**, Museum Victoria NU41490, origin unknown, 9.379gm.

### 1956 Penny (2<sup>55</sup>+A, 1+A)

The 1956 proof pennies were struck in 1956 using Obverse 9 die paired with the new Reverse I die, which was supplied already dated 1956 from the Royal Mint in London. These coins were struck from standard dies but show evidence of post-strike rim grinding. The three collector coins in the survey were from the same dies, as shown in Table 3. Both 1956 Museum Victoria Proof Record coins from the Melbourne Mint collection were of the Obverse 2P55 type, and additional examples of this obverse have been observed on 1956 proofs in dealers' stocks.

One of the greatest surprises of this study was finding information in Perth Mint records that five penny dies used for the coinage of 1955 and 1956 proofs were later transferred to the coining department in January 1957 for use on circulation coinage. The Perth Mint's die account book shows an entry on Tuesday, January 15, 1957 for three obverse and two reverse penny dies described as 'for Specimen pieces – reverses 1955 + 1956'.<sup>4</sup> These are not labelled by numbers as were regular circulation dies, but were simply listed as 'Specimen'. Of the five dies, four were used for coining some 334,800 pennies dated 1956. The fifth, a reverse die dated 1955, was already obsolete and there is no sign it was used. Their subsequent use for striking circulation coinage confirms that these 'specimen' dies conformed to standard dies.

The first use of these dies for circulation coinage was for a specimen obverse paired with reverse die #556 on Friday, February 1, 1957. This pair of dies was used to strike some 115,200 pennies on coining press #5, with a notation showing the dies were removed when 'worn'. Another obverse specimen die was used on Wednesday, February 27<sup>th</sup> paired with reverse die #555. These dies were used for 108,000 pennies on coining press #4. On Thursday, March 7<sup>th</sup> the two remaining specimen dies were paired for striking 1956 dated pennies on press #4 with 111,600 coins struck. Thus, out of a total mintage of 12,121,200 Perth Mint pennies dated 1956,<sup>14</sup> 334,800 or 2.76% were struck using specimen obverse dies, and 111,600 or 0.92% using both obverse and reverse specimen dies. Beginning the following week on March 15<sup>th</sup>, production of 1957 dated pennies for circulation began. Close-up images of 1956 proof pennies are included in Figure 15.

**Obv 2P55** – Standard ground rims, smooth fields, otherwise same as 1955 die type above, ie: a slanting line from G of REG; also faint lines from the upper left of the letters R and E.

**Obv 1P56** – Standard ground rims, smooth fields, identifiable by small lumps after the letter A of GRATIA.

**Rev AP56** – Standard ground rims, smooth fields, identifiable by a vertical line at the top of R of AUSTRALIA, plus splitting of the bottom serif of E of PENNY.

**2P55**, Museum Victoria NU4865, from Melbourne Mint collection, 9.361gm.

**2P55**, Museum Victoria NU4866, from Melbourne Mint collection, 9.246gm.

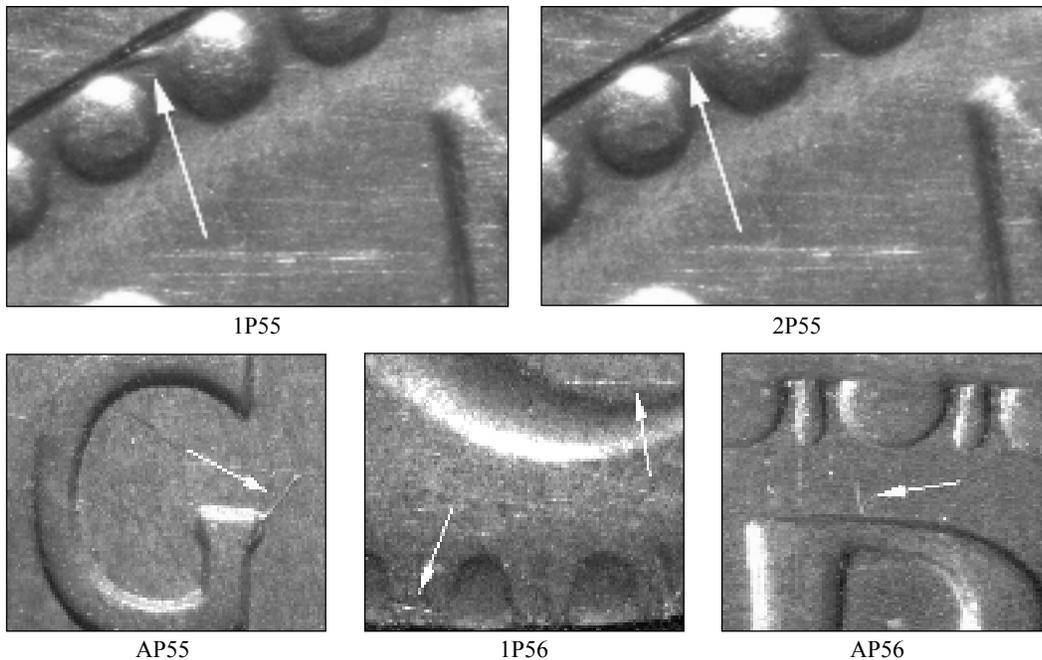


Figure 15. Close-up images of die markers for 1955–56 proof pennies.

**1957 Penny (1+A, 2+B, 3+C, 4+D, 5+E, 6+F\*, 7\*+F\*, 8\*+F\*)**

The 1957 dated proof pennies are the most complex, exhibiting the widest range of variation of all pre-decimal Perth Mint proofs. Perhaps the most dramatic variation is in the surface finish of fields which range from smooth (bright) fields, similar to those of the earlier proofs, to heavily frosted fields and bright devices giving a ‘reverse cameo’ effect. Previous writers have noted two distinct types, an earlier Type I with smooth fields like the 1955–56 proofs and a later Type II with frosted fields and bright devices.<sup>6,8,10</sup> In reply to a reader of his column, David Allen mentions *three* different types of surface finishes.<sup>20</sup> However, the actual situation for the 1957 proofs is even more complex, with eight different obverse die types and six reverse

die types observed in the present study. Fortunately, it was possible to include an unusually large number of 1957 proof coins in the survey of Table 3. The first three obverse and three reverse die types (listed and described below) exhibit smooth fields, with the remainder showing varying degrees of frosting of the fields. Also, three of the frosted die types 7P57\*, 8P57\* and FP57\* exhibit a range of distinctly different die states (see Appendix II).

The reason behind the dramatic change in the surface finish of the 1957 proof pennies is explained in a short letter from the Perth Mint to Syd Hagley:

*Our first issue of 1957 proofs was insufficient to cope with orders and a*

*further 600 coins will be produced shortly. The first issues were rather unpopular with dealers in the U.S.A. as they were accused with selling polished uncirculated coins. The next lot will have a matt finish and as I know you will require some of these, I will do my best to obtain 50 for you, and will notify you, if and when I get them, and at the same time will give you the total number of proofs struck during 1957.*<sup>5</sup>

Of the 1957 proof pennies, some 470 were struck in 1957 before the date of this letter and 642 presumably afterwards, during 1958 to 1959.<sup>3</sup> Assuming all proofs struck in 1957 had smooth fields and all those afterwards frosted fields, official proof mintage figures from the Royal Mint reports suggest that 42.3% should have smooth fields and 57.7% frosted fields. However, according to survey results in Table 3, twelve of the 35 coins or 34.3% are from the smooth field dies associated with the first three die pairings listed, and the remaining twenty-three or 65.7% are from the frosted field dies. But selected coins, which are slightly imperfect coins struck from the same dies as the proofs, should also be included in the mintage figures, and this alters the calculated ratio. Presumably due in part to extensive experimentation with techniques for die alteration, the number of selected pennies dated 1957 jumped sharply from a total of just nine in 1957 to four hundred and thirty-one during 1958-59. Adding these selected coins to the proof mintage figures and employing our previous assumption predicts that 30.9% of the 1957 coins should have smooth fields and 69.1% frosted fields, leading to significantly

improved agreement with survey results. This suggests that selected coins are well represented in our survey of proof dies.

Proof coins dated 1957 were actually produced from 1957 to 1959, allowing a three-year period for experimentation with various methods to enhance the appearance of the coins. This included using a lathe or file to lower the rims of the dies to increase rim height on the coins, and the use of post-strike grinding of the coins to square-off or flatten their rims and remove the extruded knife edge. While most 1957 proofs exhibit relatively low enhanced rims, a few exhibit the much higher rims characteristic of later proofs.

Different die states of the later 1957 proofs also exist and were created by taking dies used for striking 1957 proofs out of service, then applying additional sandblasting to the fields to produce a heavier frosted finish. One of these, Obverse 8P57\*, was clearly used to strike 1958 dated proofs *before* the final sandblasting treatment, *then* used to strike additional 1957 dated proofs. This evidence of *reverse date order* striking demonstrates that proofs of different years were sometimes struck concurrently and not necessarily in date order. Also, since the Royal Mint annual reports show that 1958 dated proof pennies were only struck in 1959, this proves that 1957 proofs with heavily frosted fields were struck in 1959. Detailed information on this and die state progressions for the 7P57\* and FP57\* dies is provided in Appendix II.

