

THE REFORMATION OF THE COINAGE OF MADRAS EARLY IN THE NINETEENTH CENTURY

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Introduction

By the end of the eighteenth century the British, in the guise of the East India Company, had extended their power to control large tracts of Southern India, either by direct or indirect rule. They had become the dominant power in the region, with their centre of government at Madras, where they had first established themselves in the middle of the previous century. At that time they had obtained the right to mint their own money, and from then until about 1800 the coins consisted, in the main, of crudely struck gold pagodas, silver fanams and copper cash, supplemented during the eighteenth century with silver rupees. However, as the Company extended their territories, the number of different coins that came under their jurisdiction grew, and there were increasing problems caused by exchange rates between all of these different coins, to the benefit of the money changers, or shroffs, and to the detriment of the Company and the general populace. The necessity of reforming the coinage became increasingly obvious and eventually resulted in the issue of a new coinage for the Madras Presidency, beginning in 1807.

Previous authors have considered this subject,¹ but even Pridmore only provided a short review, and, although he did extend the catalogue of the different varieties of coins produced during this re-coinage, many more varieties are now known that he did not include.² The present paper is an attempt to expand the information available about the events surrounding the production of this coinage, but does not attempt to catalogue all of the different varieties of coins produced. This must await a future opportunity. The paper draws extensively on records in the collections of the East India Company papers currently held in the British Library.

The Coins

By the middle of the eighteenth century the Madras coinage was based on two separate systems, essentially a gold and copper South Indian coinage and a silver Moghul coinage. Silver fanams were used, but apparently not to the same extent as silver rupees, at least by the end of the century.³ Thus, by 1800, the major gold coin of the Madras Presidency was the star pagoda, the major silver coin was the Arcot rupee and the major copper coin was the ten cash piece or dudu.



Fig. 1. The 'old' Madras Presidency Coins.

¹ J.A. Atkins, *The Coins and Tokens of the Possessions and Colonies of the British Empire* (London, 1889); F. Pridmore, *The Coins of the British Commonwealth of Nations. Part 4 Volume 1. East India Company Presidency Series c.1642-1835* (London, 1975); L.V.W. Wright, *Colonial and Commonwealth Coins* (London, Toronto, Wellington, Sydney, 1959).

² P.J.E. Stevens, unpublished paper read to BNS 25th February, 1997.

³ The silver coinages of 1802/3/4/6 were all in Arcot rupees except for a small coinage in June 1806. India Office Collections F/4/477, No. 11484.

Also under the control of the Madras Presidency was an area to the north known as the Northern Circars, which had its own silver rupee/anna coinage and a copper coinage consisting of dubs.

The new coinage, begun in 1807, was to cover all of these systems and was eventually to consist of the following coins:

Gold Pagoda	Two pagoda Pagoda	Copper Cash	Forty Cash Twenty Cash
Silver Pagoda/ Fanam	Half pagoda Quarter pagoda Five fanams Two fanams		Ten Cash Five Cash Two and a half Cash
	One fanam	Silver Anna	Four annas Two annas
Silver Rupee	Double rupee Single rupee Half rupee Quarter rupee Eighth rupee	Copper Dub	Double dub Single dub Half dub Quarter dub Regulating dub

The coins were issued at various times throughout the period 1807 to 1817. There were two major types of silver pagoda coins and copper dub coins. The first type was probably issued from early 1807 until mid 1808, and the second type from mid 1808 until 1812.

The People at the Mint

Before reviewing the events that took place leading up to and during the re-coinage, it is worth gaining some understanding of the main characters and committees involved in these events. The Madras Presidency was run by the Madras Council, headed by a Governor, who were responsible for, amongst other things, the coinage of the Presidency. The mint itself was jointly run by a Mint Master and an Assay Master, who, at various times reported either directly, or through a committee, to the Council. Table 1 provides a useful summary of the major players during the period under review.

