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Publication of the
NUMISMATIC ASSOCIATION OF VICTORIA
(Incorporating the Numismatic Society of Victoria, founded 1914,
and the Association of Australian Numismatists (Melb.), 1939)

NUMISMATIC ASSOCIATION OF VICTORIA

Founded 1946

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NUMISMATIC ASSOCIATION OF VICTORIA
P.O. Box 615D, G.P.O. Melbourne

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Contents

Cover: Numismatic Society of Victoria medal of Bert Hinkler, 1928

POST-WAR MODERN GREEK CURRENCY
PART TWO: 1964 TO 2002

By Bill Xynos, NAV 1112[1]

PROLOGUE

While the conservative governments were monitoring and fragmenting communism in the country, democratic values were still affected. The elections of 1963 marked the beginning of an era - a social revolution influenced by the centre-left elected government; only to be over-shadowed by the 1967 military dictatorship. Ever since, the country was into deep decline emphasised by the strong continuation of persecuting freedom of speech and the right of association until the November 1973 brave uprising of students at the Polytechnic School. This was the catalyst for the decline of the junta, which was ended by the July 1974 Cyprus invasion. Following these events, the popular recall of past politicians rejuvenated the political climate and the democratically-held 1974 elections restored democracy in Greece.

Numismatically, Greece experienced changes to its currency with the issuance of three main series of banknotes starting from October 1964. These signified the improvements made by the designers and engravers, and of the capacity for the Bank of Greece in producing some of the best notes the country has ever seen. This also applies to the coinage, especially with the themes used from the 1973 series. As we'll see, the issues continued to be influenced by elements from the nation's proud history, its ancient civilisation, and the Independence War of 1821.

Finally, the country faced its most difficult decision by replacing the drachma, a currency unit that had prevailed since ancient times. By becoming one of the twelve partners in the European Economic Union, Greece had to endure this hard decision but, at the same time, became an integral part of the common European currency, the Euro.

As a matter of clarification, the first part of the main article included the year of 1964 due to issuance of the last three coins with King Paul's effigy.

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1 Bill presented this talk to the NAV at meeting No 905 on 19 November 2004. Part one was published in the 2004 edition of Australian Numismatist.

But with the King's death in March 1964 and the issuance of the newly designed banknote series in October, it's my view that the issuance of the blue 50 drachmas banknote in October should be the start of this article.

YEAR 1964

As we've seen previously, the country's economic stability in the early 1960s was achieved by the drachma's devaluation ten years earlier. While the export of primary produce and infrastructure improvements in the industrial sector, services and tourism were evident, the nation wasn't 'out of the woods' yet as years of past economic mismanagement and increased military aid placed enormous debts to the economy. To make matters worse for the conservative-right government, its past unpopular domestic policies gave the chance for the electorate, at the 3 November 1963 elections, to break this 11-year political grip by allowing George Papandreou's Unified Centre Party to form government.

Following King Paul's death, the Royal Throne was passed to his son, Constantine II (a grandson of Constantine I). Born in Athens in 1940, his role to Greek politics interfered with the Papandreou administration.

Numismatically, the Bank of Greece embarked into the design of a new set of high quality banknotes. This series was progressively released for the next six years. Printed by the Bank's printing facilities, these have a pleasant new look and their paper carries the watermark of the Head of an Ephebus, or a Youth (similar to head of the statue of Hermes of Praxiteles[2]). The first banknote is the **50** drachmas and on the front, the portrait of **Arethousa[3]** and a **Greek galley[4]** are depicted. On the back, the note shows scenes from old and modern **shipyards**[5] (Pick No 195a).

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2 Source: Plate No 7, *Olympia - Complete Guide*, by Sp.Fotinos, 1971.

3 In mythology, Arethousa was a goddess of spring waters and her effigy is virtually identical to the one depicted on a silver tetradrachm coin circa 446/445 BC.

4 The Greek galley was a formidable naval unit with its speed and manoeuvrability proving important in attacking the Persian fleet.

5 The wooden boat building site is a common site across many Greek islands and ports, the modern shipyard image is most likely that from the Skaramangas shipyards near Piraeus.

Figure 1 – 50 Drachmas banknote, Bank of Greece, 1.10.1964
[Pick No 195a] (shown at 60%)

The shipyards represent part of the maritime infrastructure, so important to the economy and traditional life of the country. The banknote has shades and colour variations of blue and is dated 1 October 1964.

On the coins, King Constantine II's wedding with Danish Princess Anne-Marie in 1964 was celebrated with the striking of the silver 30 Drachmas coin in Bern. Engraved by Falireas, the effigies of the Royal couple appear on the obverse with the circled inscription: 'Constantine : Anne-Marie Royals of the Greeks'.

Figure 2 – Royal Wedding 30 drachmas silver coin, Kingdom of Greece, 1964
[Krause No KM 87]

On its reverse, is the impressive Byzantine-style design of a double-headed eagle holding ecclesiastical instruments. Around the rim, there is the inscription of 'ΙΣΧΥΣ ΜΟΥ Η ΑΓΑΠΗ ΤΟΥ ΛΑΟΥ', that translates to 'The love of the people is my strength'. The coin weighs 12 grams and was also minted in Kongsberg (Norway) with equal quantities of one million for each mint, according to Krause & Mishler and also Darousos. Pylarinos and Georgiadis both claim an equal quantity of two million. My observations confirm the references' claims that this coin has varieties, such as the sharpness of the eagle's hooked beak and the Princess's hairstyle.

YEAR 1965

A year after the death of King Paul, the Bank decided to issue a commemorative proof set of coins (**10** & **50** lepta, **1**, **2**, **5**, **10** and **20** drachmas). As far as which mint was instructed to strike these coins, Darousos claims that they were struck at the Prague Mint and carried the mintmarks of Paris Mint, but Pylarinos and Georgiadis both claim that they were struck at the Vienna Mint. As to the quantities, Krause & Mishler claim that 4987 sets only were released. These coins were never released into normal circulation.

YEAR 1966

With the minting of new coins (the four basic cupro-nickel coins of **50** lepta, **1**, **2** and **5** drachmas), the effigy of the new king was introduced. Minted in Prague, they had a corresponding mintage of 30, 20, 10 and 12 million.

Figure 3 –1, 2 and 5 Drachmas coins, Kingdom of Greece, 1966
[Krause Nos KM 89 to 91]

Engraved by B Falireas, the reverse design does not differ much from that for the King Paul coinage, but the Royal crest was engraved in a finer style and the lettering style used is similar to that found in ecclesiastical texts, Byzantine and Greek Orthodox paintings. In that year, the aluminium holed **10** and **20** lepta coins were minted in Prague in quantities of 12 and 8 million correspondingly (Krause & Mishler). Still, their designs haven't changed.

On the banknotes, the Bank released the second note, that of the **100** Drachmas. This ceramic-red note has the portrait of **Demokritos**[6] and a design representation of the **atomic structure** on the front. On the back,

[6] Demokritos was a Greek philosopher (b c. 460 BC; d c. 370 BC) who conceived the development of the atomic theory of the universe.

a lovely view of the **Academy of Athens**[7] is shown. Dated 1 July 1966, this note has the signature of Zolotas as the Bank President, it was reissued 15 months later with the signature of Galanis as the Bank President.

Figure 4 – 100 Drachmas banknote - first issue (top) (shown at 60%)
Dates and signatures of first (left) and second (right) issues (shown at 150%)
The Bank of Greece, 1.7.1966 and 1.10.1967 [Pick Nos 196a and 196b]

Back to the political front, the popularity of the Papandreou administration was strong with its policies focused on balance, moderation, political stability and equality in wealth. Yet, the instability in Cyprus and the civil unrest were becoming intolerable. The attempted military dictatorship in Cyprus shifted the delicate balance among the three guaranteeing countries (Great Britain, Turkey, and Greece) from the chance of the island being united with Greece to the opportunity of becoming independent. This change of policy was reflected by Great Britain's actions in subduing the local resistance harshly. The Greek administration was pressured to consider intervention as guardian.

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[7] The Athens Academy was build by the Danish architect Hansen from 1859 to 1866 but, as an institute, it was established in 1926 for the purpose of propagating the knowledge of science, arts, agriculture and human studies.

21 APRIL 1967 – MILITARY COUP D'ETAT

Since its election, the Papandreou administration had carried out policies that were unpopular with its political opponents. So, as the May 1967 elections approached, the chances of being re-elected were becoming stronger. However, the long dispute between Papandreou and the Royal Palace created a political vacuum. With past political enemies conspiring to destabilise his government despite the popular rallies of support, a military uprising by a group of middle-ranking officers led by Colonel G Papadopoulos took place on 21 April 1967. The government was overthrown by force, the Constitution was abolished, and democratically elected parties were outlawed.[8] Nevertheless, the King capitulated and accepted the establishment of the new military regime.

Numismatically, I'm uncertain as to if the actual striking date for the (Prague-minted) **1** and **2** drachmas coins was prior to or after this political event, but it appears that design changes weren't enforced. Both coins were struck in quantities of 20 and 10 million correspondingly. On the banknotes, the Bank released the second issue of the **100** Drachmas note dated 1 October 1967, with the signature of Galanis as the new Bank President.

On 13 December 1967, the Royal Palace attempted a counter-coup against the regime but failed. Soon, the King was forced to leave the country and went into exile to London and Papadopoulos assumed the role of regent.

YEARS 1968 TO 1973

Figure 5 – 10 Drachmas coin, Kingdom of Greece, 1968 [Krause No KM 96]

8 During the dictatorship's period, liberal and political activists were monitored, many of whom were captured, interrogated and tortured. The islands of Tzia and Makronisos were two of the most infamous places where activists were imprisoned.

In **1968**, the new **10** drachmas coin was struck with the King Constantine II's effigy and virtually carrying the same design elements noted on the 1966 coin series so far. Engraved by Falireas, this coin was the only one minted in that year with a quantity of 40 million. In **1969**, the aluminium holed **10** and **20** lepta were minted in Prague at 20 million each. Engraved again by Falireas, these were the only ones struck in that year.

In September, Papadopoulos assumed additional powers by taking the office of the Prime Minister and organised a pretend referendum for introducing a new constitution.

Figure 6 – 500 Drachmas banknote, The Bank of Greece, 1.11.1968 [Pick No 197] (shown at 60%)

The Bank released the third of the 1964 series banknote of **500** Drachmas (Pick No 197). Dated 1 November 1968, this green note has design representations from Greek mythology and ancient Greek architecture, the *Elefsina mural*[9] and the *Knossos mural.*[10]

In **1970**, the four basic coins were minted in Prague with the same design elements, and with corresponding quantities of over 10, 7, 7, and 5 million. Also, the same mint issued commemorative coins for the third anniversary of the regime. It struck 100 000 of the silver **50** and 50 000 of the silver **100** Drachmas coins. Further, it minted 10 000 of the **100** Drachmas coin in gold (32.26 g) and 20 000 of the smaller **20** Drachmas coin in gold

9 The Elefsina mural depicts Demetra with an offering to Triptolemos, protected by Persefoni. Demetra was the goddess of agriculture. Triptolemos was King of Elefsina's son. Persefoni was Zeus and Demetra's daughter. This mural is dated around 440 BC and originated from the Temple of Elefsina; it is now located at the Athens National Archaeological Museum.

10 The Knossos mural originates from the Royal Palace of` Knossos, Crete.

(6.45 g). As far as their designs are concerned, the reverse shows identical 1954 designs of the Royal emblem or crest and the circling inscription of 'Kingdom of Greece'. On the the front the effigy of the King is replaced completely by the regime's symbols of the phoenix rising from the flames and the soldier. Also, the date of the coup d'etat (21 April 1967) is shown.

Figure 7 – 1000 Drachmas banknote, The Bank of Greece, 1.11.1970 [Pick No 198b] (shown at 60%)

Finally, the Bank issued the fourth and last note of this series in November 1970, the brown **1000** Drachmas note (Pick No 198b) depicting on the front the mythological god **Zeus**[11] and the **Epidavros theatre**[12], and on the back a **woman in local island dress** with the port of **Hydra**[13] in the background. Interestingly, this note has two types of watermarks: the common 'Head of a Youth' and the scarce 'Head of Aphrodite'.

Figure 8 – 5 Drachmas coins, Kingdom of Greece, 1971 [Krause No KM 100]

11 Zeus was in Greek mythology the father, ruler and protector of gods and men.

12 The Epidavros theatre was build around the 4th century BC and is classed as a fine and well-preserved ancient monument.

13 The island of Hyrda is just off the eastern tip of the Argolis peninsula of the Peloponnesus and became a seafaring and maritime trade centre under Turkish rule and during the War of the Greek Independence in 1821.

In **1971**, the **5** lepta aluminium holed coin made its last appearance in the history of the Greek coinage and one million of them were struck. Also, the **10** and **20** Lepta were struck with corresponding quantities of approx. 5.9 million and 4.1 million. These three coins (KM 77 to 79) were minted in Athens and the border variations around the thinner hole that I've noticed for some time confirms the mint change.

In that year, the copper-nickel **50** lepta, **1**, **2** and **5** drachmas coins were struck, complemented by the **10** drachmas coin with the same basic designs. On the obverse however, the 'royal arms/crest' design was replaced by the 'rising phoenix from the flames and the soldier', the symbols of the regime. Surprisingly, on the reverse, the King's effigy was still used but with minor variations to the hairstyle. The corresponding quantities were 11, 14, 11, about 4, and 0.5 million. These coins were engraved by Falireas.

Figure 9 – 20 Drachmas coin, Kingdom of Greece, 1973 [Krause No KM 111]

During **1973**, the five coins were complemented by the Athens-minted **20** drachmas coin, engraved by Perantinos. It has the same reverse design but the obverse design of 'Selini' was taken from the earlier 1959 silver 20 drachmas coin, struck under King Paul's reign. The struck quantities were approximately 9.3, 6, 7.9, 3, 0.54, and 3.1 million correspondingly. The five coins have lettering variations and the new 20 drachmas coin has border variations.

Figure 10 – 10 and 20 Lepta aluminium coins, Kingdom of Greece, 1973 [Krause No KM 102 and 104]

The **10** and **20** lepta aluminium coins were also minted in Athens, but with thicker planchets, smaller in diameter, and with no holes. They now have

designs of the regime's symbols on obverse (rising phoenix, flames and soldier), and corresponding reverse designs of 'dolphins-trident' and 'olives'.

By now, the regime was mismanaging the economy and rumours of currency movement abroad became stronger. With this economic instability, cash reserves were limited and loans for local requirements were reduced. It wasn't long until the rising inflation and growing unemployment confirmed the country's economic decline and increased dependence on foreign aid.

Politically, moves behind the scenes by the colonels attempted towards partial restoration of the democracy as legislation was passed for providing for the junta's perpetrators full judicial immunity from any future judicial actions. Also, with a decree on 1 June, the junta abolished the monarchy and replaced it by a republic; this was confirmed by the 29 July referendum. Papadopoulos obtained full executive powers by legislation and placed Spyros Markezinis as the leader of the government.

Figure 11 –50 Lepta, 1, 2, 5, 10 and 20 Drachmas coins, Hellenic Republic, 1973 [Krause Nos KM 106 to 110, 112]

Numismatically, the Athens Mint released the second series of coinage. The junta's represented designs were simplified by the disappearance of the soldier and the inscription of 'Hellenic Republic'. This fact confirms that most likely, these coins were issued after July 1973. Engraved by Stinis and Perantinos, the coins incorporate ancient Greek and neoclassical building elements. Specifically, the aluminium coins of **10** and **20** Lepta were minted with the new design. Also, the coins of **50** Lepta, **1** and

2 Drachmas are also introduced in brass and they have designs of a neoclassical ceramic tile and of the owl for the 'drachma' coins. The **5** and **10** Drachmas coins used designs of the flying horse **Pegasus**[14]; whereas the **20** Drachmas coin carries the beautiful effigy of Athena. All eight coins have the corresponding mintages of approx. 10, 12.3, 44.6, 36.8, 40.4, 29.9, 16.9 and 17 million.

17 NOVEMBER 1973 – DECLINE OF THE MILITARY JUNTA

The anti-junta demonstrations by students, academics and union workers was growing despite the harsh methods used by the internal military and police forces for purging them. Systematic searches and imprisonments followed by tortures continued too. The climax of this defiance was continuous demonstration inside the locked Polytechnic School (located in the heart of Athens) in early November 1973 by a core of students. Defying the junta's orders for surrender, they barricaded themselves inside the School and, by establishing a rudimentary radio station, they called upon the capital's civilians to organise protest rallies, aiming at toppling the junta by popular demand and restoring the lost democratic rights. But on the evening of the 17th, following orders, tanks crashed through and rolled over the gates where students were holding on and protesting. The horrible event was recorded by a foreign cameraman and the tape was smuggled abroad and broadcasted.

This caused an outcry across many European countries and, for the next few days, the reactions alarmed the military junta to its core. With speedy internal developments, Papadopoulos was toppled from within the junta and replaced by the even more repressive Brigadier General D Ioannidis, the head of the much-feared military police. Shortly afterwards, this move failed and Colonel Gizikis became the new President leading a new moderate military government.

JULY 1974 – HELLENIC REPUBLIC ESTABLISHED

In July 1974, the bitter dispute between Greece and Turkey over the Aegean Sea's oil rights, gave the chance for Ioannidis to launch a coup in Cyprus to

[14] In Greek mythology, Pegasus was a mythological flying horse that emerged from the site of the Acropolis when Poseidon and Athena argued as to the ownership of Attica.

depose archbishop Makarios III, president of Cyprus since 1960. Makarios survived the assassination attempt, but the coup triggered the Turkish invasion of the island's northern part. The Turkish army occupied almost 40 percent of the land area and Ioannidis's response was to mobilize civilians for war with Turkey. However it proved to be chaotic, as the regime was isolated internationally and bitterly unpopular domestically with the chance of the new armed recruits turning against it. Soon afterwards, the junta collapsed in complete disarray and progressively, exiled political figures returned from abroad.

Of these, the veteran politician K Karamanlis returned from Paris and by popular demand accepted the position of the prime minister. On 1 August, he announced the reintroduction of the 1952 constitution as a provisional measure where the references to the monarchy would be replaced to that of the presidency. Still, the government would have full control over the armed forces and the judicial system would be free.

The referendum of 8 December 1974 resulted in the abolishment of the Royal Monarchy (69.3% in favour) and the reinstatement of the Presidential Democracy (Second Republic). On the 23rd of that month, the draft of the Cabinet-endorsed new constitution was officially published and enacted. From that year until 2002, the series of elected conservative and social democratic administrations improved the economic conditions but were unable to control inflation and the public sector debt.

Numismatically, the coinage of regular issues commenced from 1976 and continued on a biannual basis. The Athens Mint was the sole place for minting the Greek coins. For unknown reasons, coins were not struck in 1996. Finally, from 1982, the coins assigned for multiple denominations of the drachma had the inscribed 'official' word of ΔΡΑΧΜΑΙ changed to the 'colloquial' word of ΔΡΑΧΜΕΣ.

Figure 12 – 10 and 20 Lepta aluminium coins, Greek Republic, 1976 [Krause Nos KM 113 to 114]

The **10** and **20** Lepta coins were modified from the early pseudo-republic 1973 designs and were minted in 1976 (mintage of 2.04 and 2.5 million)

and 1978 (mintage of about 0.80 million each). The latter year was the last time these denominations would appear on Greek coinage. The first coin was engraved by Papagiannis and Orfanos and the second coin by Perantinos and Orfanos; their reverses have designs of the **charging bull** and **bust of stallion** correspondingly, with the crest of the Greek Republic on their obverse.