Of the 35 proof pennies dated 1957 examined, one, with the pairing of dies

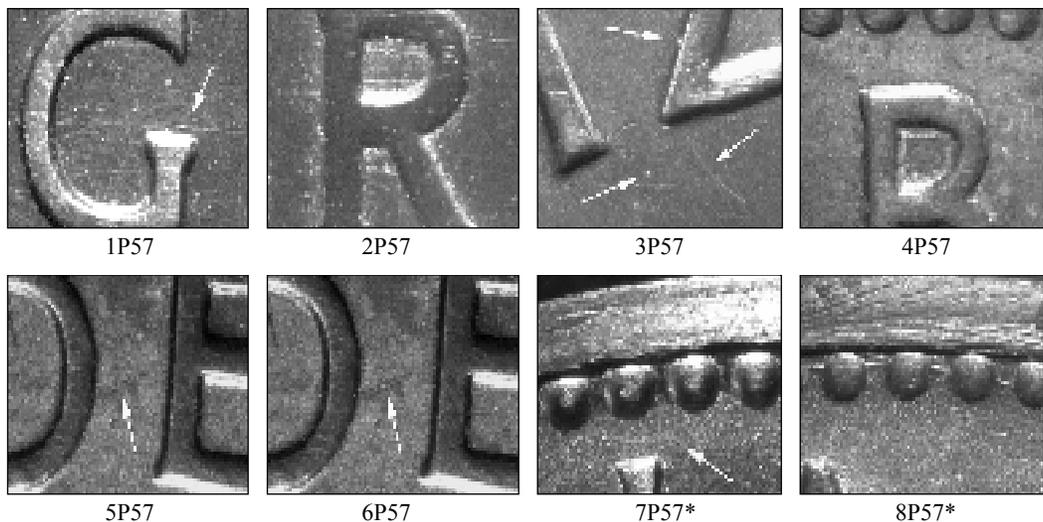


Figure 16. Close-up images of die marks on 1957 proof penny obverse dies.

5P57 + EP57, is represented by only a single coin. Inclusion of these two die types in the listing is reinforced by the fact that this coin exhibits distinctively high rims on both sides, similar to those on later Perth Mint proofs. Together with other distinctive die markers, this strongly suggests these are separately prepared proof dies.

Both Museum Victoria Proof Record coins from the Melbourne Mint collection were Obverse 4P57 type, with another coin Obverse 1P57. Close-up images to help identify 1957 proof obverse dies are given in Figure 16, with reverse dies in Figure 17.

**Obv 1P57** – Enhanced, irregular-turned rim, smooth fields, with thin horizontal lines in the letter G of REGINA, and at the top left of A of REGINA.

**Obv 2P57** – Enhanced, irregular-turned rim, smooth fields, with many fine lines

behind lettering, especially of GRATIA (illustrated is the R).

**Obv 3P57** – Enhanced, turned rim, smooth fields, spike on diagonal of Z of ELIZABETH with dot below IZ of ELIZABETH and downward curved line from the base of the Z.

**Obv 4P57** – Strongly enhanced, turned rim, frosted fields, with horizontal line in upper loop of letter B of ELIZABETH.

**Obv 5P57** – High, turned rim, partially sandblasted fields mostly around legend and next to portrait, with straight line through the beads above EGI of REGINA.

**Obv 6P57** – Enhanced, irregular-turned rim, frosted fields, with pair of faint lines between DE of DEI, and a dot or blob at upper left of G of GRATIA.

**Obv 7P57\*** – Enhanced, turned rim, frosted fields, curved line connecting beads above the +, plus crossed lines between DE of DEI; occurs in several die states (see Appendix II).

**Obv 8P57\*** – Enhanced, filed rim, light

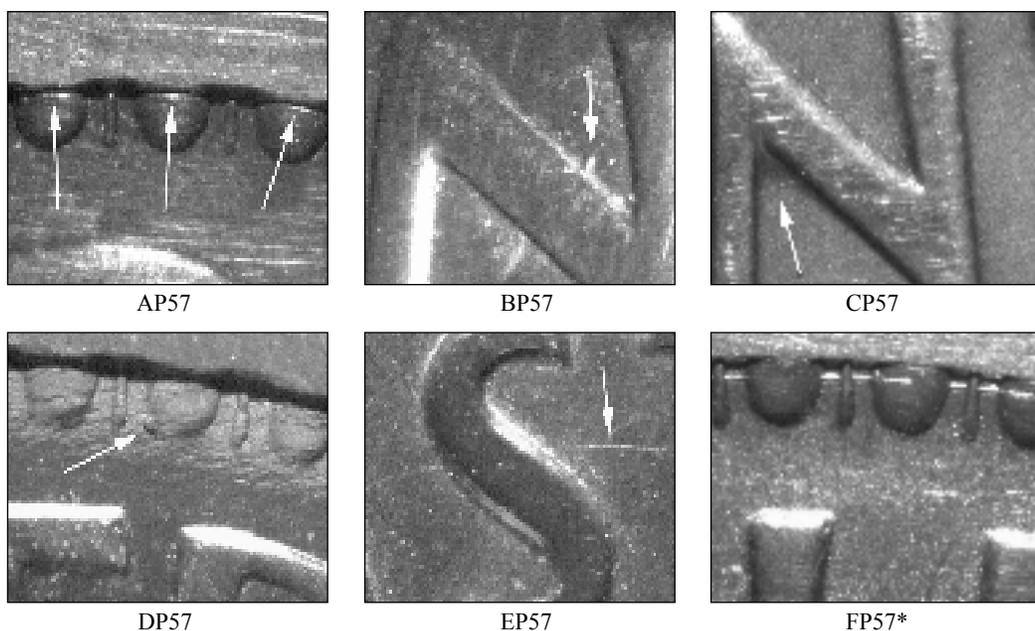


Figure 17. Close-up images of die markers on 1957 proof penny reverse dies.

to heavily frosted fields, with crossed lines in the beads above A and F of REGINA E:D; occurs in several die states (see Appendix II).

**Rev AP57** – Enhanced, turned rim, smooth fields, with thin line at top of beads nearly in contact with rim around most of the coin, plus the numeral 7 of date tripled to right.

**Rev BP57** – Enhanced, irregular-turned rim, smooth fields, with blob on diagonal of second N of PENNY, lines in beads near 7 of date, and 7 of date doubled to right.

**Rev CP57** – Enhanced, turned rim, smooth fields, with thin line through first N of PENNY.

**Rev DP57** – Strongly enhanced, turned rim, frosted fields, with distinctive lump at lower left of bead just to right of T of AUSTRALIA, plus double lines above ST of AUSTRALIA.

**Rev EP57** – High, turned rim, partially frosted fields mostly in the legend, the date and next to kangaroo, a thin curved line through UST of AUSTRALIA, plus a fine curved line under TRA of AUSTRALIA.

**Rev FP57\*** – Enhanced, turned rim, frosted fields, with line in and across left side of beads above ALI of AUSTRALIA; occurs in several die states (see Appendix II).

**1P57**, Museum Victoria NU5406, purchased 1976, 9.352gm.

**4P57**, Museum Victoria NU4867, from Melbourne Mint collection, 9.276gm.

**4P57**, Museum Victoria NU4868, from Melbourne Mint collection, 9.293gm.

### **1958 Penny (8<sup>57</sup>+A, 1+B, 2+C, 2+D, 3+D)**

All 1958 Perth penny proofs were struck in 1959, apparently concurrently with

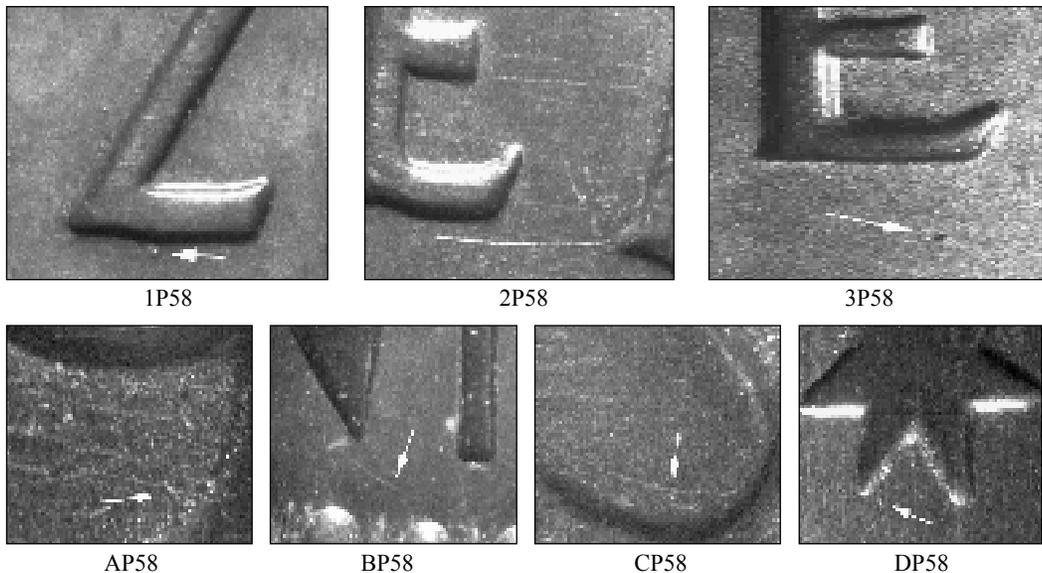


Figure 18. Close-up images of die markers on proof pennies of 1958 (see text for details, also Figure 16-Obv 7P57\*).