TABLE 1. Personalities

<i>Date</i>	<i>Mint Master</i>	<i>Assay Master</i>	<i>Deputy Assay Master</i>	<i>Mint Committee</i>	<i>Governor</i>
1807	Roebuck	Shearson	Balmain	None	Bentinck
1808	Roebuck	?	?	Smith / Hodgson / Greenway	Barlow
1809	Roebuck? Ogilvie	?	?	?	Barlow
1810	Ogilvie	Balmain / Ryder	?	Alexander / Greenway / Garrow	Barlow
1811/12	Ogilvie	Ryder	Role abolished 12th July 1811 ⁴	Maconochie / Fullerton / Alexander / Garrow	Barlow

The Recoinage

1790 to 1805

During the last decade of the eighteenth century the coinage of the *Bengal* Presidency underwent a reformation from a hand struck hammered coinage to a machine struck milled coinage. This, combined with the problems associated with the great diversity of different coin types, undoubtedly helped to stimulate the efforts that were made during the 1790s to improve the coinage of the Madras Presidency. For instance, an attempt was made to reduce the number of types of coin by

⁴ India Office Collections F/4/477. No. 11485.

introducing the official coins of Madras into the region of the Baramahal, as documented by Wiggins.⁵ Unfortunately the quality of the coins produced at the subsidiary mints at Krishnagiri and Salem, in the Baramahal, was inferior to that of those struck at Madras, and the coins were more expensive to produce. In consequence the collector in the region sent any coins for re-coinage to Madras rather than having them re-coined locally. This obviously made it more difficult to distribute the Madras coins locally and the whole enterprise failed, the mint being closed on 1st March 1796.

Another example of the efforts made to reform the coinage of Madras comes from the attempts made to entice local rulers to allow the Company to undertake a re-coinage of their currency. For instance, in 1795, the Company's officers approached the Nawob of the Carnatic with a proposal to produce for him a new coinage, bearing his name, to replace the then extant multiplicity of coin types within his territories. Unfortunately, the Nawob rejected this out of hand.⁶

Yet another attempt to deal with the problems of the coinage was made in 1799 when a committee was set up to report on the workings of the Madras mint.⁷ This recommended that this mint should adopt a milled coinage like that of the Bengal Presidency. Some steps were taken to put this into effect and the copper cash coinage of 1803/1808 was produced by machinery, albeit struck by Matthew Boulton at his Soho mint in England and shipped out to India.⁸

1805 to 1806

In 1805 a Committee of Finance, composed of T. Oakes, C. Smith, G. Buchan and J. Taylor, met to discuss the problems of the coinage within the Madras Presidency, and particularly to address the problem of the great variety of types and denominations of money.⁹ Their report was submitted to the Governor in Council, Lord William Cavendish Bentinck, on 12th October 1805, and recommended that the coinage of Bengal should be introduced as the sole currency of the Madras Presidency. One of the main reasons for this was that the committee members believed that the true relative value of gold and silver within the Presidency was greater than the official rate of 350 silver Arcot rupees for 100 gold pagodas, the major silver and gold coins then in circulation within the Presidency. This had caused the Company to suffer losses when exchanging coins with the shroffs and had caused the disappearance of silver coins from circulation. The Committee believed that by introducing the coinage of Bengal to Madras they would thereby simultaneously introduce the exchange rate of Bengal to the Madras Presidency. An added benefit would be the establishment of a uniform coinage throughout the greater part of the Company's territories in India. However, the report went on, this would require the agreement and co-operation of the local native rulers such as the Nizam of the Deccan and the Government of Mysore. Furthermore, to ensure the success of the enterprise, public officers would have to be banned from receiving in payment any but the standard coins. The Committee believed that these would be highly contentious issues that would be difficult to implement.