Figure 13 – 50 Lepta, 1 and 2 Drachmas coins, Greek Republic, 1976
[Krause Nos KM 115 to 117]

The brass coins of **50** Lepta, **1** and **2** Drachmas have design portraits of the heroes of the 1821 War of Greek Independence, **Botsaris**[15], **Kanaris**[16], and **Karaiskakis**[17]. The first coin was engraved by Perantinos and the

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15 Marcos Botsaris (b 1790, Souli; d Aug 1823, Kefalovryson, Karpenisi) was a hero of the 1821 War of Greek Independence. On numerous occasions, his attacking and defensive actions against the Ottoman Turks and the rebel forces at Ioannina were strategically proven as brilliant; so much so that he was elevated to the second-in-command of the Greek forces of the western mainland. He died from a bullet in a battle against superior enemy forces which he managed to defeat.

16 Kanaris (b 1793, island of Psara; d 1877, Athens) was famous for organising the burning of the flagship of the Turkish fleet that was anchored at the port of the island of Chios in mid-June 1822. This prevented the reinforcements of the Dramalis's Turkish troops stationed at Dervenakia in Pelloponesus. He died of illness at his office while on duty as Prime Minister for the third time.

17 Karaiskakis (b 1780?; d 1827) was a rebel and since the battle of Agrafa in 1823, he became famous for his rebellious stance and heroism during the War of the Independence. Against allegations of treason by jealous captains and politicians (December 1823), he continued fighting. In early 1825, facing the advance of Kioutachis's large Turkish army towards the besieged Messologgi, Karaiskakis assisted the city and then attacked and inflicted considerable losses to Kioutachis. Nevertheless, the city fell and soon, so did Attica and the Acropolis was besieged. Karaiskakis and Kolokotronis combined forces and after obtaining the army's

remaining coins by Papagiannis and Orfanos; and all were minted from 1976 to 1986. The **50** Lepta coin was last minted in 1986.

Figure 14 – 1 and 2 Drachmas coins, Greek Republic, 1988 [Krause Nos KM 150 and 151]

The **1** and **2** Drachmas coins continued to be struck from 1988 to 2000 (except 1996) but in copper. Engraved by Kazakos, they have changed designs from the 1976-1986 series and have portraits of heroines of the War of Greek Independence (1821), **Bouboulina**[18] and **Manto Mavrogenous**[19].

Figure 15 – 5, 10 and 20 Drachmai, Greek Republic, 1976 [Krause Nos KM 118 to 120]

Moving to the copper-nickel **5** and **10** Drachmas coins, these were struck 1976 to 2000 (except 1996) and survived with no design changes since their

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command from the reluctant politicians, he attacked Kioutachis's forces but was killed in battle at the relief of the siege of the Acropolis.

18 Bouboulina (b 1775, Constantinople; d 1825, island of Spestai) dedicated her family and its resources for supporting the 1821 War of the Greek Independence and participated at the siege of Tripolis with her own army and the siege of the port of Nafplion by using her own fleet of ships.

19 Manto Mavrogenous (b ?; d 1828) was a heroine of the War of the Independence. Upon its commencement, she went to Mykokos and raised its inhabitants to revolt against the Turkish oppression. From her own finances she organised a small army and two ships that were very active against the Turkish forces and fleet.

introduction. These coins have the corresponding portraits of **Aristotle**[20] and of **Demokritos**. The copper-nickel **20** Drachmas coin has the portrait of **Perikles**[21] and was minted in that style until 1988. These three coins were engraved by Papagiannis with the additional contributions from Orfanos, except for the first one by Nicolaou. In 1990, the Mint issued a new design with the portrait of **Solomos**[22], engraved by Kazakos and was struck in nickel-bronze. This last coin deviates from the previous issues when its design is studied.

Figure 16 – 50 Drachmas, Greek Republic, 1980 [Krause No KM 124]

The **50** Drachmas coin was introduced in 1980 with the portrait of **Solon**[23]. Engraved by Sampatakos, it again has different designs from the 1976

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20 Aristotle (d 384 BC; d 322 BC) was a great philosopher and scientist of his era. He was a student of the philosopher Plato and member of his academy for 20 years until his death. In 343 BC, upon invitation by King Phillip of Macedonia, Aristotle taught his son Alexander. Surviving records of his works testify to his enormous contribution.

21 Perikles (b 490 BC; d 429 BC) was a politician and a general of the city of Athens. As a leader of the state in 443 B.C., he focused towards the strengthening of the naval forces and of its trade with other states. His legislative changes and work creation (e.g. building of the Parthenon) were some of his important contributions.

22 Solomos (b 1798, Zakynthos; d 1857, Corfu) is the national poet. Educated, he was influenced by the rapid changes in Europe and soon in Zakynthos, he immersed himself with writing poetry. Initially using the Italian language, he was influenced by Trikoupis in 1822 to use the mother language, ie Greek. His inspiration led him to write poems and writings on the traditional songs. His poem 'Hymn to Liberty' was written in the spring of 1822. Part of this poem is used today as the national hymn.

23 Solon (b 639 BC; d 559 BC) was a traveller and a trader, and thus expanded his knowledge on the laws, politics and economic life of most cities and states he travelled. Later, he became a legislator, politician and poet. Following the island of Salamina's annexation to the state of Athens, Solon was declared a noble with executive powers for resolving disputes between aristocracy and lower classes. His work proved invaluable.

series and was minted until 1984. It was replaced by the nickel-brass coin with the portrait of **Homer**[24] (KM 147). Engraved by Kazakos, it lasted until 1994.

Also, in 1994, two new coins were struck in brass that celebrated the 150th anniversary of the Constitution (engraved by Sampatakos and Nikolaou) and in 1998, another two were also struck in brass with portraits of the national poet Solomos and the 1821 War of Independence hero, Rigas Feraios (engraved by Stamatopoulos).

Figure 17 – 100 Drachmas, Greek Republic, 1990 [Krause No KM 159]

The **100** Drachmas brass coin has the portrait of **Alexander the Great**[25] and **the star emblem** found at the archaeological excavations in Vergina. Engraved by Sampatakos, this was the most common circulating coin; it was introduced in 1990 and was struck until 1994.

The above coins were the commonly circulating coins but during that period, many historical and sporting events provided the opportunity for the Mint to strike limited mintages of other coins. Examples are the '1981-1982 European Athletic Games' and the '2500 Years of Democracy' commemoration in 1993.

Also, six different designs of 500 Drachmas '2004 Olympic Games' coins were issued and circulated after the IOC's decision for Athens to organise the next Olympics. These coins were the last circulating coins prior to the

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24 Homer (b circa 1050 BC) was an epic poet of ancient Greece and is famous by his works of Iliad and Odyssey.

25 Alexander the Great (b 356 BC, Pella; d 323 BC, Babylon) was King of Macedonia from 336 BC and acclaimed as one of the greatest military strategists and leaders of the ancient world. By capturing the Greek states and uniting them under his control, he embarked on an expedition against the Persians that would give him the unique opportunity of expanding *Hellenism* across many states and regions, of liberating many cities and unifying them under one vast and multicultural empire.

introduction of the Euro monetary unit and currency throughout the participating 12 countries, including Greece.

COIN VARIATIONS

Coin variations have been noted on the following coins:

- 1982 1 Drachma 'Kanaris' coin has a dot after the date's digit of '1';
- 1988 50 Drachmas 'Homer' coin has a spot over the mast of the ship;
- 100 Drachmas 'Alexander the Great' coin has border variations.

SECOND REPUBLIC'S NEW BANKNOTE SERIES

The Bank of Greece introduced a new series of banknotes with their style and colour similar to the 1964-1970 series. They have the watermark of the Head of Charioteer Polyzalos of Delphi.

Figure 18 – 50 and 100 Drachmas banknotes, The Bank of Greece, both dated 8.12.1978 [Pick Nos 199 and 200] (shown at 60%)

The **50** Drachmas note depicts on the front the mythological god of the seas **Poseidon** and on the back, the portrait of **Manto Mavrogenous**, a courageous woman who dedicated most of her life and fortune into building

a small navy for attacking the Turkish Fleet during the 1821 War of Independence.

The **100** Drachmas note depicts on the front the goddess **Athena** and on the back, the writer **Korais**[26].

Figure 19 - 500 Drachmas banknote, The Bank of Greece, 1.2.1983 [Pick No 201] (shown at 60%)

The **500** Drachmas note depicts on the front a portrait of **Kapodistrias**[27], the first Governor of Greece, and his birthplace and on the back, a **fortress** overlooking **Corfu (Kerkyra**).

The **5000** Drachmas (**Kolokotronis / Karytaina fortifications**[28]) note was issued in March 1984 and carried similar design elements to the 1000 Drachmas note of 1970.

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26 Korais (b 1748, Smyrna; d 1833, Paris) was an influential thinker of the times who dedicated his resources for preparing the ground among his friends for supporting the Greek independence cause. Evidence was the material support in medicine, clothing and arms, including the substantial amount of over 1.5 million francs. He was of the view that the churches and communities should be educated before the liberation takes place in order for the people to decide on their fate and predicted that liberation would commence around 1850.

27 Kapodistrias (b 1776, Corfu; d 1831, Nafplion) was a Greek statesman. An influential diplomat under the Russian Emperor Alexander I, he pressed hard for the recognition of the Greek cause for independence through diplomatic circles with limited success. Elected in April 1827 by the National Convention, he became the first Governor of Greece. He was assassinated in 1831 as his concepts of running a government weren't accepted by political enemies and powers abroad.

28 Kolokotronis (b 1770, Messenia; d 1843, Athens) was a patriot and a prominent figure in the War of Greek Independence. His brilliant action was in trapping Dramali's Ottoman army in Aug.1822. He defied the central government and was

Figure 20 – 5000 Drachmas banknote, The Bank of Greece, 23.3.1984, 120 x 40 mm [Pick No 203] (shown at 60%)

Figure 21 – 1000 Drachmas banknote, The Bank of Greece, 1.7.1987 [Pick No 202] (shown at 60%)

Finally, the Bank issued the **1000** Drachmas depicting on the front the mythological god **Apollo**[29], and on the back, the ruins of the **Olympian**

imprisoned in Hydra but was released for defending Morea against the Egyptians. The Karyataina fortifications were improved by Kolokotronis as he realised the strategic importance its position had as part of liberating Morea and repelling Imbrahim's Ottoman army.

29 In ancient Greek religion, Apollo was the god of light, truth and prophecy. He made men aware of their own guilt and purified them of it. He presided over religious laws and the constitutions of the cities, as well as communicating through prophets and oracles his knowledge of the future.

temple of Hera[30] and **Myron's discus thrower** sculpture, both kept at the Vatican museum in Rome.

Figure 22 – 10 000 Drachmas banknote, The Bank of Greece, 16.1.1995 [Pick No 206] (shown at 60%)

The Bank was planning to introduce the new denomination value of **10 000** Drachmas note. However, this required a larger note that the 5 000 Drachmas note, both in width and length, and this was a concern. Thankfully, the recent technological improvements with banknote designs and security features gave the Bank the ideal opportunity in solving the issue of size, and of introducing the necessary security (anti-counterfeiting) requirements needed for such a high-denominated banknote.

So, in January 1995, the new note was released. It portrays on the front **Dr Papanikolaou**[31], famous for his work on the development of a smear test for the prevention of cervical cancer. On the back, it portrays **Asklepios**, regarded today as the father of medicine and in ancient times, a very skilful physician. This note has radical new designs with enhanced security features.

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30 The temple of Hera was one of the most ancient temples in all Greece. Constructed around 650 BC, its style is Doric with six columns in the façade and 16 to the sides. The columns were constructed in wood, which were replaced by conchiferous stone. There is no similarity among them as the constructor of the time used his own style on the column.

31 Dr Papanikolaou (b 1883, Kymi-Evoia; d 1962, Miami) was an internationally acclaimed doctor and biologist. His Pap smear test is based on his work at the New York Hospital and the Cornell University.

Figure 23 – 200 Drachmas banknote, The Bank of Greece, 2.9.1996
[Pick No 204] (shown at 60%)

The Bank issued in September 1996 the **200** Drachmas orange note portraying another hero of the 1821 War of Independence, **Rigas Feraios**[32] and a scene of a *secret school* during the occupation. The design is different from the other notes and it's lithographed. I assume that this issue was released for replacing the 100 Drachmas 'Alexander the Great' coins. The banknote has as a watermark the bust of Philip of Macedonia.

Figure 24 – 5000 Drachmas banknote, The Bank of Greece, 1.6.1997, 95 x 35 mm
[Pick No 205] (shown at 60%) (cf figure 20)

In July 1998, the Bank released the 5000 Drachmas (Kolokotronis / Karytaina) note with similar designs to the March 1984 note but in reduced

[32] Rigas Ferraios-Venestinlis (b 1757, Velestino-Thessaly; d 1798, Belgrade-Ottoman Empire) is considered as the first martyr of the Greek Revolution for Independence. A well-educated man with many connections with the Austrians, he was influenced by the French Revolution and concentrated into supporting the Greek cause. However, he was betrayed to the Austrians who exchanged him to the Turks.

size, relatively comparable to the 10 000 Drachmas note. This new note also carries enhanced security features.

As we've seen, the designs of the banknotes and coins draw elements from the country's history (architecture, philosophers, statesmen from ancient Greece, and scenes and heroes from the 1821 War of Greek Independence). It's also interesting to comment about the sizes of the last three banknotes. While I have no hard evidence, the size reduction could have indicated the possibility of the Bank reviewing its position for introducing a new series (the 10 000, 200 and 5 000 Drachmas notes were part of), rationalising the banknote sizes and reforming the type of circulated coins. Obviously, this plan didn't eventuate due to the forthcoming introduction of the Euro currency.

DISAPPEARANCE OF THE GREEK DRACHMA AND THE INTRODUCTION OF THE EURO

Following the inclusion of Greece into the European Monetary System, the Year 2002 marked the circulation of the Euro throughout Greece. The Drachma was gradually withdrawn from circulation and collected by the Bank at the official fixed rate of 340.75 Drachmas to the Euro.

The Euro coinage was minted in 2000 and its design accommodated the design needs of the unified European coinage system and of each participating country. The Euro is the unit for the European currency and is divided into 100 Cents (EuroCents). The equivalent Greek unit of Lepto [Lepta (plural)] is given on the reverse of the Greek issues.

Figure 25 – Copper 1, 2 and 5 EuroCents, European Monetary Union-Greek Issue, 2002

Figure 26 – Brass 10, 20 and 50 EuroCents, European Monetary Union-Greek Issue, 2002

For Greece, the **1**, **2** and **5** EuroCents have ship designs from ancient times (trieme), from the 19th century (frigate) and from modern times (tanker) correspondingly. The **10**, **20** and **50** EuroCents have the portraits of **Feraios** (1821 Independence War hero), **Kapodistrias** (First Governor of Greece) and **Eleftherios Venizelos**[33] (Greek statesmen) correspondingly.

Figure 27 – Bi-metallic 1 and 2 Euro coins, European Monetary Union - Greek Issue, 2002

The **1** and **2** Euro bi-metallic coins have the designs of an **ancient Athenean tetradrachm** and a scene of the mythological '**abduction of Europa**'[34].

It is noticeable that in 2002, some of the coinage for Greece was struck at different minting countries, in order to possibly accommodate and balance the workload of coin minting. While some of these were struck at the Athens Mint (*owl* mintmark), the 20 EuroCents coin was also struck in

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33 Eleftherios Venizelos (b 1864, Mournies-Crete; d 1936, Paris) was the most prominent Greek politician and statesman of the early 20th century and, through his diplomacy, expanded Greece's territory considerably.

34 The image portrayed on the coin comes from a mural circa 3rd century BC, found near Sparta-Pelloponesus, that shows in Greek mythology the abduction of Europa by the god Zeus (camouflaged as a bull).

Spain (E for Espana), the 1, 2, 5, 10 and 50 EuroCents coins were struck in France (F) and the 1 and 2 Euro coins were struck in Finland (S for Suomi). The mintmarks appear on one of the 12 stars surrounding the local design.

Figure 28 – 5 Euro banknote, European Monetary Union - Greek Issue, 2002 [Pick No 1y] (shown at 60%)

For the banknotes, the designs for all denominations of 5, 10, 20, 50, 100, 200 and 500 Euro are the same for each country. The only difference is that banknotes printed for local consumption are identified by the prefix letter of the serial number. Each participating country has a unique prefix and for Greece, this is the letter Y.[35]

Finally, for the Athens 2004 Olympics, the **2** Euro Greek coin was redesigned and it depicts a youth at a position of attempting to throw a discus, a design identical to the Myron sculpture kept at the Louvre Museum today and obviously, representing a modern sport with ancient roots.

EPILOGUE

In closing this part, the key characteristic of the Modern Greek currency, shown throughout the releases, has been the representations of her rich history since ancient times. This is quite obvious with the second coinage of the 1973 series and the banknotes since late 1964.

These representations or concepts validate the enormous contribution the Greek civilisation has made to the history of Europe and this Greek identity was captured on the one and two Euro coins. Needless to say, the

[35] Details and illustrations of the Euro notes appeared in the 2002 edition of *Australian Numismatist*.

disappearance of the drachma in 2002 was a sad event but, in our memories, the drachma has been, and will be, in our heart for many years to come.

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SEARCHING FOR COINS IN CHINA

By Pat O'Rourke, NAV 1122[1]

`They ARE real! They are REAL!!' Chinese eyes bulged and face darkened - a sure sign of celestial rage.

My first lesson in collecting Chinese coins. Never, ever, tell a vendor selling the fakes that abound in China the real reason you don't want his stock ...

1980 - OUR FIRST TRIP TO CHINA

It was 1980 - our first trip to China. The bamboo curtain had just been raised a little higher allowing Australians more opportunities to visit that country.

You should make the most of this, advised Margaret's cousin, Bob Cook, who'd been based in Hong Kong for five years selling planes and aviation equipment to the Chinese government. Bob arranged our visit - saying the Chinese could just as easily lower the curtain again if in their eyes, their concession did not work out too well.

We started out in Shen Zhen - not the booming economic centre it is today, but just a small village then, with one traffic light of which they were inordinately proud.

We'd gone by train from Kowloon, getting off at the border crossing point at Lo Wu, where we were joined by a jostle of Chinese locals with their trussed ducks, chickens, pigs and fish, and vegetables and fruit.

There was nothing much in the coin line in the small market we visited - except for some obvious fakes of imperial Chinese dollars designed to appeal to we tourists. I told the vendor I was after real ones. My first mistake. This had caused him to lose much face - prompting his angry response.

I quickly apologised, saying I was after ‘older’ coins. That placated him a bit. Oh, he said, thoughtfully, ‘older older’. I then said the coins he had

[1] Pat presented this talk at NAV meeting No 911 on 20 May 2005

would be nice for jewellery. That really pleased him. Yes, jewellery! he said, beaming.

I found all this very useful when buying coins in China. Now when I'm shown a selection of dubious items I ask for 'older older'. People seem to understand this and will look for something more suitable, while others will send someone out to bring back what they think I really want. If they're successful and I buy, everyone gets something, and everyone is happy.

In yet another market, one stall holder had some funny metal pieces in the form of tools and knives, some old shells, and some tokens engraved with Chinese characters on what was described as 'old jade'.

(On our return to Hong Kong we had these translated. It appeared they were some sort of amulet to bring the owners prosperity, luck and happiness in the years ahead.)