1957 pennies, as there is clear evidence that some 1958 proofs shared the same obverse die with 1957 proofs and that this die was modified and later used to strike additional 1957 dated proofs. Four different obverse and four different reverse die types are listed for 1958 proofs, with five die pairings known. One of these dies was also used for 1957 dated proofs, another for 1959 dated proofs, and one, 2P58, was used with two different reverse dies. All proofs struck from 1958 dies, except those from the obverse die from 1957, exhibit high rims and frosted fields. Close-up images of 1958 proof pennies are shown in Figure 18.

**Obv 8P57\*** – from 1957, above. Enhanced, filed rim, light to heavily frosted fields, with crossed lines in the beads above A and F of REGINA E:D; occurs in several die states (see Appendix II).

**Obv 1P58** – High, turned rim, frosted fields, with dot below Z of ELIZABETH.

**Obv 2P58** – High, turned rim, lightly frosted fields, with line below ET of ELIZABETH.

**Obv 3P58** – High, turned rim, frosted fields, with dot below second E of ELIZABETH, plus line at the top of RE of REGINA, and two dots to the right of the base of the last A of GRATIA.

**Rev AP58** – High, turned rim, frosted fields, with a spike left of the tail of the 9 of the date, a thin line in the loop of the 9, and a dash on the L of AUSTRALIA.

**Rev BP58** – High, turned rim, frosted fields, with a thin curved below NN of PENNY.

**Rev CP58** – High, turned rim, nearly smooth fields with only traces of sandblasting, a thin line in the U and the S of AUSTRALIA. (Figure 18 CP58, shows a close-up of the lower loop of the S).

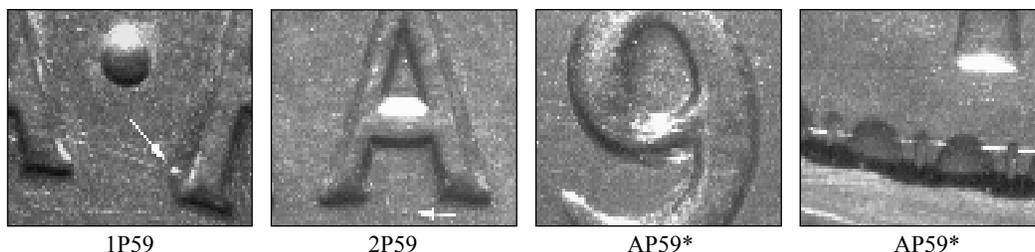


Figure 19. Close-up images of die markers on 1959 proof pennies (see also Figure 18 Obv 3P58).

**Rev DP58** – High, turned rim, frosted fields, with small dot (blob) below star.

**8P57\***, Museum Victoria NU4871, from Melbourne Mint collection, 9.272gm.

**8P57\***, Museum Victoria NU4872, from Melbourne Mint collection, 9.271gm.

**3P58**, British Museum.

### 1959 Penny (3<sup>58</sup>+A\*, 1+A\*, 2+A\*)

The 1959 Perth Mint penny proofs were struck in 1959 and 1960. Some of these proofs share an obverse die with 1958 proof pennies and may have been struck concurrently. A single 1959 dated reverse die was used for all proofs. This die has an unusual pattern of deep scratches near the lower part of the loop of the date numeral 9 (raised lines on the coin) as shown in Figure 19. The die scratches appear to have been made with a sharp probe or tool, perhaps in an effort to clean up or deepen this part of the date numeral. There is also a distinct thin straight line in the beads on the lower part of the reverse. At least three different obverse dies are paired with this reverse, which exhibits two different die states (see Appendix II). Close-up images are shown in Figure 19.

**Obv 3P58** – from 1958, above. High, turned rim, frosted fields, with dot below second E of ELIZABETH, plus line at the

top of RE of REGINA, and two dots to the right of the base of the last A of GRATIA.

**Obv 1P59** – High, turned rim, lightly frosted fields, with dot at the base of F:D.

**Obv 2P59** – High, turned rim, frosted fields, with tiny dot centered under the A of REGINA, plus a curved line through GIN of REGINA.

**Rev AP59\*** – High, turned rim, frosted fields, with a thin straight line in the beads, from the kangaroo's foot through to the first N of PENNY; occurs in several die states (see Appendix II).

**3P58+AP59**, Museum Victoria NU4875, from Melbourne Mint collection, 9.128gm.

**3P58+AP59**, Museum Victoria NU4876, from Melbourne Mint collection, 9.231gm.

### 1960 Halfpenny (1+A, 2+B, 3+C)

All 1960 halfpenny proofs were struck in 1961 with some selected coins struck in 1962. At least three different obverse and three different reverse die types are known. One of the reverse die types, AH60, has a faint serif-like flaw at the lower left of the U of AUSTRALIA as shown in Figure 20, and was previously described by Peter Wall in the Australian Coin Review's 'Variety Corner'.<sup>21</sup> He found this to be a common type, with all but one of a dozen proofs examined showing this 'extra serif'. This raised serif-like feature on the coins

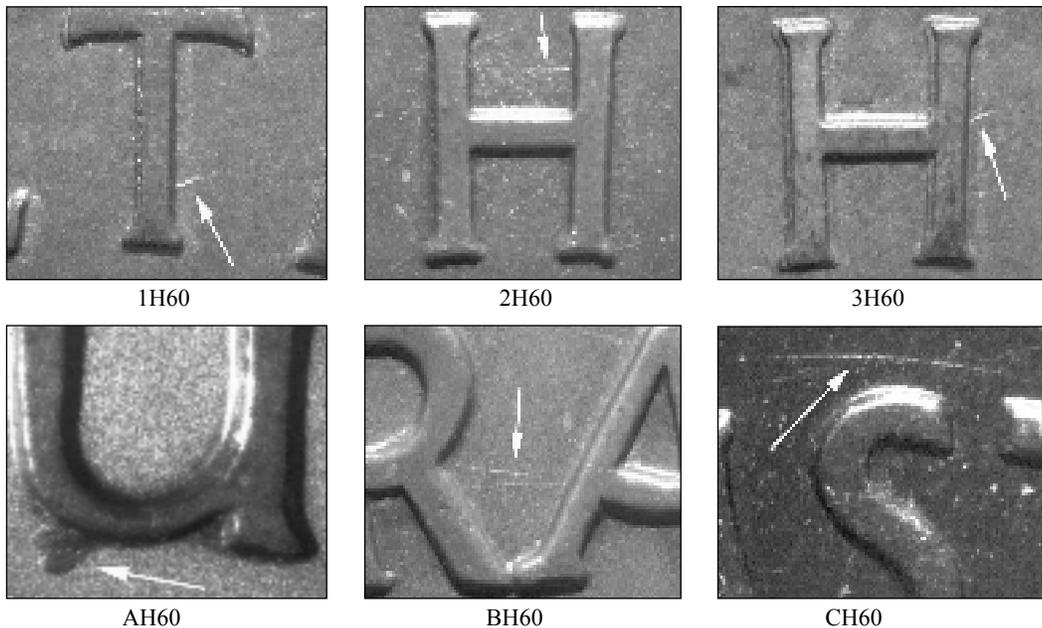


Figure 20. Close-up images of die markers for proof halfpennies of 1960.

seems to have been from an irregular shallow indent on the surface of the die and not the result of an attempt to erase a mint error. Survey results in Table 4 show 7 of 10 dies to be of this type. Although a line in the beads especially above REG of REGINA can be seen on all 1960 obverse coins, a distinct elongated rim gouge above the E of REGINA is seen only on coins from Obverse 1H60 dies, suggesting this is a separate die. Consequently, these obverses have been listed individually. Close-up images for other die markers on 1960 proof halfpennies are shown in Figure 20.

**Obv 1H60** – High, turned rim, frosted fields, with thin spike diagonally upwards from lower right of T of ELIZABETH, and elongated rim gouge above the E of REGINA.

**Obv 2H60** – High, turned rim, frosted fields, with a line through upper part of H of ELIZABETH.

**Obv 3H60** – High, turned rim, frosted fields, with a line from right side down into lower part of H of ELIZABETH (note that doubling of the letter H in photograph is from double striking of proof, not from die).

**Rev AH60** – High, turned rim, frosted fields, with a serif-like blob at left base of U of AUSTRALIA, plus faint tripled lines in the beads above TRA of AUSTRALIA, and lines in the beads by the kangaroo's tail.

**Rev BH60** – High, turned rim, frosted fields, with double lines between TR of AUSTRALIA.

**Rev CH60** – High, turned rim, frosted fields, with a line over UST of AUSTRALIA.

**1H60**, British Museum.

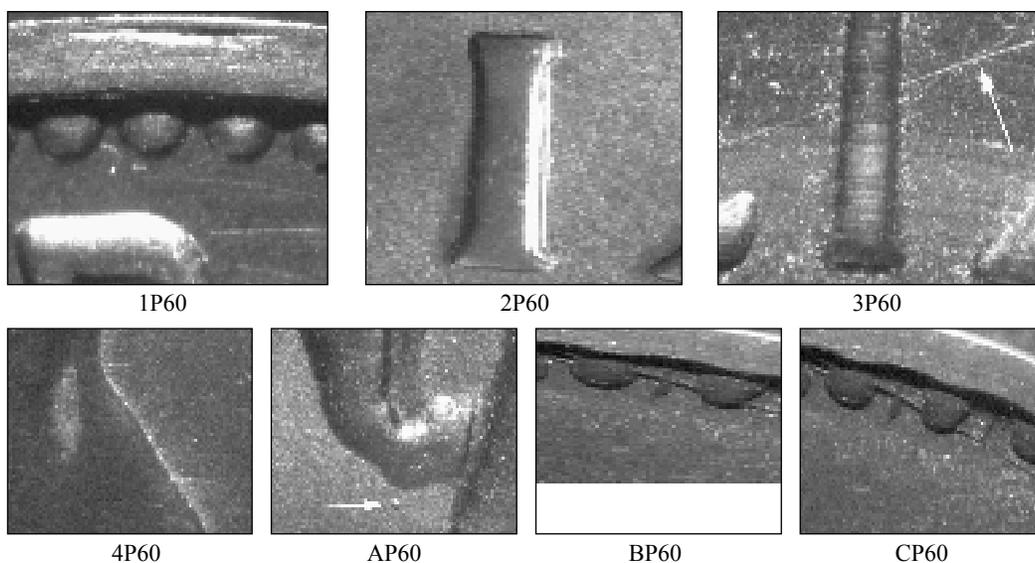


Figure 21. Close-up images of die markers on 1960 proof pennies.