At some time before the Committee met, a decision had obviously been made to strike any future coinage with machinery rather than by hand, because the report of the Committee refers to the fact that new machinery was already on the way from Calcutta. The Committee considered that further machinery, together with two overseers, should be obtained from England or, better still, bullion due to be sent to Madras should be minted into the Madras coinage, in England, before dispatch. This last point may have been influenced by the 1803 copper cash coinage, which, as mentioned above, had been produced by Boulton in England.

⁵ K. Wiggins, 'Two Unsuccessful Mints of the East India Company', *NCirc* 88 (1980), 349–50. See also Abolition of the Mint at Krishnagiri, 1796. India Office Collections. F/4/30, No. 851.

⁶ Necessity for New Coinage at Madras Presidency. Objections of the Nawob of [Carnatic?], 1794–1795. India Office Collections. F/4/1, No. 609.

⁷ Pridmore, as in n.1, p. 35.

⁸ Pridmore, as in n.1, p. 34.

⁹ Reform of the Coinage – Report of the Committee of Finance. India Office Collections. F/4/188, No. 4142.

Although the Committee produced the report, they were clearly divided on some of the points that they proposed and each individual member also sent a letter expressing his own views, together with the official report. Bentinck obviously felt the need for further advice and consulted the Assay Master at the Madras mint, Benjamin Roebuck. Roebuck wrote a crushing reply to the report of the Committee of Finance.¹⁰ Firstly, and most importantly, he refuted the claim that the official exchange rate between gold and silver was incorrect and causing losses to the Company. He admitted that in a report that he had written in 1802 he had come to the conclusion that the official rate was incorrect, but he now realised that he had been mistaken and, in fact, the official rate was correct. Since the assumption that the official rate was wrong underpinned a large part of the report of the Committee of Finance, this admission obviously seriously undermined their conclusions.

Next, Roebuck questioned the reasons for the Committee believing that the introduction of a uniform coinage throughout India would be a good thing, pointing out that they had provided no evidence to support this. He dismissed the idea that the introduction of a uniform coinage would immediately establish a standard rate of exchange between gold and silver throughout India as laughable, stating that it would 'no more affect the relative exchange between the different Presidencies, than it would the exchange between Madras and China, or Madras and London . . .'. Furthermore, anyone who knew the Nizam or the Government of Mysore would realise that they would never agree to a uniform coinage and the whole idea was therefore 'Utopian'.

Finally, Roebuck referred to the cost of striking coins in England. He pointed out that this would be much greater than in India, although he did agree that machinery should be obtained from England rather than Calcutta, an observation that was to prove all too percipient.

As well as asking for Roebuck's advice, Bentinck collected information about the rate of exchange between gold and silver from his agents throughout the Presidency, and in the bazaar at Madras, each month for several months (Table 2), so that he could confirm or refute the claim that the official exchange rate was wrong.¹¹

TABLE 2. Statement Shewing the Exchange in the Bazaar at Madras between Star Pagodas and Arcot Rupees from the first of January 1805 to the 1st January 1806

<i>Year and month</i>	<i>For Star Pagodas 100 New</i>	<i>For Star Pagodas 100 Old</i>
1805 January 1st	353	351
February 1st	353	351 $\frac{1}{2}$
March 1st	352	351 $\frac{1}{4}$
April 1st	352 $\frac{1}{2}$	350 $\frac{1}{2}$
May 1st	353	351
June 1st	353	351
July 1st	352	350 $\frac{1}{2}$
August 1st	353	351
September 1st	352 $\frac{1}{2}$	350 $\frac{1}{2}$
October 1st	353	351

In February 1806, Bentinck drew together the reports that he had received and made his recommendations to the Supreme Government at Calcutta.¹² He recommended that the Star Pagoda and Arcot Rupee should continue as the currency of the Madras Presidency at the existing exchange rate, and with the same design. Double pagodas and half and quarter rupees should be added and, in form, these should be 'exactly similar to the Bengal coins'. He ended by suggesting that a qualified person should be sent from Calcutta to supervise the erection of the machinery, which he believed was then ready. The only work that was needed before production could begin, was the preparation of the dies, for which he enclosed drawings. These drawings have not been found.