The shells and metal bits were more interesting. Not all the shells were real. Some were of bone, some made of stone - carved to represent shells. These were the first recorded currency used by the Chinese. The metal bits turned out to be broken knives and spades - also very old. They were made during the Spring and Autumn (770 - 221 BC) and Warring States (475 - 221 BC) periods.

On later trips to China we came across more and more. Doing our homework now, we visited Hong Kong's leading dealer, Tony Lee, who was more than generous with his advice. He showed us examples of early Chinese currency and explained how to tell the real from the fake. He also told us some of the best places to buy and where there were dealers we could trust.

ORGANISED TOURS

The first few years or so of our travels in China were as part of organised tours where most of the coins we came across were in markets or Friendship Stores - those somewhat misnamed venues ... known to expats as 'Hostility Stores'. Yet despite the service (or rather, lack of it) the stock here was guaranteed genuine, and with extreme patience and persistence, you could usually find some interesting things to take back home and research.

At this time, there was not the freedom to travel individually in China to the extent that there is today. (Even travelling by Chinese in their own country

was quite unusual then.) This was not meant to restrict visitors to the country, but rather to ensure they had the opportunity to see the best of what China had to offer in the time available to them, with the assistance of qualified guides skilled in their guests' language.

On these trips we would ask our guides where we could find old coins to take home as souvenirs. Mostly they took us to markets - where possible, weekend markets, where local people would bring household treasures in the hope of selling some.

Strangely, this went both ways. In the 1980s, people at these markets, and even in the streets, would come up with coins to sell to the foreign devils, hoping to get in return the prized Foreign Exchange Certificates which were valued currency then.

Many of these folk had an old cash coin or two - and would happily bargain using hand signs to indicate the amount they wanted. These proceedings usually attracted large crowds of curious onlookers, who enjoyed the pantomime performance, and who would actually smile and clap when an acceptable price was reached.

After 1989, tourism to China dropped back for a while. But this could not last forever.

1995

In 1995, we journeyed to Beijing on a Qantas inaugural flight at a ridiculously low price. This time the tour took us to a market housed in a four-storey building, where many of the vendors had permanent stalls.

Here we found 'Number 88' (the only English in his shop). Number 88 had a wonderful range of coins and artefacts - and a sister next door selling porcelains and curios who happily distracted Margaret while I bargained for relics. (At one point, managing to ask Number 88 where he found such treasures, he mimed digging, looking over his shoulder, then running off at great speed. Goodness only knows how he obtained his stock!)

Later the tour took us to the 'Underground' - opened for tourists to visit as part of their Beijing itinerary. This, too, had the usual range of 'approved' souvenir stalls with their garish dolls and pandas and their Government endorsed antiques. On the bottom shelf of one of these shops in an old cardboard box, I spotted some interesting things. A number of Ming knives

- obviously all found together - which were twisted and bent from the pressure of being buried for centuries.

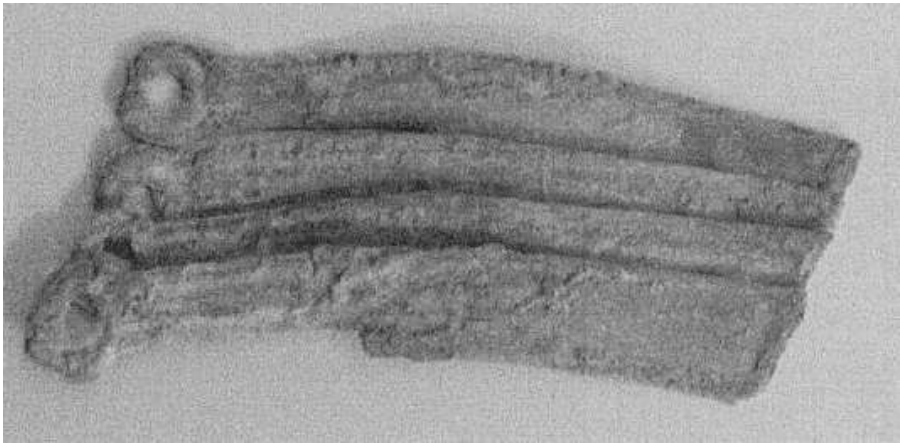

Figure 1 – Knife money (as found)

I bought these, to the great mystification of our guide, who was enthusiastically pushing the pandas. (We found out later that some of the more enterprising guides were getting kick-backs of around 30 percent from vendors involved. Prices, of course, were loaded accordingly.)

INDEPENDENT TRAVEL

A return visit in 1996 saw us granted our first days of independent travel. We had joined a tour, but explained that because we had been on the same tour the previous year, we would like a few days to ourselves to spend more time at some of the sites we had seen then. We would, of course, rejoin our group for evening meals and any planned night activities.

I don't think many people had asked for this privilege - and it certainly intrigued our guide. One day, he announced he was free for the afternoon and, as he had a car, would we like him to drive us to our planned destinations?

What could we say? So - now we guided him - taking the poor man to various coin dealers in Beijing. One was the Cultural Bureau's Antique Money Shop in Liu Li Chang. Here, up a rickety set of stairs in a dimly lit shop was a treasure trove of Chinese money - apparently OK'd for sale by the Chinese Government. It was all real - and fascinating to see. (Last

October, we found this shop had gone, but no doubt it's just moved. We will try and find out where on our next visit to Beijing.)

We are sure our guide had never spent a more boring day, although his presence did speed up the bargaining process. We wondered at the time whether he would suggest that the coin shops we called at be included in later tours. After all, these were obviously another thing (along with schools and kindergartens) that China's strange foreign visitors were interested to see!

Today you can travel freely in Beijing, seeking out dealers in markets and in the street. We find some of the best places to visit are Hongqaio Market, Beijing Curio City (now a rather upmarket venue), Lui Li Chang (the 'antiques' street), and of course Pan Jia Yuan, the Sunday market (this is open at other times, but without the hordes of weekend traders.)

Figure 2 – trading coins at Beijing 'money temple'

A must if the weather's OK is the (we think it's called) 'Baoguo Temple' - known locally as the 'money temple'. Here there are fixed price, permanent shops - and when the weather's good at weekends, many

individual sellers. I first went here in 2002 with John Sharples and other ICOMON delegates and have been back twice in the past two years.

The market specialty is coins and banknotes of all types, and it's not too hard to get to if you can get the taxi driver to understand where you want to go. (It's a good idea to ask the staff at the front desk of your hotel to write the address in Chinese on one of their cards for the taxi driver. At least you can always get back to your hotel if you happen to get lost!)

KUNG MUSEUM

A highlight of our trip last October was a return visit to Ping Yao in Shanxi Province - the cradle of modern banking in China. Here in this charming old walled city, now being preserved as a World Heritage site, is the old Rishengchang Remittance Bank, displaying examples of Shanxi's early cheques and banknotes.

Outside was the usual clutch of entrepreneurial souvenir vendors. But one had some of the iron cash coins once used in the Shanxi area. After the lengthy ritual bargaining, we settled on a price. The attendant crowd smiled and clapped, so the vendor was obviously happy - and so was I, as these coins are not easy to find in such good condition.

To get back from Ping Yao to Shanxi's capital Taiyuan, you pass near to a small town called Taigu. Because of our abnormal interest in China's currency, our guide and interpreter, Mr Li, and driver, Mr Hu, thought we might be interested to make a quick visit there to see the old home of a former Banker and Finance Minister, Mr H H Kung. Mr Kung was part of one of China's most famous families - the Soongs. He married Ai Ling, one of the three Soong sisters. (Ching Ling was married to Sun Yat Sen and Mei Ling to Chiang Kai Shek).

Of course, we got hopelessly lost trying to find the place. (Chinese drivers can't read maps!) It was in the old part of town down some very narrow streets, and Mr Hu kept stopping locals to ask them the way! Despite some folk pointing one way while some pointed another, we finally arrived.

The house - or rather, mansion - had been turned into a museum, with several of the rooms around the old courtyard showing the history and lifestyle of the Kung family. On display were furnishings, porcelains, paintings, photos and press cuttings - and - to my delight - a coin and banknote collection, with examples from China's earliest times to today,

and it was all real! While I was giving Li yet another discourse on his country's currency, a man turned up who obviously worked at the mansion. He looked a bit puzzled, so Li explained (and no doubt apologised for) the foreigner's strange preoccupation with all things monetary ...

This seemed to please the man who gave me a name card from his wallet. As I returned his gesture, my bright green Numismatic Society (Asia) membership card fell to the floor. Our visitor's eyes widened. He beamed. He literally jumped for joy, while pointing to himself, to me, and the card. It seemed he was a member of the society, too!

So, here we were, somewhere in the middle of China, instant friends with a perfect stranger! Much to our - and certainly Li's - surprise, we were invited home for tea - quite an honour in China. Home was one of the delightful court-yard cottages where we were served tea, plums and sweets by his cheerful smiling wife, while he brought out his own collection to show us.

In this were several rare Chinese coins that I'd previously only heard of - and never really thought I'd ever see. We spent an hour or so discussing these (Li translating for us, having given up any hope of keeping to his schedule!) and left weighed down with bags of old cash coins pressed on us by our host. We can only hope he enjoyed the talk about his coins half as much as we did.

HELL MONEY

You can't collect Chinese currency without coming across Hell money - the often brightly coloured ‘banknotes’ in large denominations which you ritually burn, bury, or scatter around to help your ancestors enjoy every comfort in the afterlife - something that in turn, your descendants will do for you.

Today you can provide your ancestors with amenities ranging from Mercedes cars and Amex cards, to furniture, household goods, and fashion items including Ray Bans and Rolex watches, as well as passports and travel tickets to exotic destinations.

If you still prefer banknotes, there's a seemingly endless range of issues in a variety of denominations, usually ascribed to the Bank of Hell. (Hell, it seems, does not always have the same meaning to the Chinese as it does for us. The story goes that when missionaries in China used to preach about

Hell, the Chinese thought that 'Hell' was the Christian word for 'afterlife' - and used the word in this context.)

SOME TIPS ON BUYING COINS IN CHINA

Know your prices - and bargain hard. Start at about half of what you're prepared to pay - and go up a little as the asking price comes down. When a price is agreed - that's it. You can't change your mind. Both parties should be happy with the deal.

Remember that many of the coins and banknotes in the markets are fakes. Sometimes the vendors know this - sometimes they don't. Often they're just something to sell to make some money to live.

The best idea is to buy a few things, do some research, and learn (often from mistakes!). After all, the fun of the chase and the experience of being in this timeless land are the most important things.

Figure 3 – 50 Cash nd (1851-61), Board of Revenue, Beijing

SYDNEY'S FIRST TRAIN

By Tom May, NAV #803[1]

There are 12 Australian Trader's Tokens dated 1855[2] which share this 150th year. Of these, Hanks & Lloyd-Australian Tea Mart is also possibly the only numismatic railway commemorative for the opening of the first Sydney railway in September 1855. Thereafter the 50th, 100th and 150th years are marked by other, medallic, issues.

On 26 September 1855 a large gathering saw the Sydney Railway's first train depart from Sydney Station for Parramatta. This was just a year after Australia's first steam railway was established - a short line between Melbourne and Sandridge (now Port Melbourne).[3]

But prior to considering how the railway was established in Sydney, a short outline of how this form of transport originated is necessary to appreciate the difficulties faced and overcome.

EARLY DEVELOPMENT OF STEAM RAILWAYS

By the early 18th century, the prevalence of flooding was becoming acute in the Cornish tin mines which could not be remedied using traditional energy sources for pump operation. A crude but effective steam operated pump was developed to overcome the problem. However it was not until the early 19th century that a self-propelled steam engine evolved from this. Paradoxically, the normally progressive firm of Boulton & Watt was responsible for holding back the development of the steam locomotive for 35 years, when they patented "steam power" until 1800. Their only interest was in stationary engines for factory use!

Famous names associated with locomotive innovations thereafter, were headed by Richard Trevithick and the Stephensons (George and his son Robert). These latter really "put the train on the rails" by establishing their enduring engine manufacturing business, Robert Stephenson & Co, right

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1 Tom presented this talk at NAV meeting No 914 on 16 September 2005

2 See Appendix 1

3 Australia's first public railway was horse-drawn and operated between Goolwa and Port Elliot (South Australia); it opened in May 1854 (Ed).

through the mid 19th century. It was from this source in the North of England that a rail gauge of 4ft 8½ in (1435 mm) originated from the local standard cart axle length. It so happened that after a range of rail gauges were appearing throughout the country, Parliament passed a law in 1846 standardising this as the uniform gauge - after previously setting 5ft 3ins (1600 mm) as the standard for Ireland! As we know, this was to have ramifications later for Australia.

The difficulties of setting up a railway system only started with the development of a suitable steam engine. Major problems of construction and finance arose for the private companies wishing to set up even the simplest network. Again, the Stephensons started with minimum expertise to survey and excavate - constructing bridges and tunnels to create the first real railway transporting coal and some passengers from Darlington to Stockton on the river Tees (NW England) in 1825. From the beginning, it was necessary to keep rail gradients to the minimum for successful operation - hence the extensive (and expensive!) cutting and levelling required. Nevertheless, private railways rapidly developed along with an expanding Industrial Revolution while any UK Government ownership did not eventuate until the WWII era.

STEAM RAILWAY PROPOSAL FOR SYDNEY

With these rapid advances in Britain towards the mid-1800's Australian colonies were expressing interest in this vital new mode of transport for freight and passengers.

Australia's vast distances between habitations and primary production areas made this new mode of transport seem the best solution to the problem. However the extensive cost involved was a major obstacle in a large thinly-populated country recovering from the early 1840's depression.

From 1846, meetings were convened under the chairmanship of such a notable as James Macarthur (son of John) to consider the various problems associated with building a rail system. These were headed by: proposed route, terminal site, type of equipment and most of all (the ever troublesome obstacle) raising finance. This latter remained critical, until the government agreed to some loans - and conditions improved with the discovery of gold. Paradoxically, this last led to a critical labour shortage which compounded the delays. In 1848 the Company started as "The Great Southern & Western Railway", which became by the following year "The Sydney Railway Co".

In 1849 Mr F W Shields, an Irishman and former City Surveyor, was appointed Chief Engineer for the project. His preference was for a rail gauge of 5ft 3in, which he duly had approved by the British government. Subsequently both Victoria and South Australia followed suite with possibly far sighted intentions. However as the company's budget tightened, pay cuts were instigated resulting in the resignation of Mr Shields in 1851.

The next appointee Mr W Wallace was an Englishman who favoured his own country's standard gauge of 4ft 8½ in which also made possible an order for the most successful engines from Robert Stephenson & Co. As both Victoria and South Australia were reluctant to change, the stage was set for the future headache of "non-standard" gauges. To cap it off, when Queensland started rail construction in 1876 the question of cost loomed large for an extensive but modestly funded State. So the more modest gauge of 3ft 6in (1067 mm) was selected, compounding the future mess!

CONSTRUCTION

In spite of early difficulties, the start on a route from Sydney to Parramatta was celebrated with a ceremony of "Turning the First Sod" for the Sydney Railway Terminus in 1850. This was held at the southern end of central Sydney (near Redfern) where the Vice-Regal party headed a gathering of more than 10 000 people. Governor Fitzroy's daughter officiated, due to his temporary indisposition.

From there, the numerous difficulties already noted kept operations at a snail's pace. Eventually the terminal at the Sydney end was planned for the area south of Devonshire St, known as "Cleveland Paddocks", just south of Sydney's second "Old Burial Ground". One of the sites seriously considered would have required the removal of Greenway's St James Church and the Court buildings! - shades of the Heritage destruction of recent years.

By 1854, the line was well established at last. The route from Sydney to Parramatta contained four intermediate stations - Newtown, Ashfield, Burwood and Homebush (the last now noted for the Olympics). The Sydney (Redfern) Terminus station ended up as a rather sparse shed-like building, due to costs. The remaining stations were also rather spartan, for the same reason. From the beginning a branch line ran to Darling Harbour, which was an important docking area for shipping to utilise rail on-carriage in those days.

By the end of the year (1854) Capt Edward Ward, RE was appointed Chief Commissioner. However he resigned in June 1855 to concentrate on his "numismatic interest" as Deputy Master of the new Sydney branch of the Royal Mint, as sovereign production was established. Nevertheless he continued to do consultant work for the railways for some years. Another Royal Engineer officer, Capt Mann, was appointed to replace him to head the Sydney Railway.

Because of the difficulty of obtaining iron rails in time from England, hardwood was used. This substitute had a limited life, having to be replaced frequently until the original order arrived. Later some rails were fabricated from the pioneer iron works at Mittagong, south of Sydney. Ultimately the cost per mile of the construction reached the substantial sum of 50 000 pounds. This would be equivalent to millions of dollars today.

An initial order of four steam locos from R Stephenson & Co in England was unloaded at Circular Quay and pulled up George St by a team of 20 horses to the new terminal. Engine No 1 has a special place in rail history, being the only pioneer loco to survive the 150 years. It had foresightedly been placed in storage after a working life which lasted until 1877 and 250 500 kms travelled. It was put on exhibition in Railway square for the 1905 and 1955 anniversaries, before finally being fully restored for its place of honour in the Powerhouse Museum.

OFFICIAL OPENING

The great day came on 26 September 1855 with the grand opening. Engine No 1 had the honour of carrying Governor Dennison's official party, which took 45 minutes, with all stops, to travel to Parramatta.

The large gathering which celebrated the departure of the first train included: "ladies got up in crinolines with innumerable flounces of every hue ---- and men wearing their peg-topped trousers of canary yellow and lavender with a row of pearl buttons on the inside of each ankle, their headgear consisted of cabbage tree or beaver hats set jauntily on their heads". Also, the Sydney Herald reported ---- "Ricketty Dick led a large gathering of aborigines, some of whom departed again in a hurry when the engine started up"!

Ricketty Dick, a well known identity, is represented by an attractive portrait on several medalets of the 1870's by Stokes & Martin. These were mainly struck by them at Exhibitions for souvenirs.

Figure 1 – Engine No 1 on the way to Parramatta, shortly after the official opening, displaying a useful Australian modification – a corrugated iron cab roof, 1855

Figure 2 – Cheering crowds celebrate the opening, 26.9.1855

There were 3554 passengers carried on this first day of operation. Three classes of carriage were used - third was spartan, open to the elements and cinders, while seating was on plain wooden benches. Second was similar, except the benches had some horsehair padding. First class carriages were fully glazed with leather upholstered seats. The fares for the through journey were 2/-, 3/-, and 4/-, respectively. As the ordinary weekly wage was about 10/-, it would have represented a large slice out of it. However this new form of travel would have stood out against any other of the time - speeding along at 50 kms/hr with the journey taking an average 50 minutes

including all stops. As well as the speed, the ride was markedly better than by road at the time!

NUMISMATIC COMMEMORATIVE

It appears that the only numismatic commemorative produced was the Hanks and Lloyd Trader's Token, which is mentioned in contemporary accounts; both pennies (33 mm) and halfpennies (28 mm) were struck. Only three issuers in our Trader's Token series struck a commemorative type.

Figure 3 - Hanks & Lloyd Trader's Token, 1855

GOVERNMENT TAKEOVER

By 1856 the financial position of the company caused the Government enough concern to take over altogether, making it the first Government owned railway in the Empire. From here on if one individual should be singled out it would be the talented young engineer, John Whitton who was engaged from Britain as Chief Engineer in 1857. He was to oversee the rapid expansion of the rail network in difficult conditions throughout NSW to 3 200 kms during his 33 years service, earning him the title of "Father of the Railways".