### 1960 Penny (1+A, 2+B, 3+B, 4+C)

As in the case of the halfpennies, all 1960 penny proofs were struck in 1961, with some selected coins struck in 1962. Four different obverse and three different reverse die types are known. The coin obverses all display two small raised flaws between the lower colon and D of F:D which appear as comma-like dashes on 1P60 and as dots on the other three obverses. At first glance, this suggests that a single obverse die might have been used for all 1960 proofs. However, numerous other differences and distinctive features, such as a deep rim gouge on the coins from a die turning error and evidence of doubling on some of the coins, now make it clear that these cannot be from the same die and so are listed separately here. While only a single example of the 4+C type was found, both obverse and reverse are very distinct. Close-up images of these are shown in Figure 21.

**Obv 1P60** – High, turned rim, frosted fields, with a deep gouge in the rim above R of GRTIA (repeated on more than one coin), and two small raised comma-like dashes between the lower colon and D of F:D.

**Obv 2P60** – High, turned rim, frosted fields, doubled I of ELIZABETH (note splitting at base of letter I in Figure 21 2P60), plus a curved line through TIA. R of GRTIA. REGINA.

**Obv 3P60** – High, turned rim, frosted fields, with a straight line slanting upwards through LIZ of ELIZABETH up to the R of REGINA.

**Obv 4P60** – High, turned rim, frosted fields, with textured (sandblasted) area below eye in the portrait.

**Rev AP60** – High, turned rim, frosted fields, with dot below the forepaw of the kangaroo.

**Rev BP60** – High, turned rim, frosted fields, with a small lump to left of base of Y of PENNY.

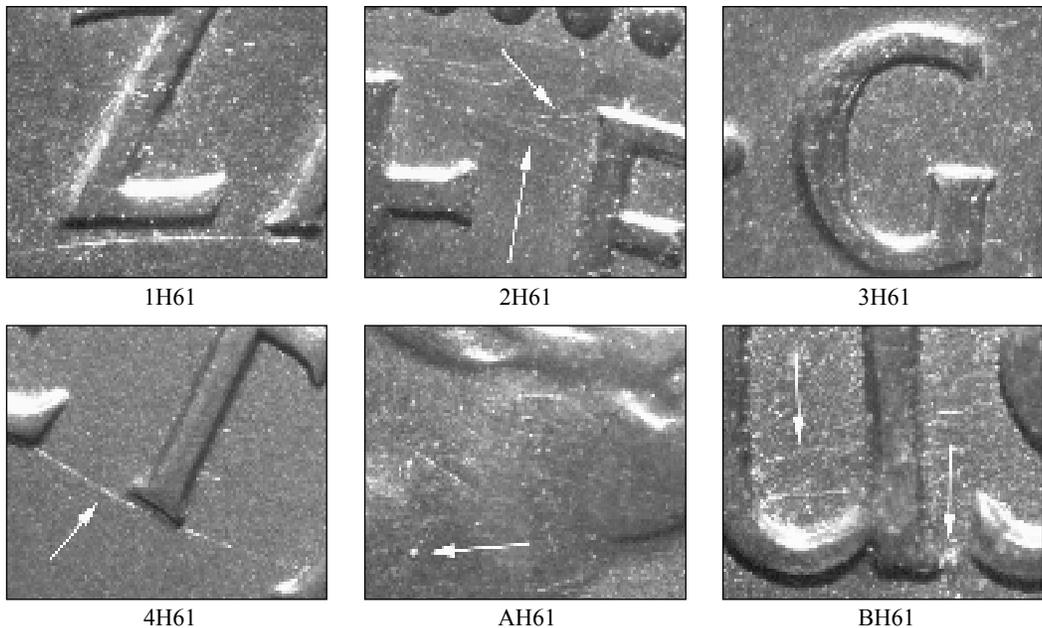


Figure 22. Close-up images of die markers for 1961 proof halfpennies.

**Rev CP60** – High, turned rim, frosted fields, with heavy line from the beads into the field in front of the kangaroo’s nose.

**BP60**, Museum Victoria NU4877, from Melbourne Mint collection, 9.360gm.

**CP60**, Museum Victoria NU4878, from Melbourne Mint collection, 9.322gm.

#### 1961 Halfpenny (1+A, 2+B, 3+B, 4+B)

Most 1961 proof halfpennies were struck in 1962, with a few proof and selected coins struck in 1963. Four different obverse and two reverse die types are known, including the strongly doubled Obverse 3H61. Close-up images are shown in Figure 22.

**Obv 1H61** – High, turned rim, frosted fields, with a heavy line under IZA of ELIZABETH, plus a small line slanting upward from outside the lower loop of B of

ELIZABETH.

**Obv 2H61** – High, turned rim, frosted fields, with lines between the upper part of + E of + ELIZABETH, plus additional lines at NA F: of REGINA F:D.

**Obv 3H61** – High, turned rim, heavily frosted fields, with strong doubling, especially G of GRATIA.

**Obv 4H61** – High, turned rim, frosted fields, with curved line under ETH of ELIZABETH.

**Rev AH61** – High, turned rim, frosted fields, with a dot at base of neck of kangaroo, and a line in the beads below NNY of PENNY.

**Rev BH61** – High, turned rim, frosted fields, with fine lines in AUS and a large dot after U of AUSTRALIA, and a lump at upper left of P of PENNY.

**AH61**, British Museum.

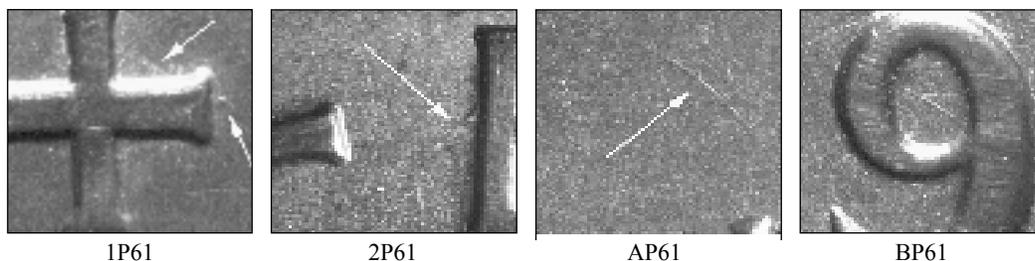


Figure 23. Close-up images of die markers on proof pennies of 1961.

### 1961 Penny (1+A, 2+B)

All proof and selected pennies dated 1961 were struck in 1963, with two different obverse and two reverse dies known. Close-up photographs are shown in Figure 23.

**Obv 1P61** – High, turned rim, frosted fields, with a blob at right of +, with diagonal line in its upper right quadrant.

**Obv 2P61** – High, turned rim, frosted fields, with a spike diagonally downwards from the upper left of the first E of ELIZABETH.

**Rev AP61** – High, turned rim, frosted fields, with dull surface on the raised devices, a curved line rising from above KG to last A of AUSTRALIA, and a line connecting two beads at left of star.

**Rev BP61** – High, turned rim, frosted fields, with lines inside the loop of 9 of the date.

**2P61**, British Museum.

### 1962 Halfpenny (1+A)

The 1962 proof and selected halfpennies were struck in 1963. The 1962 Perth proof halfpennies are unusual in that only a single pair of dies is known for these coins. Also there is a distinct die crack on the reverse, an especially unusual feature since

so few coins were struck. Close-up images are given in Figure 24.

**Obv 1H62** – High, turned rim, frosted fields, with a diagonal line connecting bases of BE of ELIZABETH, plus line in beads above A of REGINA.

**Rev AH62** – High, turned rim, frosted fields, with thin die crack at top of letters AUSTRAL of AUSTRALIA

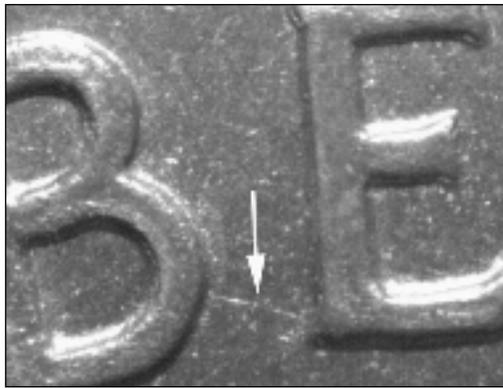
**1H62+AH62**, Powerhouse Museum N18714 and N18715

**AH62**, British Museum.

### 1962 Penny (1+A, 2+B, 3+C)

As in the case of the halfpennies, all 1962 proof and selected pennies were struck in 1963. Lines in the border beads above the U of AUSTRALIA indicate that different reverse die states exist. Since at least two examples of each type have been observed, these are listed separately for now. The three obverse and three reverse die types are described below, including the strongly doubled Obverse 2P62. Close-up photographs are shown in Figure 25.