¹⁰ Reform of the Coinage – Letter from Benjamin Roebuck to Bentinck 23/10/1805, India Office Collections, F/4/188, No. 4142.

¹¹ Reform of the Coinage – Letter from Bentinck 3/2/1806, India Office Collections, F/4/188, No. 4142.

¹² Reform of the Coinage – Letter from Bentinck 3/2/1806, India Office Collections, F/4/188, No. 4142.

1806 to March 1807

Although Bentinck had been very positive at the beginning of 1806 that there was not much work required to begin the new coinage, events would suggest that he was overly optimistic. In March 1806 orders were given for the erection of a new mint in Blacktown and Benjamin Roebuck was appointed the new Mint Master.¹³

Roebuck seems to have been the driving force behind the introduction of the new coinage. Coincidentally his father had been responsible for introducing James Watt to Matthew Boulton and for selling Boulton the patent on Watt's steam engine in 1773.¹⁴ Of course, this then enabled Boulton to build his steam-driven coining machines. Benjamin Roebuck must have been aware of his father's involvement with Boulton, and perhaps this helped provide the drive to introduce new technology into the coining process at Madras.

Roebuck had been the Assay Master at the old Madras mint and it was considered unacceptable that one person should hold the two jobs of Assay and Mint Master. A decision was therefore taken that two new joint Assay Masters should be appointed, leaving Roebuck with the job of Mint Master (as well, incidentally, as military paymaster general). Roebuck's salary was discussed at some length and an amount of 400 pagodas per month was eventually agreed. This combined with his salary as military paymaster general gave him a total salary of 1000 pagodas per month.

One of the joint Assay Masters resigned almost immediately and a decision was then made to appoint a Deputy Assay Master, rather than another joint Assay Master. Thus when the mint began operations in the Spring of 1807, the Mint Master was Benjamin Roebuck, the Assay Master was a Mr Shearson, and the Deputy Assay Master was Mr John Balmain, who later became Assay Master. The total number of mint employees was nearly 500, making this whole enterprise a substantial manufacturing process.¹⁵

No record has been found concerning the date when the final decision was made about the exact coins that would constitute the new coinage. Some decisions about this may even have been delayed until after the middle of 1807, because the first proposed proclamation declaring copper coins current (21st August 1807) did not contain the two and a half cash denomination.¹⁶ This was not mentioned until a later proclamation in November 1807.¹⁷ Nor did the August proclamation mention the gold pagoda coins, which were not produced until 1808 (see below).

April 1807

A Mr Da Costa (who was to retire as foreman of the Calcutta mint after thirty-one years' service in 1824)¹⁸ was responsible for the erection of the machinery that had been received from Calcutta,¹⁹ but this and the production of the dies must have taken some considerable time, because the mint did not begin to strike coins until April of 1807. There are good records available of the numbers of each denomination of coin struck during the twelve months beginning in April 1807.²⁰ These show that the first coins struck were copper half and single dubs and silver eighth, quarter and single rupees (tables 3–6).

Roebuck had investigated the problem of lack of the copper dubs in the Northern Circars the previous year,²¹ following an initial report from the Committee of Finance on the subject of the

¹³ Public letter from Fort St George 21/10/1807. India Office Collections F/4/274, No. 6114.

¹⁴ R. Doty, *The Soho Mint and the Industrialization of Money* (British Numismatic Society Special Publication, London, 1998), pp. 13–14.

¹⁵ Public Letter from Fort St George, 21st October 1807. India Office Collections F/4/274, No. 6114.

¹⁶ Letter from Roebuck 21/8/1807. India Office Collections F/4/276, No. 6158.

¹⁷ Letter from Roebuck 27/11/1807. India Office Collections F/4/276, No. 6158.