The fierce competition between NSW and Victoria for access to the primary produce between their capital cities urged on the extension of the respective lines towards the border town of Albury. When this eventuated in 1883, the "all change" situation arrived, owing to the rail gauge problem. Along with such inconvenience to passengers were the accompanying Customs formalities. It is hard to imagine such a process on our state borders today, which was to prevail until the 1901 Federation, but similar scenes are repeated, years later at our airports, in the interest of security!

COMMEMORATIVE MEDALS

THE 1905 FIFTIETH ANNIVERSARY OF THE SYDNEY RAILWAY

A bronze medalet (32 mm) was issued by the New South Wales Railways with the following design:-

Obv: Proclaims 26th Sept 1905 as the Jubilee Year of the occasion - A P6 state of the art loco, with two carriages, between which is a representation of the junction of the new Sydney Central station.

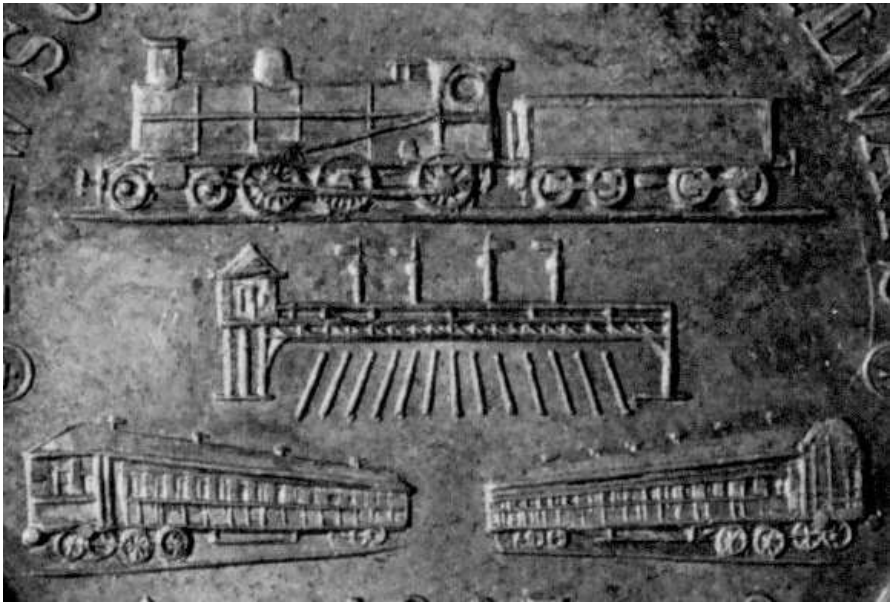

Figure 4 – Detail of P6 Loco and current carriages on 1905 medalet (shown at 2000%)

Rev: 26th Sept 1855 opening, with Arms above. The original Engine No 1 and two carriages - these are good representations of a 3rd class (open) and 1st Class carriage.

The designer and manufacturer are as yet unknown.

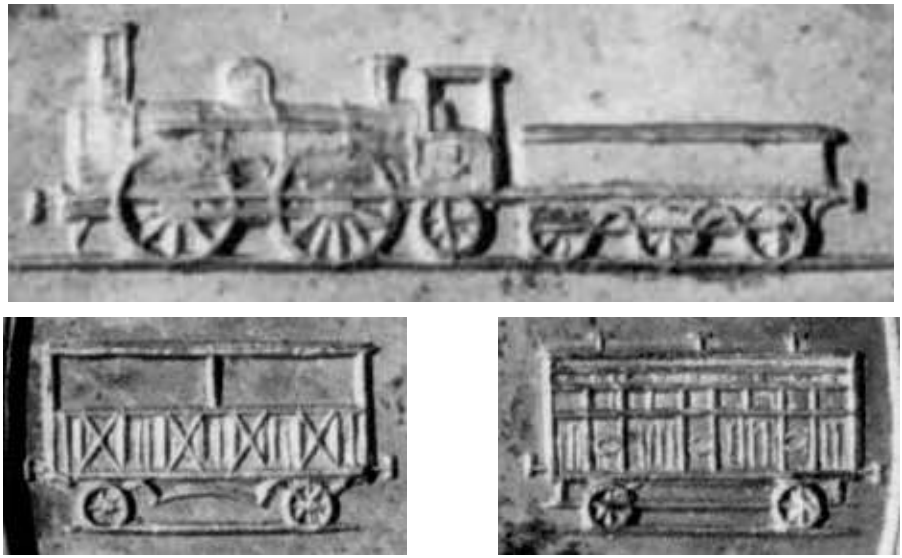

Figure 5 – Detail of Engine No 1 (shown at 3500%)and original 3rd class (left) and 1st class (right) carriages (shown at 2500%) on 1905 medalet

Figure 6 – 50th Anniversary medalet, 1905

By this time the extension of the Sydney Terminal northwards of Devonshire Street reclaimed Sydney's second Old Burial Ground and surrounding properties to become "Sydney Central". By 1906 the station complex had taken much the form which can be seen today. The P6 Loco was the culmination of steam mechanical development at the time.

THE 1955 CENTENARY OF THE SYDNEY RAILWAY

A silver-plated bronze medalet (31 mm) was issued by the New South Wales Railways for the centenary with the following design:-

Obv: Text proclaims the Centenary, 1855 - 1955

Rev: Shield of Arms[4] supported by a lion and kangaroo depicted below the last of the steam locos which pulled the NSW section of the Melbourne Express. This is a streamlined version of the C38 "12 wheeler" which complimented the more well known Victorian "Spirit of Progress" S Class "Blue Flier". Also illustrated again is Engine No 1, which went on show again for the occasion.

Figure 7 – Detail of C38 "12 wheeler" Loco and Engine No 1 on 1955 medalet (shown at 2350%)

Figure 8 – 100th Anniversary medalet, 1955

4 Probably New South Wales Railways

This was designed and manufactured at the extensive Everleigh Railway Workshops.

THE 2005 - 150TH ANNIVERSARY OF THE SYDNEY RAILWAY

The next commemorative piece is for the present year. A bronze medal (40 mm) was issued by the Metropolitan Coin Club of Sydney

Obv: Proclaims the Sesquicentenary of NSW Railways, with Engine No 1 below. Also the Sesquicentenary of - The Sydney Mint, Responsible Government for Tasmania, Victoria, and NSW. For good measure the 40th anniversary of the Club is celebrated also.

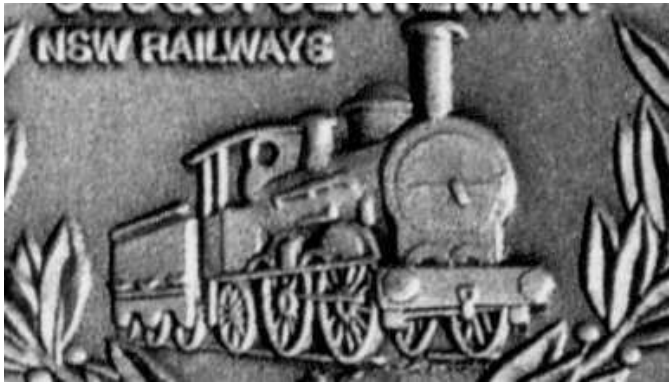

Figure 9 – Detail of Engine No 1and original carriages on 2005 medal (shown at 1500%)

Rev: The Logo of the Club - St George against the Sydney Harbour Bridge.

Designers: John G Cook & Frank C Seckold

Makers: Millers, Sydney

Figure 10 – 150th Anniversary medal, 2005

LATER YEARS AND THE FUTURE?

With a standard through gauge line opened in 1962 from Sydney to Melbourne at last, the "Spirit" became "The Southern Aurora" pulled by the latest diesel loco. However the resounding success of air travel combined with a large interstate network of freight road transports put paid to any real upsurge of rail prosperity. Although there have been several attempts to efficiently upgrade rail passenger and freight services, success is still elusive. Nevertheless a changing world can present a window of opportunity to revive rail travel with such innovations as a practical "Very Fast Train" project to successfully match its competitors.

Figure 11 - Engine No 1 and carriages displayed at the Powerhouse Museum

Meanwhile Engine No 1, complete with authentic tender and carriages sits proudly in the Powerhouse Museum in Sydney as a reminder of a revolutionary form of transport which transformed our pioneering days.

APPENDIX 1 – LIST OF AUSTRALIAN TOKENS DATED 1855

- Lewis Abrahams, Draper, Hobart
- Adamson, Watts, McKechnie and Co, Warehousemen, Melbourne
- John Allen, General Stores, Kiama, New South Wales
- William Allen, General Stores, Jamberoo, New South Wales
- William Bateman Jr & Co, Importers and General Merchants, Warrnambool, Victoria
- Edward DeCarle & Co, Auctioneers and Land Agents, Melbourne
- Hanks & Lloyd, Tea & Coffee Merchants, Sydney (issued railway commemorative)
- R Josephs, Tollgate Keeper, Newtown, Tasmania
- Levy Brothers, Importers of Fancy Goods, Melbourne
- A Toogood, Merchant, Sydney
- Thomas White & Son, General Store, Westbury, Tasmania
- W D Wood, Hotelkeeper, Hobart

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CENTENARY OF FLIGHT

PART TWO: BIPLANE TO SHUTTLE – FROM 1904 TO 2003

By Frank Robinson, NAV 713[1]

17 December 2003 marked the centenary of powered flight. It was 100 years since the day when two brothers took turns to be the first people to fly in a powered aircraft. In the century since, aircraft have become bigger, stronger, more reliable, and an everyday mode of transport. An adaptation also transports people to and from space.

In the last century there have been many remarkable achievements in the story of flight, however this paper will only attempt to cover some of these events with particular emphasis on some of those which can be illustrated numismatically. A collection of aeronautical medals at the Princeton University Library[2] lists well over 700 medals relating to aeronautical events from 1903 to 1970 – this includes space flights. In addition to these, and other, medals, aeroplanes and aviation pioneers are also depicted on both coins and paper money. I will cover only a few of these numismatic items and related events.

But first, a quick summary of Part 1, which related to attempts to fly.

SUMMARY OF PART ONE

In Part One[3] of this paper, the various steps along the path to manned powered flight in a heavier than air machine were discussed.

Hot air balloons were demonstrated by the Montgolfier brothers in 1783 with the first human passengers flying on 21 November 1783. This was followed the next month by a manned flight in a hydrogen filled balloon. Dirigibles, or rigid airships, were developed in the second half of the nineteenth century.

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1 This paper is based on one that Frank presented at NAV meeting No 897 on 19 March 2004

2 Arthur L Newman ’23 Collection of Aeronautical Medals

3 “Trying to Fly – From Myth to 1903” in The Australian Numismatist, 2004, pp 46-61

Figure 1 – Isle of Man 1 crown, 1983 – Bicentenary of Manned Flight: Montgolfier Balloon 1783

Sir George Cayley built the first true airplane in 1804; this was basically a kite on a stick. This led to the development of gliders with the first human glider flight in 1849. From the 1840s, various people developed heavier-than-air machines which flew; most of these were models, but some were full sized.

From the 1880s, Lawrence Hargrave built various model ornithopters (flying machines with flapping wings) and engines for use in aircraft. In the 1890s he experimented with kites and invented the box kite; publication of his work in North America and Europe strongly influenced the design of early aircraft.

Although others may have made a powered flight in a heavier-than-air machine first, it is generally acknowledged that the first to do so with indisputable evidence that they had made the achievement were the brothers Orville and Wilbur Wright on 17 December 1903.

Figure 2 – Isle of Man 1 crown, 1983 – Bicentenary of Manned Flight: Wright Brothers Flyer 1903

EARLY PIONEERS

In the next two years the Wright's made a number of flights in their *Flyer II* (1904) and *Flyer III* (1905). The *Flyer III* has been described as the world's first practical airplane.

SANTOS-DUMONT

The publicity of the Wright brothers' success spurred others into action. In France, which considered itself the birthplace of flight, a prize of 50 000 francs was offered to the first officially recorded circular flight of one kilometre.

In France, Robert Esnault-Peltrie built a Wright style glider in 1905. After blaming the wing-warping system for its poor performance, he used ailerons and published the success of this control method. Later aircraft designers also used ailerons in order to by-pass the Wright brothers patents.

Alberto Santos-Dumont was born in Brazil and had gone to Paris at the age of 18 years to study. He was extremely interested in mechanics and, as mentioned in Part 1, he built a number of dirigibles. In 1906 he took the basket of his No 14 balloon and added a fuselage, wings and tail. The wings and tail were basically box kites as developed by Hargrave. Because this aircraft was partly built from balloon No 14, he called it *14 bis* ("bis" is Portuguese for "encore").

Figure 3 – Brazil 10 Cruzeros Novos, 1966 – Alberto Santos-Dumont (shown at 50%)

On his first attempt to fly this aeroplane, Santos-Dumont was unsuccessful due to insufficient power of his engine. After fitting a more powerful engine, he made several more attempts. On 23 October 1906 he managed to fly 50 – 60 m, and on 12 November 1906 he flew 220 m at a height of 5 - 6 m. The *14 bis* flew tail first with the propeller behind the pilot.

In 1909 Santos-Dumont built and flew a high-wing monoplane, *La Demoniselle*. Believing in the peaceful use of aircraft and disillusioned by their use in World War I, he later returned home to Brazil where he died in 1932. By coincidence, the first men to walk on the moon (Neil Armstrong and Buzz Aldrin) did so on the 96th anniversary of the birth of Alberto Santos-Dumont.

LOUIS BLÉRIOT

Louis Blériot was a French engineer who had an early interest in aviation. He built an ornithopter about 1900 but, like other ornithopters, it failed to work. Teaming with Gabriel Voisin from 1903 to 1906, he began building aircraft with their first successful design being a floatplane glider in 1905. In 1907, he built and flew the world's first successful monoplane (Blériot V).

One of the problems with early aeroplane engines was their tendency to overheat, which usually limited flights to a maximum of about 20 minutes before they started to malfunction.

London's *Daily Mail* newspaper offered a prize of £1000 for the first successful flight over the English Channel. Hubert Latham made an unsuccessful attempt on 19 July 1909 but his motor failed and he had to ditch his plane in the sea.

Louis Blériot was encouraged by the prize to build his fourth monoplane (Blériot XI); this was his first truly successful aeroplane. After winning a cross-country race (and setting a European endurance record of 36 minutes 55 seconds), he was ready for his attempt on the English Channel. On 25 July 1909 he flew from just near Calais to Dover in 37 minutes. The reaction in England was one of shock – the country was vulnerable to air attack! However Blériot was a public hero in both countries.

Blériot also developed the control system which became the standard for all modern aircraft. A joystick controlled both pitch and roll and a rudder bar controlled yaw.[4]

The *Daily Mail* newspaper in London promoted the early development of flying by offering various prizes for aviation achievements. In 1906 a £1000 prize was offered for the first successful flight over the English Channel which was won in 1909 by Louis Blériot (see above). In 1910,

[4] pitch, roll, and yaw: see Part 1, in *The Australian Numismatist*, 2004, p56

Louis Paulhan won £10 000 for his flight from London to Manchester. In 1911, the *Daily Mail* sponsored a "Circuit of Britain" and two years later a seaplane "Circuit of Britain". The film, *Those Magnificent Men in their Flying Machines*, depicted an air race of this period sponsored by the *Daily Mail* from London to Paris.

Figure 4 – British medalet, 1912 – National Aerial Campaign

In 1912 a medalet (shown in Figure 4) was issued for the "National Aerial Campaign". This medalet proclaimed that Britain's future was in the air and depicted a contemporary aerial scene with both a monoplane (possibly a Blériot XI) and a biplane. At this stage it was not clear which type would be the better in the long term.

Figure 5 – First aerial mail from Melbourne to Sydney, 17.7.1914

The first aerial mail in Australia (from Melbourne to Sydney) was flown in a Blériot monoplane (Figure 4) by Maurice Guillaux (a Frenchman). The flight left Melbourne on 16 July 1914 and arrived in Sydney two days later (no long distance non-stop flights back then).

The aeroplanes of this early period were still experimental and their pilots were often daredevils who sometimes had very game passengers with them. These aeroplanes were like new toys and their future potential had yet to be realised. It reminds me of the story that is told of Michael Faraday on one occasion when he demonstrated his then new discovery of electricity. One lady, after admiring his demonstration, asked him "But of what practical use is it?" Faraday is reported to have replied "Madam, of what practical use is a newborn baby?" The new baby, the aeroplane, was about to start showing some of its practical uses.

WORLD WAR I

The outbreak of World War I in 1914 gave an even greater impetus to the development of aviation. It also changed warfare in two major ways: the sky became a new battlefield and attacks could be made a long distance behind the frontline. Approximately 20 000 flyers were killed during the war. The Royal Air Force suffered over 16 600 casualties and the German Air Service in excess of 15 000; I have not seen figures for the other combatants (eg France, USA, Italy, etc).

At first aircraft were used for observation purposes, as had balloons in some earlier conflicts. Very quickly other uses were found – aircraft could carry bombs and they could shoot each other down with machine guns. Aircraft were also used to deliver stores to besieged communities.

German Zeppelin airships conducted bombing raids over southeast England. Both sides had their aces – pilots who succeeded in shooting down many aircraft; probably the most successful was Manfred von Richthofen, the "Red Baron", who was credited with 80 victories. Britain's most successful ace was Major Edward Mannock who had 73 victories.

Many new aircraft were developed during the war; while most were biplanes, there were also monoplanes and triplanes.

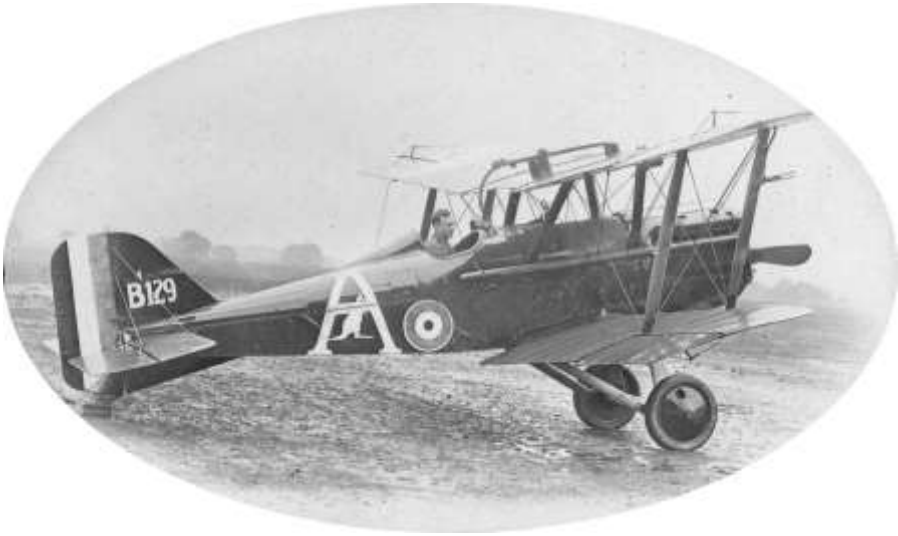

Figure 6 – Australian Flying Corps aircraft in 1918

PIONEERS BETWEEN THE WORLD WARS

With the end of the war, there were a large number of surplus aircraft, some of which were sold to pilots. Some of these pilots came from countries a long distance from Europe. There were a number of pilots who decided to fly their aircraft home rather than ship them home.

Major A S C MacLaren and Captain Robert Halley made the first England to India flight in December 1918 – January 1919 taking 34 days.