**Obv 1P62** – High, turned rim, frosted fields, with lumps at lower left of the bases of IA R of GRATIA REG; slight doubling visible throughout the legend but especially



1H62



AH62

Figure 24. Close-up images of die markers for proof halfpennies of 1962.

pronounced at the top of the +.

**Obv 2P62** – High, turned rim, frosted fields, strong doubling apparent on entire legend, with serifs of legend often split. The doubled top of the R of GRATIA is shown in Figure 25.

**Obv 3P62** – High, turned rim, frosted fields, with curved line between LI of ELIZABETH.

**Rev AP62** – High, turned rim, frosted fields, with line below the tail of the kangaroo and above the 2 of the date.

**Rev BP62** – High, turned rim, frosted fields, with line at the top of AUS of AUSTRALIA.

**Rev CP62** – High, turned rim, frosted fields, with curved line above KG.

### 1963 Halfpenny (1+A, 2+A)

All 1963 proof and selected halfpennies were struck in 1963. Two obverse and a single reverse die type are listed below. Both obverses also show a line in the beads above REGIN of REGINA, indicating that these may represent different die states. Since at least two examples of each type have been observed, these are listed

separately for now. To date all coins observed with Obverse 1H63 exhibit obverse and reverse hand ground rims, and all those with Obverse 2H63 have un-ground rims on both sides. Close-up photographs are given in Figure 26.

**Obv 1H63** – High, turned rim, frosted fields, with a curved line under II of ELIZABETH II.

**Obv 2H63** – High, un-ground turned rim, frosted fields, with dot at upper left of first E of ELIZABETH and die scratch under BE of ELIZABETH; a curved line behind head, and a line in the beads above A of REGINA.

**Rev AH63** – High, turned rim, frosted fields, with a line below the kangaroo's forepaw and in front of leg and at F of HALF.

### 1963 Penny (1\*+A, 2+B, 3+C, 4+D)

The majority of 1963 proof and selected pennies were struck in 1963, with some struck in 1964. Four different obverse and four different reverse die types are listed here. Obverse 1P63\* is unusual in that it

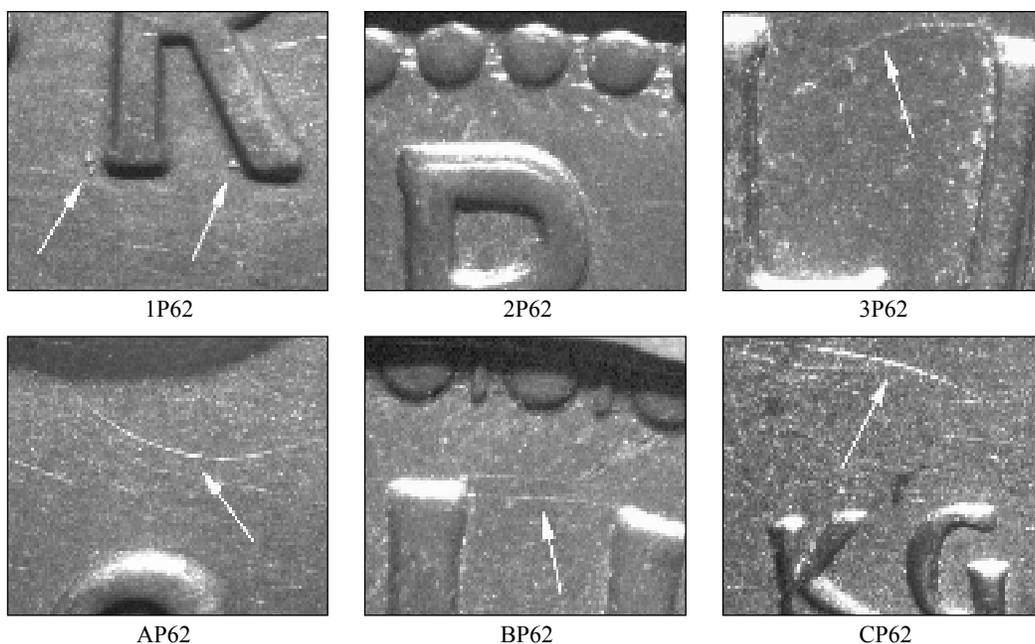


Figure 25. Close-up images of die markers for proof pennies of 1962.

shows a distinctive raised, irregular flaw in the hair at the back of the head and exhibits different die states as summarised in Appendix II. The difference between Reverse AP63 and Reverse BP63 is in the clearly visible die scratches over the date. Since these are linked to different obverse die types and more than one example of each has been observed, they meet the criteria for being listed separately. Two other single 1963 proof coins were also examined, both showing different but relatively weak lines, and these are listed here for the sake of completeness (see Figure 27).

**Obv 1P63\*** – High, turned rim, frosted fields, irregular flaw near back of head in hair, plus curved line through TIA of GRATIA; occurs in several die states (see Appendix II).

**Obv 2P63** – High, turned rim, frosted fields, with a curved line at lower left of R of REG and a tiny lump inside base of right leg of R of REG.

**Obv 3P63** – High, turned rim, frosted fields, with a line from inside upper part of E to L of ELIZABETH, plus a line between D and the + of F:D:+.

**Obv 4P63** – High, turned rim, frosted fields, with a lump inside base of right leg of R of GRATIA.

**Rev AP63** – High, turned rim, frosted fields, with a curved line above numeral 1 of date.

**Rev BP63** – High, turned rim, frosted fields, with a line curving up and left from top of 9 of date.

**Rev CP63** – High, turned rim, frosted fields, with curved lines inside U of AUSTRALIA, plus lines in P of PENNY.

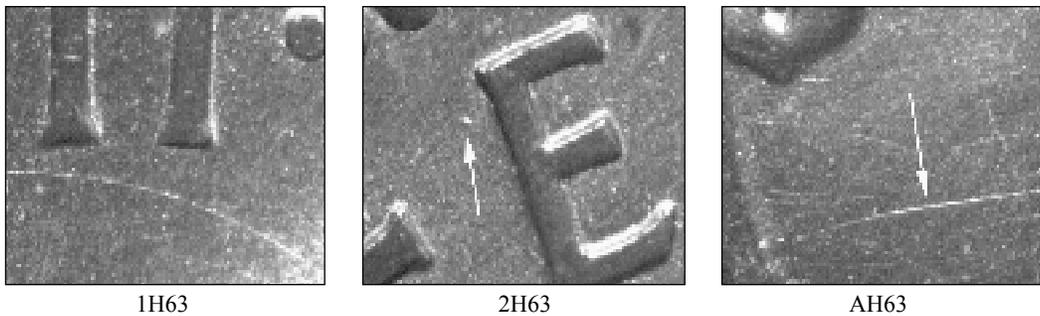


Figure 26. Close-up images of die markers for 1963 proof halfpennies.

**Rev DP63** – High, turned rim, frosted fields, with fine diagonal line between 9 and 6 of date.

### 1964 Halfpenny and Penny

Finally, the 1964 halfpenny and penny proofs, although formally outside the scope of this article, should be mentioned briefly. These coins are apparently unique and were sold together as lot 956 at Spink auction sale 21, on 31 March 1987. They were described as ‘ex G. W. Robinson’, former Deputy Master of the Perth Mint. Based on photographs in the auction catalogue and examination of the coins by the auctioneer,<sup>22</sup> these were struck from standard coinage dies but to a proof standard, providing an unusual end to the series of pre-decimal proofs from the Perth Mint.

### Mintage Figures for Perth Mint Proofs 1955–1963

While standard mintage figures for Perth Mint proofs of 1955–63 are readily available in published coin guides and catalogues, careful analysis of the official figures presented in the Royal Mint Annual Report can provide valuable insight. These

give concise summaries of the activities of the Royal Mint and each of its branches during the calendar year of the report (e.g. the 1956 annual report covers 1956). A summary of this information for Perth Mint proofs is shown in Table 5, starting with the year of the Royal Mint report, page number, and a listing of proof coins produced by date on the coin.<sup>3</sup>

Analysis of the total of 12,571 proof coins struck shows that 3,363 or 26.75% were struck during the same year as the date on the coin, 7,969 or 63.4 % were struck during the year after the date on the coin, and 1,239 or 9.856% were struck during the second year after the date on the coin. During the years 1959 and 1963, proofs were struck with three different dates and in 1956 with two different dates. Listing the results by the date on the coin gives us the standard mintage figures, as shown in Table 6. It will be noticed that the totals for penny and halfpenny proofs dated 1960 and 1961 do not quite match.