CROSSING THE ATLANTIC OCEAN

From 8 to 28 May 1919, a US Navy flying boat made a crossing of the Atlantic Ocean by flying short stages from New York to the Portuguese capital, Lisbon. On 18 May 1919, Harry Hawker (a pre-war Australian aviation pioneer, notably as a test pilot with Sopwith) and Lt Cdr Kenneth Mackenzie-Grieve left Newfoundland in a Sopwith aeroplane named the Atlantic[5], in an attempt to fly non-stop across the Atlantic Ocean, but were forced down after flying 2250 km (about 900 km short).

[5] a Sopwith Transport (Trans-Atlantic Type)

In a letter dated 22 May 1919, one Australian soldier in London wrote home:

> "Great excitement has prevailed in this country over the Atlantic flight. It is very sad. I think that Hawker has failed. He is not heard of yet & is 2 days overdue. I fear the worst has happened. He was an Australian.
>
> "The suspense for his wife who lives not far from here must be terrible, she was so confident that he would succeed. Expect that you have read all about his flight so will not tell stale news or what will be so by the time that you receive this epistle."[6]

Fortunately part of their plane could be detached and used as a boat. Hawker and Mackenzie-Grieve were rescued by a passing Danish steamer (which did not have a radio). News of their rescue was received on 25 May (one week after departure). The *Daily Mail* newspaper awarded them a prize of £5000. Hawker died two years later in July 1921 on a test flight in England.

The first successful non-stop fight across the Atlantic Ocean was by Capt John Alcock and Lt Arthur Whitten Brown. Flying a modified Vickers Vimy twin-engined biplane, they left Newfoundland on 14 June 1919 and reached Ireland 16 hours later. They won a prize of £10 000 from the *Daily Mail* newspaper.

ENGLAND TO AUSTRALIA

On 10 March 1919, the Commonwealth of Australia government offered a prize of £10 000 to the first Australian crew to fly a British made aircraft from England to Australia in 30 days before the end of 1919. Bert Hinkler was going to fly solo, but race officials believed this was too dangerous and forced him to withdraw. Charles Kingsford-Smith and his crew were also barred as race officials believed that none of them could navigate well enough.

Two Frenchmen, Etienne Poulet and Jean Benoist, decided that they would be the first to fly to Australia; they were the first to start, leaving from Paris on 14 October 1919. However they had engine trouble which grounded them in various places and caused them to be delayed for several months. Eventually they crash-landed and they abandoned their attempt.

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6 Private correspondence of Sgt PTR Grisold

Another crew, which included Hubert Wilkins, departed from England on 21 November 1919, but also experienced engine problems in France; they flew on after repairs but crash-landed in Greece.

Two other crews also crashed en-route.

The last to depart was Ray Parer and John McIntosh who departed from London on 8 January 1920 and arrived in Australia on 2 August 1920 after a 206 day flight. This was the first flight from England to Australia in a single engine aircraft.

The team that actually succeeded was led by the brothers Capt Ross Smith (pilot) and Lt Keith Smith (navigator); the two other crew members were Sgt Jim Bennett and Sgt Wally Shiers (both mechanics). A year earlier, Ross Smith had been co-pilot on the first flight from Cairo (Egypt) to Calcutta (India); this would be of great assistance a year later.

The Smith crew left Hounslow Aerodrome (London) in England on 12 November 1919 and arrived in Darwin on 10 December. Their trip, in another Vickers Vimy twin-engined biplane, lasted 28 days with 155 hours 55 minutes of flying time and covered a distance of 17 910 km. They also carried the first airmail between the two countries.

The route they followed went via Lyons, Rome, Cairo, Damascus, Basra, Karachi, Delhi, Calcutta, Akyab, Rangoon, Singera (an unscheduled stop in Siam), Singapore, Batana and Surabaya to Darwin.

Figure 7 – NAV medal 1969 – 50th Anniversary of first aeroplane flight England to Australia 1919[7]

7 C1969/10

Figure 8 – Pacific Promotions medal (Australia), 1979 – 60th Anniversary of first aeroplane flight England to Australia 1919[8]

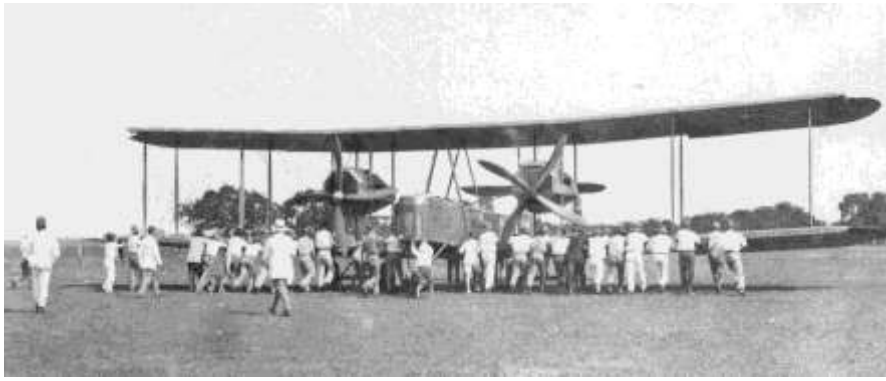

Figure 9 – Welcome to Australia: Ross and Keith Smith's Vickers Vimy at Darwin in 1919

QANTAS AND OTHER EARLY AIRLINES

As a result of a ground survey between Darwin and Longreach for an air route for the England to Australia 1919 air race, Hudson Fysh became convinced of the need for aerial transport in Australia's "outback". In November 1920, with P J McGinness and Fergus McMaster, he founded Queensland and Northern Territory Aerial Services Ltd at Longreach. Their first regular air service began in November 1922 between Charleville and Cloncurry.

It is often claimed that Qantas is the oldest airline in the English speaking world and the second oldest in the world (after KLM). However this claim requires some examination.

8 C1979/13

The first airline to provide regular services was the St Petersburg / Tamba Airboat Line in January 1914; I don't have any further information on this airline, however I suspect that it didn't survive the World War.

In 1919, after the war had finished, a number of people starting commercial fights. Henry Farman carried 11 paying passengers on the first commercial flight between Paris and London in February or March 1919, however I have not found any evidence that he actually founded an airline. DLR (Deutsche Luft-Reederei), a German airline, commenced scheduled flights in March 1919. In April 1919, CMA (Compagnie des Messageries Aériennes) began freight services and the North Sea Aerial Navigation Company began passenger services. The Aircraft Transport and Travel company commenced the first daily international flights between London and le Bourget in August 1919. The British Aerial Transport Company commenced domestic services in Britain in September 1919. Handley Page Transport was in operation on or before mid-October 1919 flying between London and Brussels. Apart from CMA which latter became part of Air France, I assume that none of these organisations have survived the ravages of time.

KLM (Koninlijke Luchtvaart Maatschappij), literally Royal Aviation Company but usually translated as Royal Dutch Airlines, was founded on 2 October 1919.

Chalk's Ocean Airways was founded in 1919 as Chalk's Flying Service and operated from Florida (USA) to the Bahamas using seaplanes. This airline continues to operate.

Sociedad Columbo-Alemana de Transoprte Aéreo (SCADTA), Columbian-German Air Transport Society, was founded in Columbia on 5 December 1919. As SCADTA was German owned the USA government barred SCADTA from operating in the USA; after the Japanese attacks on Pearl Harbor in 1941 SCADTA ceased operations and its assets were seized by local governments. The remnants of SCADTA were then incorporated into Avianca (which had been established in June 1940). Wikipedia claims that Avianca was only the third airline ever to operate, the second oldest in the Americas (after Chalk's Ocean Airways) and the second oldest in the world still operating.[9] Wikipedia also claims that Qantas is the third oldest in the world after KLM and Avianca.[10]

9 www.wikipedia.org/wiki/Avianca

10 www.wikipedia.org/wiki/Qantas

Thus it appears that there were at least ten airlines founded prior to Qantas; of these, two are still operating, another one is operating under a successor's name, and a fourth has been absorbed by another airline.

In January 1934, Qantas Empire Airways (QEA) was formed to operate overseas air routes in conjunction with Imperial Airways (of Britain). Their inaugural flight of an airmail service on the Australia – England route left Brisbane on 10 December 1934. QEA was taken over by the Commonwealth Government in 1947. In January 1958 Qantas inaugurated a round the world air service. Qantas entered the jet age (see below) when it received its first Boeing 707 jet in July 1959; on 29 July, this jet then began the first transpacific service flown by a jet aircraft.

GAGO COUTINHO

Gago Coutinho was a Portuguese naval officer who had also spent a considerable time with the Portuguese Cartography Commission mapping the boundaries of various Portuguese colonies.

Coutinho first became interested in flying about 1917. He and a fellow naval Commander, Sacadura Cabral, planned to undertake a flight from Portugal to Brazil in 1922 to mark the centenary of Brazil's independence. However before doing this, Coutinho dedicated himself to updating aerial navigation methods to enable accurate flights over the ocean. As a result, he developed a sextant with an artificial horizon and also a route corrector.

Figure 10 – Portugal 20 Escudos, 1978 – Admiral Coutinho (shown at 55%)

Coutinho and Cabral flew from Lisbon (Portugal) in a Fairey F III-D flying boat named *Lusitânia* in an attempt to cross the Atlantic Ocean to Brazil. They made stops at the Canary Islands, St Vincent Island (Cape Verde), and St Peter (St Paul's) Rocks (in the Atlantic Ocean northeast of Brazil). Their flight commenced on 30 March 1922 but after excessive fuel consumption,

rough water on landing at St Peter (St Paul's) Rocks caused their aircraft to sink.

The Portuguese Government shipped another similar aircraft to Coutinho and Cabral; however rough weather prevented it from being unloaded and it went on to the northern Brazilian port of Fernando Noronha. Coutinho and Cabral then flew the new aircraft almost back to St Peter (St Paul's) Rocks but were forced to ditch in the Ocean. Another Fairey flying boat (named *Santa Cruz*) was shipped to Fernando Noronha, but this time Coutinho and Cabral flew south along the coast and, after stops at various ports, they eventually reached Rio de Janeiro on 17 June 1922.

HINKLER

As mentioned earlier, Bert Hinkler had been barred from the 1919 air race from England to Australia. However he was determined to make the flight. After he eventually saved enough money to buy his own aircraft, an Avro Avian biplane, Hinkler left England on 7 February 1928. He followed the same route as the Smith brothers (in 1919) and landed in Darwin on 22 February – just 15 ½ days (13 days less than the Smith brothers). This was also the first solo flight between the two countries.

Hinkler became an instant national hero and the Australian government gave him a special prize of £2000.

Figure 13 – NSV medal, 1928 – Bert Hinkle'sr flight London to Darwin 16 days[11]

[11] C1928/1 This medal was issued by the Numismatic Society of Victoria (NSV) which was the predecessor of the Numismatic Association of Victoria.

KINGSFORD SMITH

After being barred from the 1919 England – Australia air race, Charles Kingsford-Smith was upset and dreamed of flying the trans-Pacific route to Australia. He returned to Australia and worked as a "barnstorming" pilot and flying airmail for Western Australian Airlines. After meeting Charles Ulm (who also dreamed of flying the Pacific), the pair went looking for sponsors. To show their ability, they flew the Australian coastline (12 000 km) in 10 days 5½ hours (the previous record was 22 days 11 hours). The New South Wales government sponsored them to the tune of £3500.

In the United States of America, they purchased a Fokker tri-motor plane. However political upheaval resulted in Kingsford-Smith and Ulm having to return the money, but they were saved when an American businessman bought the aircraft and then gave it back to them. They then named it the *Southern Cross*. For crew, the pair selected Harry Lyon (navigator) and James Warner (radio operator).

They departed from Oakland (California) on 31 May 1928 flying firstly to Honolulu (3800 km), then to Suva (5100 km), and finally to Brisbane (2900 km) where they arrived on 10 June. The actual flying time was just over 83 hours.

Smithy, as Charles Kingsford-Smith was popularly known, went on to make various other pioneering flights both in Australia and overseas. On 31 March 1929, Smithy and Ulm (with a new crew) left Sydney in the *Southern Cross* to fly to England, but were forced down 400 km from Wyndhan (Western Australia); they again set out on their flight on 25 June. They reached London on 10 July 1929 – a new record of 12 days 18 hours.

On 24 June 1930, Smithy flew from Ireland to New York and then onto Oakland (California) where he arrived on 4 July; this flight was also in the *Southern Cross*. With this flight, Smithy became the first person to circumnavigate the earth by air.

In 1934, Smithy and P G Taylor (another Australian) made the first flight from Australia to the United States across the Pacific Ocean. They left Brisbane in the *Lady Southern Cross* on 21 October and arrived at Oakland on 4 November.

Figure 11 – Australia 20 dollars, 1973 – Sir Charles Kingsford Smith (shown at 60%)

Smithy and his co-pilot died in another flight from England to Australia when the *Lady Southern Cross* disappeared on 8 November 1935 over the Bay of Bengal.

Figure 12 – Australia 1 dollar, 1997 – Sir Charles Kingsford Smith with 'The Southern Cross'

FLYNN AND THE FLYING DOCTOR

The Australian Inland Mission (AIM) was founded in 1912 to bring education, medical services, and also the Church to the people of inland Australia. Its founder, Rev John Flynn, had seen the loneliness of people scattered of a vast area and the problems faced when a medical crisis occurred. His dream was to provide "a mantle of safety" for the people of the Outback. Two things were needed – a fast means of communication and a fast method of transport to medical services and/or quickly bringing a doctor to the patient.

Communication was answered by the development of a radio for use in the Outback. While some were powered by a bank of large batteries, others needed a portable generator that could be worked by the same person who was operating the radio. Alf Traeger invented the pedal radio in 1928.

Figure 14 – Australia 20 dollars, 1994 – Rev John Flynn & Flying Doctor (shown at 60%)

The AIM commenced operating the Aerial Medical Service, a flying doctor service, from Cloncurry (Queensland) in May 1928. The first aircraft was a de Havilland DH 50 named *Victory*; it made the first emergency medical flight on 17 May. The first radio transmission from a doctor flying in a plane was made on 31 July 1934. The Aerial Medical Service later became the Royal Flying Doctor Service.

1934 INTERNATIONAL AIR RACE

As part of the centenary celebrations for Melbourne and Victoria in 1934-5, the Lord Mayor of Melbourne proposed an air race from London to Melbourne.

The rules were fairly simple

- five compulsory stops – Baghdad, Allahabad, Singapore, Darwin, and Charleville (Queensland);
- no limit to aircraft size or power;
- no limit to crew size;
- no pilot to join aircraft after leaving England;
- each aircraft to carry three days rations per crew member, floats, smoke signals, and efficient instruments.

There were prizes for the fastest aircraft and a handicap winner for the best performance (with a time limit of 16 days).

The initial field of 60 starters had reduced to 20 by the starting date of 20 October 1934. The field consisted of a mixture of earlier racers, light transports, old bombers and two of the new generation of American all-metal passenger transports.

First across the finishing line at Flemington racecourse was the de Havilland DH 88 Comet *Grosvenor House* flown by Ft Lt Charles Scott and Capt Campbell Black in the time of 71 hours (ie 2 days 23 hours) on 23 October.

The second aeroplane to finish was a Douglas DC-2 flown by the Dutch crew of K D Parmentier, J J Moll, B Prins, and C van Brugge. This aircraft took 90 hours 13 minutes and was the winner on handicap. Importantly, both this and the third aeroplane, a Boeing 247-D, were passenger transports which showed promise for the future development of flight.

Figure 15 – Royal Air Force medal, 1934 International Air Race – Scott & Black and their DH 88 Comet

Nine crews finished the race within the time limit of 16 days; another two finished in the next three weeks, the last one being on 24 November. Another seven withdrew from the race at various stages, one of which eventually reached Melbourne on 13 February 1935. Two other aircraft crashed.

WORLD WAR II

Once again, a world war saw great leaps in the development of aircraft. By 1939, the era of the dirigible / airship was over following the disasters that destroyed *R101* (British, at Beauvais in 1930), *Akron* (USA, 1933 in a storm), *Macron* (USA, 1935, sank), and *Hindenburg* (German, 1937 burnt when attempting to dock with its mooring mast at New Jersey in 1937). The *Graf Zeppelin* (German) remained in service until 1938.

The era of the biplane wasn't quite over with various ones seeing some service in World War II. However the vast majority of aircraft for this

period were metal monoplanes. They ranged from small single seater single engined fighters to larger four engined bombers with crews of up to seven (or more) and transports capable of carrying a large number of passengers (eg paratroops) or cargo.

Figure 16 – Netherlands East Indies 5 gulden, 1943 – Pilot & Military Aircraft (shown at 60%)

Aircraft played major roles in both invasions and destroying the war effort and morale by carrying out bombing missions deep into the homeland of the enemy. Gliders were also used to land troops behind enemy lines during an invasion.

Figure 17 – Great Britain 50 pence, 1995 – Gliders being towed across English Channel for D-Day invasion of France

AIRLINERS AND JET AIRCRAFT

DC-3

While there had been a number of airlines operating between the world wars, there was a dramatic expansion in air travel after World War II. The new airliners were a vast improvement over those of the 1930s. Planes

such as the Douglas DC-3 were widely used and were affectionately called "gooney birds". The DC-3 first flew in December 1935 and saw both civilian service as an airliner and military service as a transport; the military versions were named C-47, C-53, R4D, and Dakota. Over 10 000 DC-3s were built. After World War II, thousands of surplus C-47s were converted into civilian airliners and became the workhorse of the airlines for many years; some DC-3s are still in service.

Figure 18 – China 2 fen, 1953 – DC3 Passenger Aircraft (shown at 60%)

THE FIRST JET AIRCRAFT

A big advance came with the introduction of jet aircraft. In the late 1920s in England, Frank Whittle proposed using a turbine instead of a piston engine; however the Air Ministry rejected his ideas. With private funding he developed a test engine in 1937 and by the outbreak of World War II, official work began. The first flight of the Gloster Whittle jet aircraft was on 15 May 1941. This led to the development of the Gloster Meteor.

Figure 19 – Isle of Man 1 crown, 1983 – Bicentenary of Manned Flight: Gloster Whittle Jet 1941

Meanwhile in Germany, Hans von Ohain had also independently developed an operational jet engine which was also tested in 1937. The first aircraft with Ohain's engine was the Heinkel HE178; this plane flew for the first time on 27 August 1939.

JET AIRLINERS

The De Haviland Comet was the first jet airliner; however its fuselage was faulty and resulted in a number of disastrous accidents before it was withdrawn from service. With the introduction of the Boeing 707 in 1958, long distance air travel at high speeds became commonplace. This led to larger jet airliners such as the Boeing 747 ("Jumbo"), probably the one of the best known big jet airliners, which first entered service in January 1970.

Other aircraft manufacturers, such as Douglas with their DC-9 and DC-10, also built large jet airliners.

Figure 20 – Netherlands Antillies 2½ gulden, 1970 – DC9 Jetliner (shown at 60%)

CONCORDE

The Anglo-French Concorde was a supersonic jet that was jointly developed by the British and French Governments. The prototypes first flew in 1969 and the production models entered service in 1976. Only two airlines, British Airways and Air France, purchased the Concorde. A total of only 20 Concordes were built.

One aircraft, G-BOAD, was jointly operated by both British Airways and Singapore Airways from 1979. The port side of this aircraft was painted in a Singapore Airlines livery while the starboard side remained in British Airlines livery. Interestingly, this Concorde is shown on the Singapore 20 dollar note (the registration, G-BOAD, can be read on the note) shows the starboard side with the Singapore Airlines livery! Presumably this note was prepared prior to the final paint job being decided (or else yet another case of artistic licence).

The Concorde was finally retired from service in 2003. It is claimed to have been the only profit making supersonic jet ever to go into regular revenue service.

Figure 21 – Singapore, 20 dolars, (1979) – Concorde over Changi International Airport (shown at 60%)

LEAVING EARTH

The research into liquid fuelled rockets in the 1930s led to the development of the A4 rocket by Germany during World War II. Quantities of this rocket, also known as the V2, were captured by the Allies in 1945. Further development of the V2 led to its use as intercontinental ballistic missiles and then as a means of putting a payload (including humans) into space. The first man to travel into space was Yuri Gagarin who made one orbit of the earth on 12 April 1961.

Figure 22 – USSR 1 rouble, 1981 – Yuri Gagarin

The largest and most powerful rocket developed from the V2 was the Saturn V which was developed specifically for the purpose of putting a man on the moon. Perhaps the most unusual looking flying machines were the

lunar modules which were specifically for landing men on the moon and returning them to the orbiting mother spacecraft.

Figure 23 – medalet, 1969 – 'Eagle" lunar module on the moon

However none of these rockets were reusable and to help reduce the cost of spaceflight, a reusable space shuttle was developed. The space shuttle looked more like a aeroplane than a space rocket. The first one launched into space was the *Columbia* on 12 April 1981. On its return to earth, it glided to an airstrip where it landed like a conventional plane.

Figure 24 – Isle of Man 1 crown, 1983 – Bicentenary of Manned Flight: Orbiter Space Shuttle 1983

IN CONCLUSION

In the 100 years since the Wright Brothers made their first powered flight in December 1903, men and women have more than just reached for the sky. A flying kite[12] became a reliable aircraft with two or three wings which could carry several people and/or cargo (including bombs). Wooden frames covered with fabric gave way to lightweight metals and a better

[12] Early pilots often referred to their aeroplanes as "kites".

understanding of flight saw monoplanes become the masters of the sky. The piston engine also gave way to the jet engine.

From the dare devil early flyers who were "those magnificent men in their flying machines" in the first decade after the Wright brothers, through the pilots of World War I, the "barnstorming" pioneers who pushed their aircraft to new limits and opened up new long distance routes, the military pilots and aircrews of World War II, to the pilots who took their machines through the sound barrier and into space, a century of manned flight in heavier-than-air machines has seen many dramatic changes.

I have only included a few stories and a few people here. There are many famous pilots and developers of aircraft as well as many more stories of flight, both with and without numismatic connections, which I could have included. There were thousands of different types of aircraft flown, some famous, others rarely heard of.

It should be remembered that Australians were in the forefront of early aviation development and pioneering flights.

Figure 25 – Australian medallion, 2003 – Hargrave's box kite, the Wright Brothers' "Flyer", and a space shuttle[13]

This medal, issued by the Metropolitan Coin Club of Sydney, sums up the story of flight: Hargrave's box kite leading to the Wright Brothers' "Flyer" and a century later a space shuttle in earth orbit.

[13] Issued by the Metropolitan Coin Club of Sydney

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EARLY GOLD COIN PRODUCTION AT MELBOURNE AND SYDNEY MINTS

By John Sharples, NAV 1127[1]

On Friday 6th September 1867 an Act was passed 'to make permanent provision in Victoria for maintaining the establishment of a branch of the Royal Mint'[2]. Within this act the mint was called the Victorian Branch of the Royal Mint and like the Branch already established in Sydney it was to be fully funded from colonial revenues. Unlike the sister mint, the Victorian Act, which authorised the sum of up to twenty thousand pounds a year to defray 'salaries contingencies retirement and other allowances and expenses connected with the establishment' of the mint added that this would be subject to a 'proclamation issued by Her Majesty in England … declaring that the coin issued from the said Victorian Branch is to be legal tender for payments within the United Kingdom of Great Britain and Ireland.'

Just over two years later, on Friday 5th November 1869, the Governor of Victoria ordered the publication of an Order of Her Majesty in Council in the Government Gazette[3]. It reads :

"At the Court at Osborne House, Isle of Wight,
the 7th day of August, 1869.

PRESENT:

The Queen's Most Excellent Majesty in Council.

"…. The Commissioners of Your Majesty's Treasury beg leave to represent to Your Majesty that it appears to Your Majesty's said Commissioners to be expedient –

"That a branch of the Royal Mint be established at or near Melbourne in Victoria, on such site as the Governor or Officer administering the Government of the Colony for the time being might approve; that the Chief Officer thereof, who shall be

1 John presented this paper at NAV meeting 914, 19.8.2005

2 No CCCVII, published as a Supplement to the 'Victoria Government Gazette' 10 Sept. 1867.

3 Victoria Government Gazette No 61, 5 November 1869, p 763.

considered as a Deputy Master of the Royal Mint, on being appointed by Her Majesty, be authorised and empowered to coin gold and other coin in accordance with the standard weight and fineness of the currency of the realm and of the same design; and that the Master of the Royal Mint be authorised to prepare and transmit dies for such coins, so long as the Lords Commissioners of Her Majesty's Treasury may think necessary, and subject to such regulations as they shall prescribe;

"That it may be lawful for the Governor or Officer administrating the Colony for the time being with the advice of his Executive Council, to frame regulations under which the Mint shall receive gold bullion, and coin the same; …

"That five other principle Officers of the Mint be appointed from time to time by the Commissioners of Her Majesty's Treasury, and that the Governor, or Officer administering the Government of the Colony, be empowered on the application of the Deputy Master to suspend either of them in case of misconduct, and, on the recommendation of the Deputy Master, to appoint a person to perform the duties of either of them in case of death, sickness, infirmity, resignation, or suspension, subject to the orders of the Commissioners of Her Majesty's Treasury;

"And that the five officers so to be appointed shall be –

"1st. The Superintendent of the Bullion Office, who shall be responsible to the Deputy Master for the receipt of bullion and the delivery of coin by the Mint; the safe custody of the same while in charge of his department; the faithful conduct and accurate record of all transactions with the public and the Coining Department of the Mint; the general precision of the arrangements, and integrity of the operations of the refining and melting house; and for the faithful and zealous discharge of any other duty which the Deputy Master may direct him to perform.

"2nd. The Superintendent of the Coining Department, who will be responsible to the Deputy Master for the bullion delivered into his charge by the Superintendent of the Bullion Office; for its conversion into coin of the legal weight properly stamped with authorized dies; for the safe custody and legitimate use of the dies; for the operations of his department being properly and

economically conducted; for the records thereof being kept with care and precision; and for the faithful and zealous discharge of any other duty which the Deputy Master or his representative may direct him to perform;

"3rd. The First Clerk of the Bullion Office, who, under the immediate supervision of the Superintendent of the Bullion Office, will be responsible to the Deputy Master for the skilful and economic direction of the operations of melting and refining; for the records thereof being kept with care and precision; and for the faithful and zealous discharge of any other duty which the Deputy Master or his representative may direct him to perform;

"4th and 5th. Two Assayers who will be responsible to the Deputy Master for the accurate assaying and reporting of all bullion or coin delivered to them for the purpose, for the safe custody of same whilst in their charge; and for the faithful and zealous discharge of any other duty which the Deputy Master or his representative may direct him to perform;

…..

"And the Deputy Master shall faithfully and without unnecessary delay, after the expiration of each calendar month transmit to the Master of the Royal Mint the following returns:-

"Weight of rough gold and weight of gold bullion received from the public by the Bullion Office

"Weight melted previous to assay

"Weight assayed and valued and value thereof

"Weight refined

"Weight and value of bullion re-issued, and amount charged for melting, assaying and refining

"Weight of bars delivered for coinage, distinguishing those from scissel and ingot pots

"Weight of each description of coin produced

"Weight of each description of coin delivered to the public and amount, if any, charged for coining

"Number and average of assay reports on which ingot pots have been passed into work, and the highest and lowest reports on such pots

> "The same for scissel pots.
>
> "The same for assay of coin.
>
> "Number and description of dies received or completed during the month, of dies worn out, of dies effectually defaced, and serviceable dies in hand.
>
> "And that the Deputy Master shall faithfully, and without unnecessary delay, forward to the Master of the Royal Mint, at the end of every quarter, a return showing the waste during the quarter, distinguishing the waste arising in melting, in refining, in coining, and in assay…..
>
> "And that, to ensure the careful observance of the Standard in the Coin, the Deputy Master shall only permit coin to be delivered to the public between such hours, on such days, as shall from time to time be ordered by the Governor or Officer administrating the Government of the Colony, during which time an officer appointed by the Governor or Officer administrating the Government of the Colony shall attend and take, without preference in the selection, a number of pieces, in proportion to the quantity delivered, not being more than one piece out of every five hundred coins, nor less than one piece in five thousand:
>
> "That the piece or pieces so taken be sealed up by the Officer appointed as foresaid , and the envelope dated and signed by him, and be forwarded by the Deputy Master to the Master of the Royal Mint in London for such examination as the Lords Commissioners of Her Majesty's Treasury may direct:" etc.

The same number of the Gazette also carried the Royal Proclamation declaring that the "Gold Coin made at the Branch Mint in Victoria, be a Legal Tender within all parts of Her Majesty's Dominions in which Gold Coin issued from Her Majesty's Mint in London are now Legal Tender."

As such, in early November 1869 everything was in place for the efficient running and world-wide circulation of the coins produced by the Melbourne Mint - except the actual mint.

This efficiency was a far cry from the situation surrounding the establishment of the first Branch of the Royal Mint in Sydney. Gold had been discovered in 1851 first in New South Wales and soon after in the newly independent Victoria. Diggers were not keen to leave the gold fields

and travel to the commercial centres to sell their gold, they wished to find more. But at the same time they wanted to get the best price they could for their gold. Gold dealing passed through a brief phase of trading by private merchants on the fields – who gave prices well below the international rates (justified by initial uncertainty of the quality of the gold being found, and the costs of transport and insurance etc.). But soon the Banks entered the market and developed a nice little monopoly. The diggers were a quite important political pressure group who demanded government support for their obtaining a good price for their gold. In Sydney a debate ensued on the establishment of a Branch Mint or a Government Assay Office through 1851. The banking lobby wanted to retain the status quo as it was making a fine profit buying raw gold and shipping it to London for processing. This would end if the diggers had access to an official Assay Office in Sydney or worse still if they had access to a mint. They believed that the British Government would reject a proposal for the establishment of a mint and saw the official application for one as a way of delaying the establishment of an Assay Office. So in November 1851 the New South Wales Legislative Assembly (by 16 votes to 13) set out to request a mint.

At the same time in London the great concern was the protection of the Royal prerogative on coinage. The Californian gold rush had demonstrated that private mints and assay offices were a real threat to this. Fears of private mints in Australia were well founded, we now know that by 1853 there were proposals for assay offices in South Australia, Victoria and New South Wales plus the Kangaroo Office with plans to mint gold tokens and a group calling themself the Australian Mint Association advertising plans for the assaying and stamping or coining of gold[4]. In discussing the Adelaide Pound issues in the Catalogue of the Royal Mint Collection William Hocking says "This act was an invasion of the royal prerogative, and is indefensible"[5].

The British solution was to offer New South Wales a Branch of the Royal Mint. Somewhere off the coast of India in December 1851, the formal request for a mint from New South Wales passed a ship bringing a formal offer of a mint from England. At least some of the authorities behind both letters were relying on a rejection – both miscalculated and the era of Branch Mints was underway.

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4 Sharples, pp 57 – 76.

5 Hocking, p 324.

The Sydney Branch had proved that the quality and esteem of 'the chief coin of the world' the British sovereign could be sustained even when produced in the colonies. First produced in 1855 Sydney Mint sovereigns and half sovereigns slowly clawed their way to international acceptance. They were reliably and accurately produced over the years and by 1866 were declared Legal Tender even in Great Britain. Because of early difficulties in removing silver from the raw gold being discovered in Australia, they were actually worth more than British sovereign which were alloyed with copper. This was overcome by the development of the Miller process of employing chlorine to remove and reclaim the silver at the Sydney Mint[6] and it was then only a small step, as G.P. Dyer has said, to allow Sydney to strike coins of the same design as the Royal Mint[7]. This they began to do in 1871 bearing only the mint mark S to distinguish them from the London product.

As we have already heard, the dies for the coins struck in Australia were shipped from the Royal Mint in London. Melbourne too received dies for an 1871 coinage – but still had no building. Like the Sydney Mint before it, the Melbourne Mint was to initially be manned by a detachment of Royal Engineers and with the same first Deputy Master, Edward Ward (who had been a Captain in 1855 but by 1872 was a Colonel). The detachment arrived in Melbourne on 1 November 1871, but their documentation was lost on the P&O steamship Rangoon which had sunk on its way to Australia. The Rangoon had also been bringing part of the Melbourne Mint's supply of sovereign dies. This accident alerted the Melbourne mint authorities to the potential for the die supply failing – a serious threat to the success of the new mint.

In an attempt to overcome this threat the die engraver Julius Hogarth, late of the Sydney token issuing firm Hogarth, Erichsen & Co., was employed. He wrote the following letter to Colonel Ward on 17th September that year requesting a reconsideration of the terms[8]:

> Sir,
>
> I beg you kindly to reconsider the way in which I was engaged by Mr. Comber to try if I could to transfer and make the Dies for to strike sovereigns, and on my entering the Establishment before

6 Mullett, p.7.
7 Dyer, p48.
8 VPRO (Victorian Public Records Office) Series 643 Unit 69

commencement of work Mr. Comber asked me for what he should put me down a day as to the trial. My reply was that I did not wish to take anything on a shilling a day until I had made a Die but Mr. Comber said it will only be for a few days and in the mean time I will put you down at 12/6 a day – after that understanding on my part (only a few days) I tried the experiment and out of the first die was struck 500 and two blanks came under the Die and it was destroyed, the second had the same fate two Blanks destroyed the Die after striking about 1000 pieces – the third after striking 1,400 was also destroyed in the same way, as to that part hardly any blame could be on my side, but I as well as a [cause?] yourself can see that it would be imposible (sic) for me to compite (sic) against against (sic) the Mint at England for to make Dies but it was illustrated to me by yourself & Mr Comber that you were running short of Dies and therefore you would try if I could help the difficulty. Supose (sic) that idea of Dies was a failure altogether, then I have altered 60 Dies which otherwise would have been of no value – that was decidetly (sic) not in our agreement and should therefore hope that Colonel will not think it unreasonable that I should have that paid as already [there are?] thousands of coins are struck from the Dies.

I beg to put down as memorandum what I have don this month and surly you will find that I am correct but I have to leave it to your consideration.

To cast a Matrix for striking dies of Sovereigns	£5.0.0
To make one pair of Dies as trial	£5.0.0.
To alter and hardening 60 Dies @ 5/-	£15
	£25.0

Mr V F Comber replied:

"Mr. Hogarth was employed at 12/6 per day (while on trial) to make punches and to repair worn dies, but as there was no agreement about the altering of dates of the 1871 dies I beg to recommend that his claim of 5/- per die for that service be allowed. He altered 30 dies. I am informed that he threw up employment at 20/- per day with a view to permanent employment at the Mint.

> "I have deducted the time he was engaged in altering the 30 dies from his day work."

The Melbourne Mint proceeded with work on dies into 1873, although it is not known who did the actual work. In that year they returned a die to London together with complaints about the quality of the dies being sent to Melbourne and accompanied it with a half-sovereign die of local manufacture. The London die officials found no fault with the die that was returned and suggested that the problems may have arisen from poor setting of the die in the press. The same authority when examining the locally prepared half sovereign die was less flattering " This die would not appear to be fit for coining, as the design is distorted, and the letters are "doubled". It may also be remarked that the die appears to have been unskilfully "lapped" and that the letters therefore are of different depths and calculated to produce an unsightly coin." Perhaps they should have sent their home-made die under separate cover.

The detachment of Royal Engineers remained in Melbourne for the first three years of the Mint's operation at which time six of the twelve returned home[9]. One member of this group was however sent home early as punishment for getting too deeply in debt. He was Sapper T. Heron who had been accompanied by his wife and two daughters (aged three years and seven months and two years respectively when they set sail). Heron was paid £3 a week but had run up debts of £64.14.2 ½ by the end of October 1873. Included in his debts were the medical expenses and funeral costs for his younger daughter, Agnes. The receipt from Henry Allison the Undertakers suggest he had splurged, hiring Shillibeers and a hearse. Employees of the mint were not to have large debts.

To return to the experimental die work, it was curtailed after 1873 and the mint was instructed to order sufficient dies to meet their requirements. That it occurred at all seems to be strange as high quality die steels were not to be found in Melbourne (even the London Mint complained at times about the quality of steels available to them). Yet it was indirectly allowed under the Order in Council establishing the Mint for while stating that "the Master of the Royal Mint be authorised to prepare and transmit dies for such coins" it also asked for monthly reports on "Number and description of dies received or completed during the month, of dies worn out, of dies

9 VPRO Series 643 Unit 181

effectually defaced, and serviceable dies in hand." The phrase 'completed during the month' seems to imply die manufacture.

Ten years later, in 1883 the Mint provided modern students and collectors with an important piece of reporting of the state of gold coinage in circulation in Melbourne[10]. Authorities in London were concerned about the degree of wear on the gold coinage in circulation – sovereigns and half sovereigns were only legal tender when of full weight. The Melbourne Mint was asked to report on the condition of the coinage in Melbourne in October 1883. It approached the eight leading banks and asked them to provide £1000 each of randomly selected sovereigns and half sovereigns. These thousand pound lots were put through the automatic weighing machines and the number of light coins was recorded. Then, and more interestingly, a small sample of the light weight coins was examined and the date born by the coins was recorded (Table 1).

Table 1
Melbourne Mint 1883 Survey of worn gold circulating in Melbourne

	Sovereigns	**%**	**Half Sovereigns**	**%**
George III	2	1.3	9	2.8
George IIII	26	17.3	19	6.0
William IIII	11	7.3	7	2.2
Victoria - London Mint	97	64.7	164	51.9
- Sydney Mint	9	6.0	117	37.0
- Sydney post 1871	2	1.3	0	0.0
- Melbourne Mint	3	2.0	0	0.0
TOTAL	**150**		**316**	

It is clear that examples of every date of sovereign and half sovereign from the introduction of the denomination in 1817 found their way into circulation in Melbourne (except perhaps the 1819 sovereign). You may recall that the archaeological evidence for the circulation of silver and

[10] VPRO Series 643 Unit 167

copper denominations I presented a few years ago indicated that the same was the case for all other denominations.

A potentially more interesting outcome of the 1883 survey lays in the circulation of Sydney Mint gold here, in particular the half sovereign. This denomination tended to be a bit of a work horse, circulating far more rapidly than the full sovereign and as such both tended to wear more rapidly and exposed a greater surface area for its volume to wear. Added to this, the survey obtained twice as many half sovereigns as sovereigns (one thousand pounds of each denomination from each of the eight banks) and they form a neat group struck within a twelve year period ending some sixteen years before the survey took place.

The reason for interest is two-fold. Firstly, the official record of production of this coin did not always reflect the year stamped on the coin. This survey can begin to offer an insight into the actual production of different dated half sovereigns. And, intertwined with this, these figures when analysed may be able to assist researchers working with older coin hoards to establish a better idea of how the contents of a hoard might reflect original, and totally unknown, production levels.

The accepted mintage figures, derived from annual reports giving numbers of coins struck in a given year, are to be found in catalogues like that of Greg McDonald. As Greg correctly notes "Mint records show that in 1867, 62 000 coins were struck and a further 154 000 were issued in 1869. It would appear that earlier dies were used as no coins bearing these dates are known."[11]

Graham Dyer wrote to me some years ago explaining that the Royal Mint held historic records of monthly activities at the Australian Mints. In his early days at the Royal Mint in London he had planned to carefully go through these reports and work out exactly what numbers of coins were produced bearing what dates. Other duties, and those who have had dealings with him will recognised that these are, as an employee of the Royal Mint, always 'faithfully and zealously discharged' have stopped him fully following this plan. But he has been able to provide some closer idea of production for the Sydney Mint (Table 2).