In view of the very labour intensive way the proofs were made at the Perth Mint the total number of proof coins produced by year is especially significant. This is

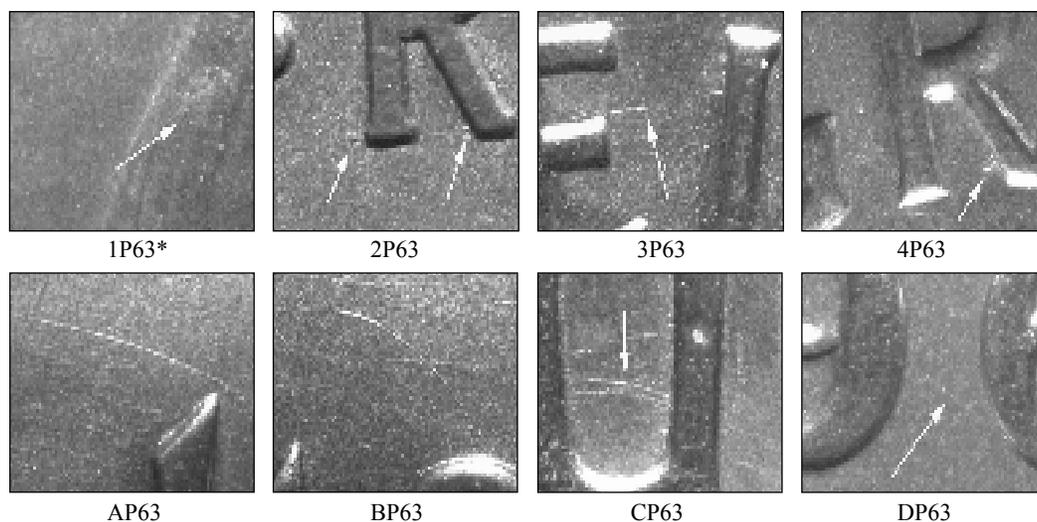


Figure 27. Close-up images of die markers for 1963 proof pennies.

shown in Table 7, and it illustrates the uneven work load for this activity, with production ‘spikes’ in 1959 and 1961 and a major increase in 1963. The work was so tedious that George Knight, Foreman of Mechanics, sometimes recalled ‘regretting’ that the Perth Mint got involved in making these proofs.<sup>4</sup> For the 12,571 proof coins produced over a period of 9 years, the revenue to the Perth mint was only about £1,257. By comparison, the Melbourne Mint produced 73,036 pre-decimal proof coins yielding a financial return of over £7,303. Thus, while employing a much less labor intensive process for producing proofs, the Melbourne Mint realised nearly 6 times the financial benefit. In contrast, the rather dismal financial situation for the Perth Mint regarding proofs is confirmed in a recently uncovered letter to Syd Hagley from the soon-to-be Deputy Master Charles Cook on the 2<sup>nd</sup> of March 1962:

*Such has been the demand at short notice for coin, that both men and machines have been under considerable pressure at times. As we are short of staff and have a very limited capacity for the production of Proof and Selected coins (which are incidently [sic] produced at a loss) we have not been able to meet the demand.<sup>5</sup>*

Also listed separately from proof coins in the Royal Mint reports are selected coins, and for 1956, specimen coins. A summary of these listings is shown in Table 8. Precisely what these coins were has presented a puzzling numismatic problem, as there appears to be *no* discussion of selected coins anywhere in the literature. This was discussed with Mark Freehill who had ordered a quantity of collector proof coins from the Perth Mint many years before. He recalled that some

<u>Report year</u>	<u>Page</u>	<u>Proof coins produced</u>
1956	p. 66	301 proof 1955 pennies, 301 proof 1955 halfpennies, 417 proof 1956 pennies.
1957	p. 69	470 proof 1957 pennies.
1958	p. 69	474 proof 1957 pennies.
1959	p. 79	168 proof 1957 pennies, 1,028 proof 1958 pennies, 600 proof 1959 pennies.
1960	p. 82	430 proof 1959 pennies.
1961	p. 75	1,030 proof 1960 pennies, 1034 proof 1960 half-pennies.
1962	p. 80	1,013 proof 1961 half-pennies.
1963	p. 83	1,040 proof 1961 pennies, 31 proof 1961 halfpennies, 1,053 proof 1962 pennies, 1,053 proof 1962 half-pennies, 812 proof 1963 pennies, 1,064 proof 1963 halfpennies.
1964	p. 93	252 proof 1963 pennies.

Table 5. Perth Mint proof coins by year, from Royal Mint annual reports.

of the 1957 proofs he had received were at a reduced price and that these were ‘seconds’ or coins which did not fully meet proof standards.<sup>23</sup> The recently uncovered letter from the Perth Mint to Syd Hagley now confirms this interpretation, stating that:

*selected coins are slightly imperfect coins that have been rejected as proofs. We sell the selected coins for 7d. each instead of 2/1d. for proofs, and they are generally bought by lodges for ceremonial*

<u>Coin Date</u>	<u>Mintage Figures for Perth Mint Proofs</u>
1955	301 pennies and 301 half-pennies.
1956	417 pennies.
1957	1,112 pennies.
1958	1,028 pennies.
1959	1,030 pennies.
1960	1,030 pennies and 1,034 halfpennies.
1961	1,040 pennies and 1,044 halfpennies.
1962	1,053 pennies and 1,053 halfpennies.
1963	1,064 pennies and 1,064 halfpennies.

Table 6. Perth Mint proof coin totals by date on coin. For 1960 and 1961, the table reveals a difference by four coins between penny and halfpenny proof totals.

*work, but some have been laid under foundation stones of new buildings.*<sup>5</sup>

This suggests that the survival rate for selected coins may have been somewhat lower than for collector proofs.

It is now clear that the so-called selected coins were struck from the same dies as the proof coins, differing only in that they had imperfections and carried a sixpence surcharge over face value instead of the one florin (two shillings) for each proof coin. This difference in surcharge would have required that proof coins be accounted for separately from the selected coins and it seems that this was the reason for their explicit (and separate) mention in Royal Mint reports. The total additional amount

<u>Year</u>	<u>Total Proof Coins Manufactured</u>
1955	—
1956	1,019
1957	470
1958	474
1959	1,796
1960	430
1961	2,064
1962	1,013
1963	5,053
1964	252

Table 7. Perth Mint proof coin totals by year made. The listing shows production ‘spikes’ in 1959 and 1961, and a major production increase in 1963.

generated for the Perth Mint from the surcharge on selected coins (at 6d per coin) would only have been about £101. The term selected first appears, together with the term proof, in the Royal Mint report for 1957, replacing the earlier term specimen, paired with proof, in the Report for 1956. The listing in the 1957 report also includes six selected 1954 dated halfpennies, which otherwise must have been identical to the 24 specimen 1954 halfpennies listed in the 1956 Annual Report.

As in the case for the proof coins, the annual reports show numerous instances where selected coins are reported well after regular production for coins of those dates had ended. For example, the 1957 Report lists six each of selected 1954 halfpennies, 1955 pennies, and 1955 halfpennies. In the 1959 Report, 123 selected 1957 pennies are listed, and in the 1963 report, 351 selected 1961 dated pennies and 403 halfpennies are listed. This precludes any possibility that these coins

<u>Report Year</u>	<u>Page</u>	<u>Specimen or Selected Coins Produced</u>
1956	p. 66	24 specimen 1955 pennies, 26 specimen 1955 half-pennies, 32 specimen 1956 pennies, plus 24 specimen 1954 halfpennies.
1957	p. 69	6 selected 1955 pennies, 4 selected 1956 pennies, 9 selected 1957 pennies, 6 selected 1955 halfpennies, plus 6 selected 1954 half-pennies.
1958	p. 69	308 selected 1957 pennies.
1959	p. 79	123 selected 1957 pennies, 295 selected 1958 pennies.
1960	p. 82	401 selected 1959 pennies.
1961	p. 75	176 selected 1960 pennies, 135 selected 1960 half-pennies.
1962	p. 80	95 selected 1960 pennies, 157 selected 1960 half-pennies.
1963	p. 83	351 selected 1961 pennies, 403 selected 1961 half-pennies, 341 selected 1962 pennies, 338 selected 1962 halfpennies, 276 selected 1963 pennies, 459 selected 1963 halfpennies.
1964	p. 93	183 selected 1963 pennies.

Table 8. Perth Mint specimen and selected coins from Royal Mint annual reports. The listing shows the year of the report, the page number, and the number and denomination of specimen or selected coins produced by date on the coin.

were struck as a part of regular coinage and demonstrates that they must have been specially struck. Additional coins presumably

would also have been produced for the Mint's proof record and for distribution to other mints, to institutions such as museums and numismatic societies, for visiting VIPs and for other official government uses for which, it seems certain, no surcharge would have been charged.

I was able to examine the Proof Record specimen coins sent to the Royal Mint in London from Perth (now in the Royal Mint museum's collection at Llantrisant, Wales), and those of 1955–63 clearly appeared to be the same as collector proofs. In July 2000, when I was in Perth, George Williams, former Director of the Perth Mint presented me with a 1963 Perth halfpenny. This halfpenny presumably would not have originated as a collector proof, but otherwise seems identical to the proof halfpennies I have examined. Finally, as noted in the previous section, examination of the 1955–63 Perth proofs in the Museum Victoria collection revealed that Proof Record coins were struck from the same proof working dies as other proof coins in my reference collection. Taken together, this indicates that selected, proof and specimen coins would have been struck from the same dies with the reason they were accounted for separately being due to different surcharges.

A combined listing of the specimen and selected coins of 1955–63 by date on the coin and denomination (excluding 1954 dated halfpennies) is presented in Table 9. This gives a total of 4,148 coins from 1956–63, which represents about 33% of the total of the standard mintage of proofs. Again, we notice that the totals of penny

and halfpenny coins in a particular year do not necessarily match.

The combined total of specimen and selected coins made by year is shown in Table 10. This shows a major increase for the year 1963, which, combined with the proofs in Table 4, results in a total of 7,221 coins minted in 1963. This labor intensive production of pre-decimal proofs increased the work load at the Perth Mint at a time when the regular production of bronze pennies and halfpennies exceeded 50 million for the first time.

Based on the results of research presented in this article, there is compelling evidence that the dies used for the proof and selected coins, as reported in the annual Royal Mint reports, are indistinguishable. Whilst the mintage figures reported in catalogues accurately reflect the number of Perth Mint proofs struck for collectors, selected coins are not accounted for in these figures. Although survival rates for these coins may be somewhat lower than for proofs, many are undoubtedly in the hands of collectors. For this reason the mintage figures for Perth Mint proof coins should probably be increased to include selected coins, as shown in Table 11. The addition of selected coin totals to proof coin totals would result in a modest increase in the figures for 1955 and 1956, and a substantial increase in the figures for 1957 to 1963.

Finally, it should be noted that examination of the Royal Mint annual reports also reveals that a total of 30 specimen and selected halfpennies dated 1954 were struck in 1956 and 1957. This figure might

<u>Coin Date</u>	<u>Mintage Figures for Perth Mint Specimen and Selected coins</u>
1955	30 pennies, 32 halfpennies.
1956	36 pennies.
1957	440 pennies.
1958	295 pennies.
1959	401 pennies.
1960	271 pennies, 292 half-pennies.
1961	351 pennies, 403 half-pennies.
1962	341 pennies, 338 half-pennies.
1963	459 pennies, 459 half-pennies.

Table 9. Combined totals of Perth Mint specimen and selected coins by date on coin.

be used to update the Table in John Sharples' article: 'Perth Mint Proof Record Coins 1940–54' in volume 8 of this Journal.

### Insights and Conclusions

In numismatics as in life, often the most interesting and profound questions are the 'why' questions. When considering the Perth Mint proof coins of 1955–63, questions naturally arise such as: why so many dies, and why was such a labour intensive approach taken in fabricating the Perth Mint proofs? With only limited information in the way of mint records and correspondence available we may never find out all the answers. However, numismatic insight can be used in helping to address these questions. While at the British Royal Mint's museum collection, I

<u>Production Year</u>	<u>Total Specimen and Selected Coins Produced</u>
1956	82
1957	25
1958	308
1959	418
1960	401
1961	311
1962	252
1963	2,168
1963	183

Table 10. Combined totals of Perth Mint specimen and selected coins by year made.

came across 1951-PL Royal Mint proof pennies and Perth Mint Proof Record coins in the same tray. I was momentarily stunned. If there is such a thing as a nearly perfect, iconic Australian penny, the 1951-PL proof was it! It suddenly occurred to me that the broad, perfectly squared off rims on the reverse of this coin simply *had* to be the inspiration for the Perth Mint proofs.

While there is no direct evidence to support this view, it is known that the Perth Mint did receive, from the Royal Mint, Proof Record coins which included the 1951-PL penny.<sup>4</sup> The reason the Perth Mint began receiving (and exchanging) proof coins with the Royal mint and other mints around the world is due to one man, Geoffrey William Robinson, an ardent coin collector and numismatist who later became the Deputy Master of the Perth Mint. A June 12, 1947 letter from a Mr. Stride of the Royal Mint London reads:

<u>Coin Date</u>	<u>Total Perth Mint Mintage of Proof and Selected Coins</u>
1955	331 pennies and 333 half-pennies
1956	453 pennies
1957	1,552 pennies
1958	1,323 pennies
1959	1,431 pennies
1960	1,301 pennies and 1,326 halfpennies
1961	1,391 pennies and 1,447 halfpennies 1,394 pennies and 1,391 halfpennies
1963	1,523 pennies and 1,523 halfpennies
<b>Total</b>	<b>16,318 coins</b>

Table 11. Perth Mint proof plus selected coin totals by date on coin.

*Mr. Robinson of your staff has written to me asking for any assistance we can give him in his pursuit of coin collecting. He is evidently a keen numismatist and we are of course only too keen to help him to the best of our ability. As a start I have collected together from duplicates in our museum about 250 coins of the Empire, a list of which I am enclosing.*<sup>4</sup>

These arrived labelled 'Specimen coins for GW Robinson and Royal Mint Perth'. A letter of reply dated 12 August 1947, from William Rogers, then Deputy Master of the Perth Mint, states 'Last Saturday Robinson and I opened the boxes with great interest and I can only say he is

extremely fortunate to receive such a collection'.

Robinson was also a close friend of Syd Hagley, a prominent South Australian numismatist, who in fact placed the very first order for collector proofs with the Perth Mint for one hundred each of the 1955 pennies and halfpennies, and 1956 pennies.<sup>5</sup> The important role played by Hagley in the Perth Mint's production of proofs for collectors has now been confirmed in a recently uncovered Perth Mint letter of 14 February 1958, sent to Hagley and stating: 'It was only through your enquiries that this Mint began to issue proof coins to numismatists, and since the numismatic grape vine took over we have been inundated with enquiries and requests for coin'.<sup>5</sup> This is re-enforced by an earlier letter (February 1956) to Hagley from LB Brand, Assistant Secretary of the Commonwealth Treasury, which states, referring to his letter of 21 December 1956:

*Similar representations had already been received from the Deputy Master and after consideration he has been informed that Treasury would have no objection to Perth Mint supplying collectors with specimens of its production on the basis approved for the Melbourne Mint.*<sup>5</sup>

This clearly shows that arrangements for the striking of collector proofs originated at the Melbourne Mint and were then approved for the Perth Mint, largely due to Hagley's strong expressions of interest. It also now seems likely that the much lower mintages at Perth for the 1955–56 proofs

(compared to Melbourne) may have been at least partially due to this rather late approval from the Commonwealth Treasury, perhaps coupled with a lack of awareness among collectors until 1957, about the availability of proofs from the Perth Mint.

It seems certain that when the Perth Mint prepared to strike proofs for collectors, Robinson would have been heavily involved as the 'resident expert' on such coins. While small numbers of Proof Record coins had been struck at Perth since the 1940s<sup>1</sup>, the much larger quantities to be produced for collectors would have required significant effort. Also, since one of the primary customers for these coins was a close friend of Robinson and a fellow numismatist, the quality of these coins would have been an especially important consideration. It is here, I speculate, that the 1951-PL proofs came to be viewed as the best possible model for what Australian bronze proofs should look like.

In the 1950s Perth was an isolated place. Coining equipment at the Perth mint had originally been developed for striking gold from the Western Australian goldfields and was clearly sub-standard for striking bronze coins compared to the Royal Mint in London, and probably also compared to its sister mint in Melbourne. This seems evident from even a cursory comparison of the quality of circulation coinage of 1951-PL pennies and halfpennies (struck in the UK), with corresponding coins from Melbourne and Perth. I think it is likely that the evolution of the Perth Mint's approach for proofs was strongly influenced

by attempts to overcome shortcomings in coining equipment in order to achieve a very high standard in appearance. Here, the isolation of the Perth Mint combined with the type of 'can do' attitude this can inspire seems to have led to significant coining innovations.

While the following account is somewhat speculative, it represents a reasonable and logical argument for understanding the evolution that occurred in the production of Perth Mint proof coins from 1955 to 1963. An important underlying factor is that Perth Mint proofs seem to have been created for unaided vision.

The 1955 Perth Mint proofs themselves appear to be reasonably well struck, being comparable to those from the Melbourne Mint. The introduction of the new Reverse I die type for 1956, which has wider rims than Reverse G used for 1955, may have made extruded knife edges even more apparent. The expedient of carefully grinding off the extruded edge may have been more feasible than finding ways to improve the alignment and tolerances between the dies and collars on the coining press. Once grinding began to be used to clean up the rims, consistency between coins would have become an issue. For example, if the rims on one side of the coin were carefully ground flat, this would need to be replicated on the other side. Also, with coin orders of up to 100 coins of each type, appearance would need to be maintained for the same batch. It can be seen how this might lead to all the coins having their rims hand ground to finish them to a uniform standard.

Once rim grinding on the proofs became standard practice, the relative relief of the design elements on the coins compared to the rims became an issue, since grinding the rim could have resulted in accidental damage to other parts of the coin. One way to avoid such damage was to raise the rims of the coins by cutting down the rims on the dies themselves, thus providing extra clearance for post-strike grinding. This was first done on 1957 proofs. Once cutting down the rims on the proof dies became the standard practice and the number of proof coins that needed to be produced increased significantly, the height of the rims was apparently increased even further in order to facilitate the post-strike grinding. These high rims, which became standard on proofs dated 1958 and onwards, would also have been visually attractive, and this must have appealed to a numismatist like Robinson.

However, the nearly vertical, high relief rims of the proofs would have put extra stress on the dies and shortened their life. This would be especially true for striking bronze at the much higher pressures required for proofs. Also, since proofs are double struck, work hardening of the metal would have occurred between strikes. If a Perth mint die account book for the proofs similar to that for circulation coins should ever be found, it might record detailed information showing when each of the dies was made, the number of coins struck from each pair of dies, and, provide information on the fate of each die (eg. cracking, etc.). Lacking such information, we can only speculate that the Perth Mint proofs required a surprisingly large number of dies because of the extensive amount of

experimentation from 1957 to 1959, coupled with the increased stresses due to high relief die modifications, especially at the rims.

Finally, the fields of the Perth Mint proofs which started out smooth on the earlier coins of 1955–57 would have highlighted any small flaws on the surface of the dies, especially on proof coins which are struck twice at higher pressures and undergo further workshop processing. Such minor flaws and surface irregularities would be carefully scrutinised by collectors who pay a significant premium for proofs and presumably this led to the complaints by coin dealers about early 1957 proofs. While improvements in die production methods might have been used to minimise this, another option was to simply texture the surface of the dies to hide these flaws. Direct observation shows that the Perth Mint experimented extensively with sandblasting dies for later 1957 dated proofs, with fields ranging from partially sandblasted to heavily frosted. These later coins with frosted fields exhibit a spectacular and unique ‘reverse cameo’ effect, which must have appealed to both Robinson and many collectors. This chain of innovative developments at the Perth Mint resulted in the beautiful high rim proofs with frosted fields of the early 1960s. While the motivation for these innovations suggested above is speculative, the spectacular result on the coins themselves can be observed directly.