11 McDonald, p68

Table 2
Sydney Mint Half Sovereigns

Sydney	Survey	McDonald Mintage	Dyer Mintage	Dyer's observations
1855	2	21 000	21 000	
1856	20	478 000	478 000	
1857	12	499 000	537 000	
1858	9	483 000	483 000	
1859	15	341 000	341 000	
1860	8	156 000	156 000	
1861	19	186 000	367 500	Includes 190 000 struck in 1863
1862	8	210 000	215 000	Struck in 1863
1863	8	348 000	150 000	Struck in June 1863
1864	7	141 000	240 000	Struck in 1865
1865	4	62 000	104 000	42000 struck in1865 62000 struck in 1867
1866	5	154 000	154 000	Struck April 1869

Rounding the findings of the 1883 survey to the number of coins found for each 5000 originally minted, for the twelve dates nine fall into the 20 to 30 thousand bracket. That is for nine dates one coin was found for each twenty to thirty thousand produced – at this gross level the survey seems to reflect original production. The years not 'correctly' represented were 1855 where there was one more coin than might be expected – it is a rare coin and I had not expected to see one found, much less two; 1857 and 1858 which should have been represented by about 20 examples but were both well below; and 1864 which again should have had about 20 but had only 7. My guess is that the 1857 and 1858 issues did not enter Australian circulation quite as freely as other years, perhaps they were exported (the Miller Chlorine process for removing the silver from gold alloy was developed in 1869 and

would seem to have nothing to do with the inconsistency of numbers in the survey).

The Sydney Mint itself was probably also asked to survey the condition of the gold currency if Sydney as part of the same survey. Its figures may be sitting in the New South Wales Archives, and would make interesting reading.

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THE EARLY DAYS OF PAPER CURRENCY AND JOHN LAW

By Len Henderson, NAV 409

Paper money has only recently found favour with collectors. It is often cheaper, it is now very colourful, and the designs are large enough to be admired. However, it took time for it to find favour with the 'man-in-the-street'; perhaps because so many issuing 'authorities' collapsed and the holder of the banknote found he was holding a worthless scrap of paper. In 1800 there were 350 banks in England alone and this figure had grown to 430 by 1833; virtually all of these banks issued "banknotes".

In the medieval days an enormous amount of trade took place during the Saints' Days and other Feasts of the Church. Gold and silver coins were too bulky for merchants to transport along the poor and lonely highways, which could invite robbery in the countryside. Because of this the merchants of those days adopted a system whereby debts and credits of one fair could be recorded and reconciled at some later date. The hazel tally-stick, with notches cut in it to represent the sums owed, was split lengthwise as a contract and so became the earliest tokens of credit and exchange. From these came the parchment Letter of Credit or Bill of Exchange which formed the basis of the first banks founded in Genoa in 1407; other banks were founded in Venice and Barcelona soon after.

In England the history of banking really started in the Civil War when the competing armies, Royalist and Roundhead, seized the gold held in the Tower of London which had been placed there for 'safe-keeping' by the gold merchants. The merchants looked for some other means of security beyond the reach of King or Commonwealth. This led to the printing of receipts instead of hand-written documents for any gold lent out on credit. Within 30 years the goldsmiths were virtually acting as Bankers.

JOHN LAW

The man who really dominated the history of 18th century paper money was John Law, the son of William Law a goldsmith of Edinburgh. By the age of 21 he had already squandered the fortune left by his father and was in Debtors Prison in London. His mother rescued him but within two years he

was in trouble for killing a man in the street. The man killed was Beau Wilson and the action took place in Bloomsbury Square. A woman was said to be behind it, as well as gambling debts. John Law was imprisoned in the Tower but made his escape and fled to Holland with a price on his head. It was here that he heard of the plans of William Patterson to establish a Bank of England. Law thought he could do better.

He embarked on a study of continental economic practices by risking his money on the Stock Exchange and being successful. He thought it an infallible system of gambling. No overdrafts were allowed and no credit given except to the government and the Dutch East India Company. He then went to Venice to investigate trade with the Middle East. He also studied banking in Florence and Genoa. By 1700 he was ready to return to Edinburgh, eager to put his financial plans into practice. As Scotland was still a separate country, he was safe there from charges of murder in London.

He produced a pamphlet "Considerations on Legal Tender and Trade" with the notion of a Council of Trade with himself in charge. This would solve Scotland's monetary problems. He said the economic power of a nation depended on a balanced flow of money to stimulate trade, and as any form of money would do, there was no need to use traditional gold or silver; paper would do just as well. His proposals were rejected by the Scottish and English Governments. He returned to Europe.

JOHN LAW IN FRANCE

France was his obvious target as it was exhausted by the wars and extravagance of Louis XIV. John Law convinced the Duke of Orleans of the benefits of his "System". In 1715, Louis XIV died and was succeeded by his great-grandson, still a child, with the Duke of Orleans as Regent. Law established a State Bank which would take in all the revenue in gold and silver and pay out in banknotes. He induced the public to invest in his System with promises of the backing of the value of land overseas.

In May 1716 the "Banque Generale Law et Cie" was founded with a capital of six million Livres. They issued banknotes to the value of 10 million Livres in three different denominations. Each note bears the figure of a woman with a Cornucopia of Plenty. For the first 18 months it was a success which was stimulated by plans to build up the colonies in the Americas. The Companie d'Occident was formed with four million shares.

These would be paid for by payments from the Royale Exchequer. John Law's bank first issued 15 million notes in 30 months but this rose to 50 million in a fortnight. The 'profits' would come from gold, diamonds and furs from Louisiana – "all the Indians there are covered in gold"! The Mississippi Company bubble burst and was wound up in October 1720.

For his own safety Law left France for Italy where he died in Venice in 1729. The paper money he inaugurated continued as the Banque Nationaux and the Banque Royale. [When he attempted to flee from Paris during the Revolution Louis XVI was recognised by an inn-keeper from his portrait which appeared on a banknote – another example of their danger to those in the public eye.]

FRENCH REVOLUTION

The Assignats varied in value from 1000 Livres (francs) down to 50 Sols. During the Reign of Terror period the notes were issued for just over 12 years with not only the date but also the month of issue printed on them. During the months of "Fruitfulness" the people were starving. As a decimal system they had a 10 day week named after turnips, pigs, etc which the people could not buy. They were living on rats at 2 francs each when the average wage was less than that.

The only thing to do was to go to war to capture wealth and food from other countries. Napoleon came to power. The survivors of the monarchy had been offered a miniature Court in the Kingdom of Westphalia. Here the Court was financed by pensions from various royal cousins. Prince Louis (later Louis XVIII) and the Count of Artois (later Charles X) received an initial 1 444 689 livres from Catherine II of Russia, followed by 200 000 roubles from Paul, reducing to 55 000 roubles seven years later. They received 25 000 crusadas from Portugal each year from 1799 to 1807 and from Austria 50 000 florins a year, although this was probably from the sale of the Duchesse d'Angouleme's diamonds smuggled out by Marie-Antoinette. George III of England sent an initial 3000 pounds.

This was not enough to finance the royalist forces, so they took to forging the revolutionary Assignats. The work was done by priests as they felt they were opposing anti-christian activities. The revolution had declared Christianity illegal and priests and nuns were torn from their monasteries and convents, chained together, and hurled into rivers to drown in a "revolutionary wedding". The Cathedral of Notre Dame was going to be

pulled down but was used as a wine cellar for over ten years. When priests were recognised again they were to be "servants of the state, elected by the people, and paid a government wage".

With the escalation of the wars, Louis, Artois and their Court were driven into Russia, but in 1807 they decided to leave there and go to England where they set up Court in Essex. King George wanted him to use the Palace of Holyrood in Scotland but this was declined. From George they received 6000 pounds a year. It was a Swedish ship which brought them to their third place of exile. There was no longer the need to forge revolutionary banknotes which in any case were worthless now in France. Jacques Neckar, Minister of Finance, had also failed to save France with paper currency.

The ideas of John Law for a paper currency with no backing, or collateral, based on gold and silver was coming to an end, and it is only in the past 70 years that our own banknotes have ceased to have the inscription: "The Treasurer promises to pay ... in gold coin".

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JAPANESE INVASION MONEY OF WORLD WAR TWO

By Ross Wilkinson, NAV 1120[1]

INTRODUCTION

In the years leading up to and including World War Two, Japan embarked upon a massive military colonisation of East Asia and the South-West Pacific regions. This area became known as the Greater East Asia Co-prosperity Sphere and encompassed many of the former European colonies in Asia.

During this time, the Japanese government authorised the issue of a range of currencies for the different countries re-occupied or freed from European colonisation. This issue was very complex and made difficult to understand by the lack of supporting documentation left by the Japanese at the end of the war.

Initially Chinese bank issues became hosts for overprint issues, then paper currencies were issued by the Japanese government for various countries and, finally, puppet governments were authorised issue their own currency.

Due to the complexity of this subject, this paper will confine itself to that class of currency issued by the Japanese and known by its acronym, JIM. However, I will touch on other issues that circulated during this period because of interaction with the movement and use of JIM.

HISTORICAL CONTEXT

During the 1930's and the war years of World War Two, Japan entered into a massive expansion era. This was necessitated by the need for more land for resettlement of a rapidly expanding population, a need for ready access

[1] Ross presented this paper to NAV meeting No 904 on 15 October 2004

to resources to feed the people and to supply the primary materials for its expanding industrialisation programs.

It is recalled that the then Australian Attorney-General, Robert Menzies, was heavily criticised for permitting the sale of scrap iron to Japan in 1938. Waterside workers refused to load the ships in the belief that the metal would be used to make war materials likely to be used in the murder of Chinese and possibly in a future war against Australia. This was in a period when Australia's military intelligence was advising the government of the extreme likelihood of Japan commencing a war in the region. As a result of his actions, Menzies became known by his opponents as "Pig Iron Bob".

Coupled with this pressure, was the historical and cultural belief that mainland areas such as Manchuria and Korea were traditional Japanese land.

It was most likely recognised by the Japanese planners that invasion and occupation would be difficult to justify totally over the area envisaged as necessary to sustain the proposed expansion. Therefore, the guise of ridding countries of their European colonial governments and playing to their independence aspirations was used as can be seen through some of the currencies introduced.

The "occupation" of the area later to be known as the *Greater East Asia Co-Prosperity Sphere* did not occur overnight. Korea was annexed by Japan in 1910. Japan was given control of island areas in the Pacific by the League of Nations following the end of the First World War. Progressive occupation of Manchuria commenced in 1931 and full-scale military occupation of China began in 1937/38.

The Pacific War "officially" began with the bombing of Pearl Harbour on 7 December 1941 although the invasion of British Malaya on 8 December 1941 actually occurred several hours before Pearl Harbour by a quirk of the International Dateline. Although it officially ended on 15 August 1945 after the bombing of Hiroshima and Nagasaki, and the invasion of the Japanese island territories close to the home islands, there were many territories still some distance from Japan continuing to be occupied by Japanese troops.

The strategic aims of Japan were to discourage United States involvement in Japan's Pacific expansion by knocking out its military capability in a massive single strike and to occupy and hold the designated territories within six months of the start of the Pacific War.

THE PHILOSOPHY OF INVASION CURRENCY

Paper currency has traditionally been created as a convenience to avoid the number and weight of coin for large transactions. To provide confidence in its use, governments managing such currency used a precious substance such as gold or silver as the foundation of value for the various denomination notes forming the currency.

The basis of most world currencies at the time of the Second World War was gold. In other words, currencies were backed by something of value to support them in the event there was a "run" on the currency or demand for tangible evidence of value.

There were exceptions to this, such as the notgeld currency of Germany and its states, being produced in large numbers without financial backing as an artificial means to bring about financial reform.

However, the various currencies produced by Japan through the course of its military conquest of east Asia and the south-west Pacific, were produced in great quantities in paper because of a shortage of metal for coins. Whilst they did not have secure intrinsic backing, there were several bases for the various forms of Japanese currency produced during the period. These were:

- The creation of financial and economic dependency on Japan
- Break down of pre-war economy and currency base
- Sense of Identity & Acceptance -
  - National, Regional & State Banks
  - Puppet Government & Banks
- Low cost to produce -
  - No financial backing
  - Paper based – lack of metal due to war effort.

It was also important to understand that Japanese military law was used to ensure use of the introduced invasion currency. Anyone caught trading in anything but the introduced currency was executed. It even applied to Japanese soldiers trading amongst themselves although, with the evidence of Japanese "home" currency found on its soldiers, it is most likely that this was common and not enforced.

JAPANESE INVASION MONEY

There were only five basic areas that were subject to what we call JIM. It is difficult to understand the rationale behind this with the lack of documentation left by the Japanese at the end of the war.

With the development of different national currencies by the Japanese about the "liberated" East Asian zone, overprinted or national-looking bank notes appeared using the currency units of those former governments. This made acceptance of that currency easier.

It was only in the five JIM zones shown on the on the map below, that completely separate currencies were developed and introduced. In other areas of the Japanese "sphere", occasional new distinct notes were introduced but only to supplement the existing currency systems.

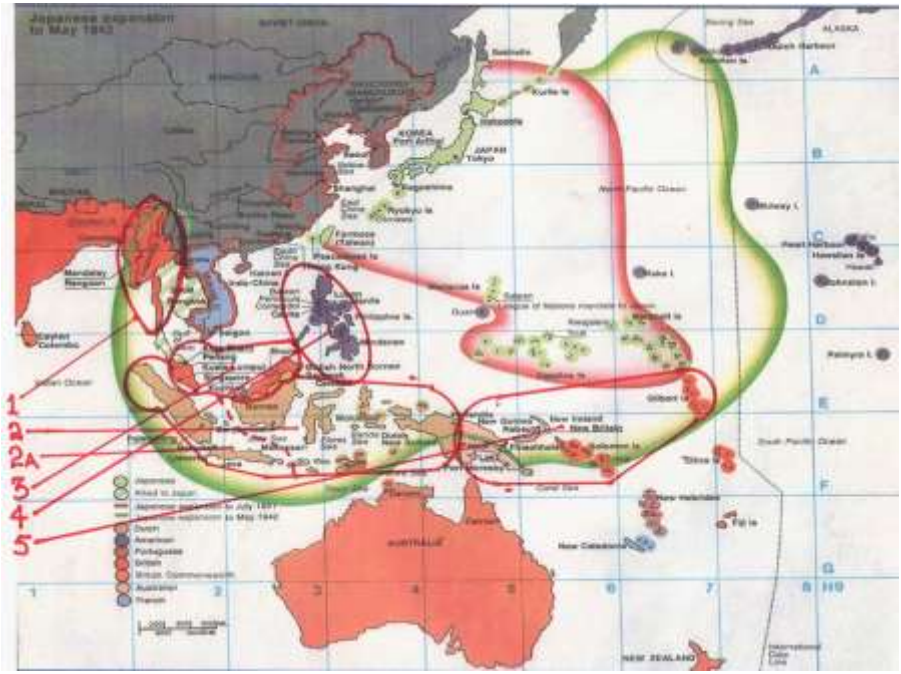

Figure 1 – Map of currency regions

Japanese Invasion Money (JIM) Zones

Area	Prefix	Locality
1	B	Burma
2	S	Netherlands East Indies
2A	S	Indonesia
3	M	Malaya
4	P	Philippines
5	O	Oceania (British colonies in the South West Pacific)

JIM NOTE DESIGNS

The designs on each JIM note were prepared to induce a sense of identity through generic "tropical" designs that would induce a specific sense of identity in each of the occupied or "liberated" areas. The titles and denomination units were selected to enhance the designs and sense of identity.

Figure 2 – 5 Rupees, Burma (shown at 60%)

In two areas later issues became very "area specific" to encourage acceptance and usage. These are the Roepiah issue for "Indonesia" (Dutch East Indies) and the Rizal Monument issues for the Philippines. These will be discussed in some detail later.

The JIM notes have been, in my opinion, quite well designed on the face but the reverse shows a lack of imagination on the whole. Clearly there has been a saving in production costs to create standard plates for each denomination across all five JIM areas.

Figure 3 – 10 Dollars, Malaya depicting tropical trees and fruits (shown at 60%)

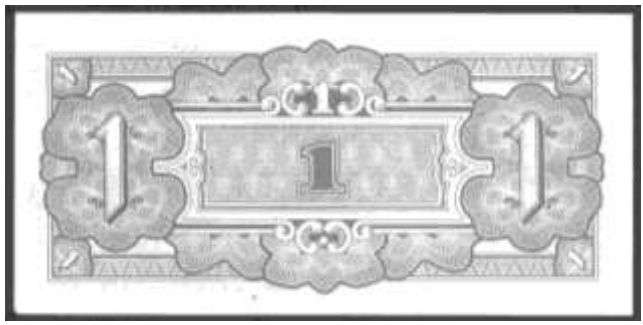

Figure 4 – Standard back for 1 Rupee (Burma), 1 Dollar (Malaya), 1 Shilling (Oceania), 1 Gulden (Shonan) (shown at 60%)

JIM SERIALISATION

All "authorised" banknotes have individual serial numbers printed on at least one of the faces to provide evidence of government authorisation and as a tool for the issuing authorities to audit against. Due to the destruction of most of the Japanese wartime records, there is no knowledge or even reasonable estimate of how many notes were printed.

JIM notes have a type of serialisation that provides some regional identification and a semblance of "authority" to the issue. This can be a combination of whole block letters, split or fractional lettering, lettering and numbers or numbers alone.

The initial letter on each note or the upper letter on the fractional block designates the region as per the list shown above as "Prefix." Each is self explanatory except for the Dutch East Indies or Indonesia region. The "S"

is for Shonan but is more commonly mistaken as meaning Sumatra. Shonan means Southern Paradise or Great Southern Lands and is believed to have arisen from the riches in the East Indies.

Examples that occur are as follows:

- **MA** (Combinations are listed as MA to MZ)
- **M/AA** (Combinations are listed for the lower letters as AA to CZ)
- **MA 107626**
- **S19** (Combinations are listed as S1 to S31) [only on Shonan issues]
- **{23}** (prefix on left side) **0420063** (Serial number on right side) [only on Philippines Rizal Issue]

Figure 5 – Examples of JIM serialization (shown at 60%)

MYTHS AND OTHER POINTS OF INTEREST

Each of the region's JIM currency was expressed in the pre-war colonial currency units. This led to some myths and misconceptions and, in some cases, misrepresentations. The least issued of the series was for Oceania. As the Japanese used this for the former British possessions in the South-

western Pacific islands including Australia's New Guinea protectorate, this meant that the currency was expressed in Pounds and Shilling units. This was mistakenly believed to mean that Japan intended to invade Australia. Japanese wartime records indicated a clear intention to isolate but not invade Australia.

Figure 6 – 1 Pound, Ocenia (shown at 60%)

Similarly, the Malayan currency was expressed in dollars and cents. Many believed that this indicated that Japan intended to invade the United States. Again nothing was further from the truth.

Unfortunately these stories have been used to misrepresent and inflate the value of these notes for resale purposes.

Like all currency, mistakes occurred that created errors and varieties. However, were they actual errors or post-war fakes?

The smallest minting of the JIM types was the Oceania notes as the Japanese were in this region for the shortest period of each of the occupied regions.

There were rumours and stories of sightings of other notes of differing denominations in Oceania that are otherwise unknown and not listed in the various catalogues. There is no proof of these sightings and they have been discredited unless located and verified.

INFLATION

As the war progressed and it became obvious that things were not going well for the Japanese, the JIM currency began to lose favour and value.

Inflation notes of greater value of up to one thousand units were issued in both Malaya and the Philippines.

The quality of these notes in the Philippines was particularly poor being printed with poor quality paper and ink.

Figure 7 – 1000 Dollars, Malaya (top); 1000 Pesos (back), Philippines (shown at 60%)

NATIONALIST MOVEMENTS

Japan started to recognise that nationalist movements in some of these regions could be utilised to further the separation of the populations from their former colonial governments. One way of pushing this through to the population at large was on the banknotes.

Examples of this were the later Roepiah issues that had traditional Javanese folk figures and puppets printed on them and the second issue notes of the Philippines with the Rizal Monument shown.

Figure 8 – 10 Roepiah, Puppet Government issue for Indonesia (shown at 60%)

COINAGE

This was very scarce during the war as the Japanese were struggling for hard resources due to the war demands for materials. Domestic coinage was minted in Japan during the war but this, as a general rule, did not extend to the Invasion Series.

However, evidence exists of coins of three denominations minted for Shonan with the latter "independence" or folk designs seen on them. What is not clear is what happened to these. Two stories exist that they were either melted down prior to issue or that they were lost when a ship was sunk on the way to the Netherlands East Indies.

The fact that there are sufficient numbers still in existence tends to lean to the second theory as it is unlikely that these would be available today if they were withheld in Japan and melted down.

Figure 9 – 10 Sen coin (aluminium alloy), Puppet Government issue for Indonesia

GENERAL ISSUES

This time was a period of great turmoil and confusion. Many notes were printed and circulated throughout the Greater East Asian Co-prosperity Sphere.

Whilst not JIM, China was an amazing centre of numismatic issue with each regional bank issuing a variety of notes for the Japanese Government. Japanese domestic notes were overprinted for wartime use and special notes were printed for the puppet governments in Burma, Thailand and India.

Interestingly, notes were printed in the US for the Netherlands East Indies in 1943 well after the Japanese occupation.

In the Philippines, each region had a guerrilla government that issued its own notes of very poor quality. The population were caught between a rock and a hard place because if they had Guerrilla currency when the Japanese came calling they were executed and vice versa.

Finally, the Allies printed copies of JIM issues with propaganda notes on one side. They were distributed in an attempt to convince the Japanese to surrender.

POST-WAR REDEMPTION

There were attempts to achieve redemption of the face value of JIM notes held by the populations of the Netherlands East Indies and the Philippines.

In the Netherlands East Indies, the Dutch government initially replaced JIM held by the population at face value. Clearly this was an attempt to buy the loyalty of the people in the face of a rapidly growing independence movement. Over several years, this redemption program was scaled back with the face value being progressively discounted until the program ceased. Shortly after, Indonesia was granted independence in the United Nations.

By far the largest amounts of JIM appeared to be in the Philippines and the people sought redemption from the Philippines and US governments. In 1951 an organisation called the Japanese War Notes Claimants Association of the Philippines or JAPWANCAP. The notes were collected centrally and stamped with any one of seven different stamps of the Association.

The association sued the American government through the American Courts. These claims were finally rejected in 1968.

Figure 10 – 10 Pesos, Philippines stamped by JAPWANCAP

SOUVENIRS

When Manila was re-occupied by the Americans, it was found to be the distribution centre for much of the JIM in the various regions. Large amounts were found in the banks and storehouses. Much was destroyed but some was cancelled by drilling two holes through each note. Much of this was handed over to the Red Cross where the notes were handed out to servicemen as souvenirs.

Figure 11 – 10 Centavos, Philippines cancelled and given out by the Red Cross

Figure 12 – 1 Shilling, Oceania note used as a short snorter (signature at right)

Many of these notes, when collected by servicemen one way or another, became the basis for the creation of "short snorters." These notes were signed by the men present at any given time and had to be produced on demand. As the number of signatures grew, notes were taped together. As they moved around the different areas or collected currency from prisoners, the notes formed a good record of currency issues.

SUMMARY

The various issues of Japanese Invasion Money form the basis of a good collecting theme. It is interesting both in terms of an historical record of wartime economic management and the design and production of a bank note series.

The historical events of the time and the proliferation of other issues across the limits of Japanese wartime expansion make this one of the broadest and most varied areas of study in numismatics.

In conclusion I wish to thank Frank Robinson with the preparation of this paper.

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AUSTRALIAN WWII PRISONER OF WAR & INTERNMENT CAMP ISSUES

By Nik Sharplin, NAV 1132[1]

During World War II, various forms of currency were issued in Australia for use in the numerous camps holding Prisoner's of War and Internees. These camps were spread far and wide around the country, often in remote areas. It was very common for these prisoners and internees to be employed performing work duties both inside, and outside their respective camps, such as farm labourers or labouring on the construction of railroads such as the one in Port Pirie. Prison money existed as a form of currency for the prisoners to be paid according to these work details, which then related to an approved pay scale, and this money was then used to purchase goods within the camps. It was important that the type of money issued and used would be unique and therefore useless, ie worthless outside of the camp, thus not aiding escape with local currency.

Here in Australia in World War II there were three different types used:

- Unauthorised issues (Camp 7 Hay)
- Paper Chits/Coupons
- Metal Tokens

UNAUTHORISED ISSUES (CAMP 7 HAY)

There were three camps in Hay, in New South Wales. Camp 6, which held Italian internees, who, whilst residents of Australia at the time hostilities broke out, still held Italian Citizenship. Camp 7 and Camp 8 were the two camps that the "Dunera Boys" were divided into. The inmates of Camp 7 were mostly professional, or businessmen, and it was these internees that issued and used their own form of unofficial "bank notes".

There are three notes in this series, the lowest denomination being the sixpence, printed in blue with black over print. The Serial number starts with the prefix "C", and it is estimated that 3000 were printed. I estimate that approximately 82 exist today.

[1] Nik presented this paper to the NAV meeting No 909 on 18 March 2005

The one shilling note is printed in green with black over print. The serial number starts with the prefix "D", and was also of an estimated print run of 3000. I estimate that approximately 50 of these notes are still in existence.

The highest denomination is the two shilling note, which is red with black over print. The Serial number sequence on this note starts with the prefix "E". It is estimated that there were 2000 printed of this denomination, of which I believe that 58 of these exist today.

Figure 1 – Specimen 2 shilling note (Hay) (shown at 60%)

These notes were printed by the local Hay newspaper, "The Riverine Grazier" by letterpress, which is a hand fed "Arab" platen press, and were designed by one of the internees of Camp 7, Georg Anthony Teltscher. Georg was one of the Dunera boys, and his name is recorded on the bottom right hand side on the front of the note. He was a professional artist and engraver, who are credited with having designed the Austrian schilling coin of 1934. He later took his mother's maiden name and became George Adams. He died in the early 1980's.

All these notes bear two signatures (except the specimen notes of course). The signature to the right of the coat of arms is that of Richard Stahl, who was the manager of the Camp 7 Bank, and who was a banker in real life.

The signature to the left is one of three internees.

- A Mendl - Abraham Arno Mendl
- W Epstein - Walter Waldemar Epstein
- H M Robinow - Hermann Melchior Robinow

This series of notes has become famous for the many hidden messages and meanings incorporated into their design. In the barbed wire around the edge of the front of the notes can be seen, "we are here because we are

here". Also in the barbed wire in the centre of the front of the note is the message H.M.T Dunera Liverpool to Hay. The sheep in the centre of the shield has the name "Eppenstein" in the pattern of the wool. There were two Eppenstein's on the Dunera, but this name refers to Andreas Eppenstein, who was also known as Andrew. He was the leader of Camp 7.

Figure 2 - "we are here because we are here" (shown at 60%)

The back of the notes shows 25 sheep. Some theorists believe that each sheep represents a hut in the camp, but there were 55 huts in total in Camp 7, 36 of these were for accommodation. As with the sheep on the front of the note, each of these has a hidden name in the wools design, each of various internees.

Figure 3 – Eppenstein in wool (shown at 500%)

These notes were confiscated and destroyed as noted in correspondence dated 15 May 1941 as they were in contravention of Regulation 21 of the National Security (Internment Camps) Regulations Statutory Rules 1941, No 7, which prescribed what tokens were issuable, and that the Camp Paymaster was the only issuing authority. Immediate action was requested

as to their withdrawal and destruction as well as the destruction of all "blocks, etc used in their printing." It was also noted that the use of these notes was limited in their usage to No 7 Camp only and they were not in use in the other camps in Hay. Thus all those notes that still exist today were originally souvenired by some of the internees at this time.

In addition to these notes that name Camp 7 Hay as the camp of issue, other notes are documented to have been circulated in this camp complex. Three types of notes have been documented by Lance Campbell in his book *Prisoner of War and Concentration Camp Money*, however, to date I have not been able to verify the existence of any of these with any other source. Schwan & Boling, co-authors of *World War II Remembered, a history in your hands*, also mention these notes but sourced their information from Campbell. It is not known if these were official or unofficial issues, or on what colour paper these were printed, or even the colour of the ink used.

Type 1

These have either a four or five digit serial number at the top, and two signatures at the bottom. The denomination is in the centre, on the side is a picture of a camp building. There are supposed to be six notes in the series: 2d, 3d, 6d, 1/-, 2/-, and 5/-.

Type 2

This also has a four or five digit serial number, however these are either at the top, or the bottom of the note, with the denomination in the centre. There are two denominations in the series, a 1d and 10/-.

Type 3

The serial numbers are either at the top left or top right, with the denomination at the centre. There are two signatures either in the middle or at the bottom. There are three denominations in this series are 1d, 3d, and 6d.

Campbell notes that this series was very crudely printed.

PAPER CHITS/COUPONS

These unauthorised issues gave way to officially printed and distributed paper chits or coupons when all canteens were closed, and re-opened under the control of the Australian Defence Canteens Service, who introduced their own paper currency in the guise of paper chits.

HAY, CAMP 7

Two types of these chits are known to have been issued here.

Type 1

This series consisted of two denominations, one-penny chit which was printed in black on green card of which nine are known to exist. And the three-penny chit, which was printed black on cream or buff colour card, of which five are known to exist. Both have a four-digit serial number.

Not much is known of this issue, but one interesting detail is that all of those in existence today that bear a signature are signed by R Stahl. This is the same Richard Stahl who signed all of the unofficial notes.

I am not sure if it was common practice for internees or prisoners of war to be signatories to official issues.

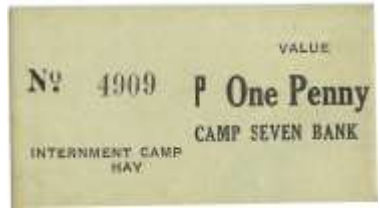

Figure 4 – Hay Type 1, 1 penny chit (shown at 60%)

Type 2

This was a more standardised series of paper chits, which were introduced in booklets. These were printed by A H Pettiffer, acting government printer, and contain the heading "Australian Defence Canteens Eastern Command".

Four denominations of chits were printed:

The 1d chit was printed on blue paper, 2d chit on pale pink, 3d chit on yellow, and the 4d chit on deep pink. The only known booklet to survive, though incomplete, is stamped Camp 7 Hay. There are a few loose chits in existence, these are all the same number as this booklet, 10965, so were all removed from this book at some stage.

It appears these may have been a generic printing, for use in all camps and then they were stamped with the camp number by some form of pressure that cut the camp number through the paper.

CAMP HARVEY

To date, only one type of chit has been reported from this camp, a one-penny, and whilst this chit has no camp number or name mentioned on it, it is believed to have been issued at Camp Harvey, which was in Western Australia, south of Perth. To date only two of these examples are known. They are printed in black on pale green card with the wording "Internment Camps, Canteen Coupon".

Figure 5 – Camp Harvey, 1 penny chit (size not known)

LOVEDAY, CAMP 9

Loveday consisted of at least three separate compounds or camps, numbers 9, 10 and 14. These were located in the Riverland District of South Australia near Barmera, which is 12 kilometres south west of Renmark. To date the only chit to surface from this region is a one-shilling chit printed with "1/-" and the name of "Loveday" in black print, whilst the serial number and camp number "9"are printed in red on orange card. Four of these chits are known to exist.

Figure 6 - Loveday, 1 shilling chit (size not known)

PORT PIRIE

Port Pirie housed Italian prisoners of war working on the transcontinental railway. Work on the rail spread from Port Pirie Junction in South Australia for a distance of 450 kilometres. To date only one example

attributed to this camp has surfaced, serial number 80. It is a one-shilling chit printed on a light olive green coloured stock with black overprint, and the name of H T Severn, Secretary printed in the centre in light purple ink.

Figure 7 – Port Pirie, 1 shilling chit (size not known)

TATURA

Tatura (near Shepparton in Victoria) and the surrounding region were made up of eight camps under the command of the third military district. To date there are four types of chits that have been attributed to have been in use in the Tatura camps.

Type 1

This is a sixpence chit used in camp one which was in Tatura. These were printed on a roll, like cinema tickets by Miller of Melbourne. The sole surviving piece to surface to date has the serial number 90587, with the printing "No.1 Camp", and "Canteen". The colour of this chit is unknown.

Type 2

A one-shilling chit that has the wording "Concentration Camp, 3rd Military District" printed in black on pink paper[2]. This is believed to have been a generic printing for use in all of the camps in this region. These were also printed on a roll, like cinema tickets, also by Miller of Melbourne. To date only two pieces are known to have survived, they have the serial numbers 31946 and 91636.

[2] It has been suggested that the term "concentration camp" in this context refers to an army camp were the troops have been concentrated together and does not refer to a camp for prisoners of war or internees. (Ed)

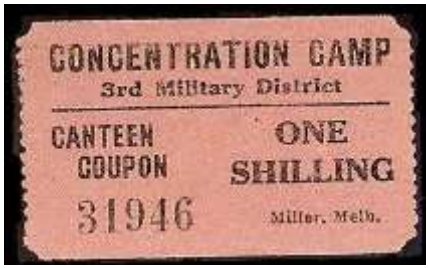

Figure 8 – Tatura Type 2, 1 shilling chit (shown full size)

Type 3

This is also a one-shilling denomination chit, of which there are two types thus far recorded. These have the wording "War Camps, 3rd Military District", "Canteen Coupon" printed in black on two different types of coloured paper stock; one on light pinky grey, serial number 478402, with the other on dark pink, serial number 170776. These are the only two known surviving pieces. These were also printed in a roll but by Pride of Renwick.

Figure 9 - Tatura Type 3, 1 shilling chit (shown full size)

Figure 10 - Tatura Type 3, 1 shilling chit (shown full size)

Type 4

This is a 5-shilling chit from Camp 2. Only one example is known to exist, printed in black ink on yellow paper, this has the number 5 in the middle, with the wording "Five Shilling" through the centre. Printed around the 5 is the wording "Canteen Voucher" at the top with "No. 2 Camp Tatura. Vic."

around the bottom of the 5. This unique piece has the serial number 10000, and is stamped "sample without value".

METAL TOKENS

The issuing exchange and subsequent cancellation of all these paper coupons or chits proved "very cumbersome and unsatisfactory". This led to a request on 9 July 1942 by the Secretary of the Department of the Army, F R Sinclair to the Department of the Treasury for "the production of metal tokens for use as currency in Prisoners of War and Internee Camps." It was also requested "The tokens should be of a type distinct from ordinary coins. This could be achieved by making the tokens in square shape or by making a hole in the centre of the token".

On 29 July 1942, the Department of the Treasury approved the request. The suggestion was also made that they confer with the Deputy Master of the Royal Mint in Melbourne for advice, but that the mint itself would be unable to manufacture these tokens due to the shortage in "coinage requirements" at the time.

There were five tokens minted in this series:

The one-penny token, the only token minted in brass with a mintage figure of 144 630, the two shilling token, mintage of 91 720 pieces in copper, and the five-shilling token, mintage of 34 643 also in copper. These were all minted by H Arendsen & Sons, Malvern

Figure 11 – 1 penny and 2 shilling tokens without hole

K G Luke, Fitzroy, minted the other two tokens, the three pence, mintage 224 000 pieces, and one shilling token, mintage 180 000 pieces.

These tokens were also used in New Zealand. The New Zealand Liaison Office expressed an interest in obtaining a number of these tokens for their own Camps. At that time they were using a very simple series of steel discs

with the denominations (1/2d, 1d, 3d, 6d, 1/-, and 2/-) stamped on them. It is presumed that the New Zealand Government of the day could see the advantages and benefits in a properly designed and minted series. Their request was for the following quantities:

Denomination	Quantity
5/-	8000
2/-	8000
1/-	4000
3d	8000
1d	6000

As it was "not possible to release the above quantities from existing stocks", it was suggested that upon approval from the relevant authorities, every assistance must be granted to the "Dominion of New Zealand" with the arrangements with contractors.

Figure 12 – The dies as stored at the Royal Australian Mint, Canberra

The dies for these tokens have been the property of the Canberra Mint since the Melbourne Mint closed in 1970 when everything was transferred there. Unfortunately no paperwork accompanied these dies during the transfer, so the Canberra Mint has no documentation regarding these tokens or dies in their archives.

The dies for the threepence and one shilling had both a male and female die, as opposed to the dies by Arendsen which are both flat and plain in the centre. This would explain why no examples of either the 3d or 1/- without a centre hole or an off centre hole have been reported. The blanks for these must have been pre-punched, otherwise these dies would have been smashed or damaged in the minting process. Unlike the blanks for the 1d, 2/- and 5/- tokens struck by H Arendsen, which were not pre-punched before striking. All examples of these tokens that I have seen with an off centre hole are never flat, but the detail around the hole is complete. This indicates the hole was punched after the tokens were struck.

Figure 13 – 5 shillings with off-centre hole

At the end of hostilities, after all internees and prisoners were released and the camps closed, there was no longer any requirement for these tokens. They were gathered up and all sent to Melbourne, where on 10 December 1948 the tokens were weighed, and subsequently melted down at the Department of Supply and Development Ammunition Factory, Gordon Street, Footscray. This was witnessed by E M Hall of the District Finance Office, and T Huggan from the Commonwealth Audit Office who issued a certificate to this effect.

The quantity that was destroyed, and the price for which it was purchased by the Ammunition Factory was as follows:

Brass 67/33 (comprising 1d. coins)	754 lbs	£87 /- /- per ton
Copper (comprising other coins)	3086 lbs	£116 /13 /4 per ton

The total face value and number of those destroyed was as follows:

Token	Face Value	Quantity
5/-	£8 474 / 10 / -	33 898
2/-	£8 442 / 8 / -	84 424
1/-	£8 488 / 7 / -	169 767
3d	£2 275 / 4 / 6	182 018
1d	£433 / 19 / 9	104 157
Total	£28 114 / 9 / 3	574 264

By subtracting the number of those that were destroyed from the mintage figures will give us a far more accurate record of how many of these pieces could possibly have survived.

Denomination	Number
5/-	745
2/-	7 296
1/-	10 233
3d	41 982
1d	40 473

However these figures do not include any tokens that were minted for New Zealand. As yet I have been unable to confirm the mintage figures or any further information as to their fate.

This little researched series of issues is of great numismatic interest, and provides a great challenge for the collector. New finds and information continue to surface, making this area of collecting a thought provoking, and due to the rarity of nearly all items in this series, a financial challenge.

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- Tony James
- John Yarwood
- Joe Boling
- Steve Pearce from the Royal Australian Mint in Canberra

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