Naturally these unusual proofs were also sent from Perth to the Royal Mint in London as Proof Record coins. On my visit to the British Royal Mint at Llantrisant in

Wales, I had the opportunity to examine these coins in the collection, and a comment was made about the amusement provided to the London mint workers by the annual arrival of the packets of these proofs from Perth. John Sharples also recalls visiting a pub with former London mint workers who were justifiably proud of their skills and the tradition of perfection in their proofs, and that ‘after a few beers they started talking about the Australian “Proofs” that they used to have sent to them. They all had a good laugh and we had another beer’.<sup>5</sup>

While at one time Perth Mint pre-decimal proofs may have been viewed by outsiders as naive concoctions from a distant colony, not so today. These proofs are now highly regarded, as current market prices suggest. Perhaps more importantly for the numismatist they are surprisingly complex, allowing individual proof dies to be identified, revealing die-linkages, progressions of die stages, and a fascinating evolution of innovative techniques. In short, in this day of magnifiers and microscopes, numbered grading systems and obsession with perfection, Perth Mint pre-decimal proofs offer a refreshing and numismatically complex tonic compared to their beautiful but rather sterile cousins from other branches of the Royal Mint.

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Photography credits with many thanks for 1H54, 1H55, AH55, 1P55, 3P57, 7P57\*, CP57, 1P59, 4P63, DP63 (in figures 14, 15, 16, 17, 19 and 27) are due

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### Appendix I. Consecutive Labelling of Penny Master Die Types

A revision of the labelling system used for penny master die types in previous articles in this Journal is summarised below. This employs consecutive numbering of obverse die types and consecutive letters for the reverse die types beginning with George V pennies. There are no changes for George V pennies. For George

VI obverses add two, for Elizabeth obverses add five, and for the kangaroo reverse design the letter designation should be increased by three (e.g. George VI penny dies 1+A become 3+D). The changeover to a consecutive labelling approach for the pennies, makes this consistent with that used for halfpennies in volume 9.<sup>11</sup> The original approach for pennies<sup>24</sup> followed the lead of Peck<sup>25</sup> and Freeman<sup>26</sup> for labelling British bronze coinage by restarting number or letter designations anew with each major design change. While this certainly makes sense for British Victorian coins where numerous

<b>Penny Master Die Types</b>			
<b>Obverses</b>			
<u>New</u>	<u>Old</u>	<u>N<sup>o</sup>. of Beads</u>	<u>Comment</u>
1	1	177	'English' die, final upright of N of OMN between beads.
2	2	178	'Indian' die, final upright of N of OMN with bead.
3	1	156	First George VI type, upright of P of IMP aligned with bead.
4	2	148	'Bombay' die, upright of P of IMP aligned between beads.
5	3	155	Last George VI type, IND:IMP: omitted.
6	1	116	'Melbourne' die, I of GRATIA between beads.
7	2	117	'Perth' die, I of GRATIA aligned with beads.
8	3	120	'Melbourne' die, F:D: added, I of GRATIA aligned with bead.
9	4	116	'Perth' die, F:D: added, I of GRATIA aligned between beads.
<b>Reverses</b>			
<u>New</u>	<u>Old</u>	<u>N<sup>o</sup>. of Beads</u>	<u>Comment</u>
A	A	174	'London' die, AL aligned with beads, IA between beads.
B	B	177	'Birmingham' die, A IA aligned with beads, L between beads.
C	C	179	'Calcutta' die, A IA between beads, L aligned with bead.
D	A	81	'Roo' type, U of Australia, P of penny aligned with beads.
E	B	77	'Bombay' type, elongated border beads.
F	C	77	'Bombay' type, shorter border beads.
G	D	81	'London' type, P of PENNY aligned between beads.
H	E	81	'Melbourne' type, as D but U misaligned with beads.
I	F	81	'Perth' type, uprights of NN of PENNY aligned & between beads.

die types are known and new discoveries are occasionally made, it is not necessary for Australian bronze. It should also be mentioned that other numismatists<sup>27</sup> have employed consecutive labeling of these die types for several years now, so this belated change also helps consistency. In the descriptions below, the pointing alignment of the uprights of letters in the legend with border beads is used to distinguish die types. Detailed photographs for the different master die types (using the old labelling system) are available in references 12 and 24.

## Appendix II. Die State Progression in Perth Mint Proofs

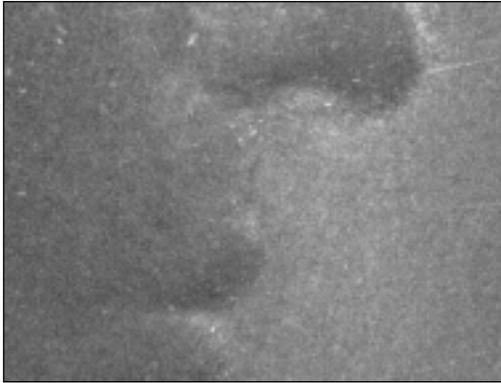
As if the complexity of the Perth Mint proof dies alone were not enough, different die states come into the picture. While subtle die markers such as scratches in the fields are quite distinct on the proofs and are replicated on many coins, they can also reveal a progression of different die states, especially when coupled with varying degrees of sandblasting. Worth noting is the fact that four of the five dies which have been identified as exhibiting die state progressions appear to have been used on proofs made during the year 1959, a time of very active experimentation with proof dies at the Perth Mint. Perhaps the best and most interesting example of this occurs on the proofs with Obverse 8P57\*, easily identified by the crossed file marks in the border beads (Figure 16). On Obverse 8P57\* a progression of die scratch lines in the word ELIZABETH and the hair ribbon at the back of the head in going from partially sandblasted fields to heavily sandblasted fields (Figure 28 and table 12),

clearly shows that Obverse 8P57\*(1) was used for striking 1957 dated proofs, then 1958 coins as obverse 8P57\*(2), and finally after additional heavy sandblasting, more 1957 proof coins with Obverse 8P57\*(3). This apparent striking of proofs in reverse date order is made clear when we observe a lack of sandblasting in the fields (especially in front of the mouth) on 8P57\*(1) compared to the heavily sandblasted 8P57\*(3). Because the intermediate die 8P57\*(2) was used to strike 1958 dated proofs *before* being heavily sandblasted and *then* was used to strike 8P57\*(3) proofs dated 1957, the striking in reverse date order is clearly established.

The reverse die FP57\* was used on 1957 dated proofs, including coins paired with obverse dies 6P57, 7P57\*, and 8P57\* (above), and is identifiable by a line in and across the left side of the beads above ALI of AUSTRALIA (see Figure 17). Again, the degree of sandblasting varies, although not as much as for 8P57\*, and other line features can be used to follow the die state progression as shown below, in Table 13. These features include a series of lines between the 7 of the date and the border, a curved line below LIA of AUSTRALIA, a line in and to the right of the kangaroo's ear, curved lines below RA of AUSTRALIA and between the star and arm of the kangaroo, among others.

Similar die state progressions have been noted on other Perth Mint proof dies and are briefly described below:

**Obverse 7P57\*** which is also paired with FP57\* exhibits a die state progression via lines, especially with lines between DE



8P57\*(1)



8P57\*(3)

Figure 28. Die state progression of 8P57\* showing additional sandblasting.

of DEI. For example, a sequence can be followed as 7P57\*(1) with crossed lines connecting DE of DEI, 7P57\*(2) with crossed lines connecting D of DEI and a line below, and 7P57\*(3) without the crossed lines and different lower line from the base of the D continuing through the E of DEI.

**Reverse AP59\*** which is paired with the 1958 obverse 3P58 and all 1959 obverses, exhibits a die state progression as follows: AP59\*(1) paired with 3P58 shows a curved, diagonal line between I of AUSTRALIA and the kangaroo's back. AP59(2) paired with 1P59, 2P59 and some 3P58, shows a curved line below LIA of AUSTRALIA.

**Obverse 1P63\*** exhibits a progression of die states as follows: 1P63\*(1) shows a curved line from inside the letter D to the top of the letter E of DEI; also a pair of lines from the top to the stem of G of GRATIA. 1P63\*(2) appears to be transitional, showing a weak line in DE of DEI and different lines in G of GRATIA now

upward through the top of the G. 1P63\*(3) shows no sign of the line in DE of DEI nor the upward lines through the top of the G of GRATIA, but has a distinctive curved, upward line through TIA of GRATIA.

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		<u>BETH</u> line	<u>BETH</u> line	<u>BETH</u> line	<u>BETH</u> dot	ribbon line
1957	8P57*(1)	good	good	good	good	good
1958	8P57*(2)	none	good	weak	visible	weak
1957	8P57*(3)	none	none	none	v. weak	weak

Table 12. Details of die state progression of 8P57\*

	7 lines	<u>ALIA</u>	'roo's ear	<u>STRA</u>	arm
FP57*(1)	good	good	good	none	none
FP57*(2)	none	none	good	good	none
FP57*(3)	none	none	none	none	good

Table 13. Details of die state progression of FP57\*.

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