¹⁸ Calcutta Mint Proceedings 1823–1824. India Office Collections P/162/74.

¹⁹ Letter from Roebuck to Bentinck 4/6/1807. India Office Collections F/4/299.

²⁰ India Office Collections F/4/299, No. 6932.

²¹ Letter from Roebuck to Bentinck, 16th December 1806. India Office Collections F/4/274, No. 6115.

copper currency.²² The Committee of Finance had found that the shortage of copper currency was the consequence of three activities: firstly, insufficient copper being sent to the Northern Circars (Masulipatam had only received one shipment between 1803 and 1806); secondly, the local populace melting down the coins to make copper utensils; and thirdly, many coins being exported simply for their copper content, because coins were not taxed when exported whilst copper plate was. Roebuck suggested that copper coins should be reduced in weight from thirty-three dubs to the pound avoirdupois to forty-four. With Bentinck's agreement, he then went on to examine the costs of production, suggesting that when the new machinery was available he hoped to reduce these costs from twenty pagodas per candy of copper coined, to eight pagodas.²³ However, Roebuck recognised that it would take some time to get the machinery working and proposed that in the meantime copper dubs should be produced locally in the mints of the Northern Circars (Masulipatam, Vizagapatam, Ingeram and Madopollam). There is no record of whether or not this advice was followed, but it is not surprising that dubs were amongst the first coins produced once the new machinery was working.

In April 1807, Roebuck produced a report on the copper cash (as opposed to dub) coins to be included in the new coinage. He suggested that the largest denomination should be an 80 cash piece equivalent to a fanam. This would be necessary because there were no plans to strike a silver fanam coin. An 80 cash coin would have been very large and a decision was obviously taken sometime later that a silver fanam denomination would be more practicable. No 80 cash coins were produced. There were also to be denominations of 40, 20, 10 and 5 cash coins. Roebuck considered that smaller denominations would be too expensive to produce and should be avoided, although if necessary coins of 4, 3 or 2 cash denominations could be struck with a reduced intrinsic value.²⁴ In the event, of course, a decision was taken to produce a 2½ cash denomination.

TABLE 3. Mintage of Silver Annas and Copper Dubs between April 1807 and March 1808

<i>Month</i>	<i>Two Annas</i>	<i>Quarter Dub</i>	<i>Half Dub</i>	<i>Single Dub</i>	<i>Double Dub</i>	<i>Regulating Dub</i>
April	0	0	288,850	63,200	0	0
May	0	0	0	0	0	0
June	0	0	0	0	0	0
July	0	0	0	0	0	0
August	0	177,300	994,00	16,000	2,700	118,250
September	0	299,700	0	0	0	0
October	0	0	0	0	0	0
November	22	22	22	22	22	22
December	0	0	0	0	0	0
January	0	0	0	0	0	0
February	0	0	0	0	0	0
March	0	0	0	0	0	0
Total	22	407,022	388,272	79,222	2,722	118,272

²² Letter from Committee of Finance to Bentinck, 6th March 1806. India Office Collections F/4/274, No. 6115. See also letter from Committee appointed to investigate the copper currency in the Northern Territories to Bentinck, 7th March 1807, *ibid*.

²³ Letter from Roebuck to Bentinck, 27th January 1807. India Office Collections F/4/274, No. 6115.

²⁴ Letter from Roebuck to Bentinck, 19th April 1807. India Office Collections F/4/274.



Two Dubs (mis-struck on bottom right)



Single Dub



Half Dub



Quarter Dub



Regulating Dub



Fig. 2. The 1807 Copper Dub Coins struck for use in the Northern Circars. The Regulating Dub was used to help exchange between the dub coins and the silver fanams (translation reads: 'This and three new dubs are one small fanam').

TABLE 4. Mintage of Silver Rupees between April 1807 and March 1808

Month	Eighth Rupee	Quarter Rupee	Half Rupee	Single Rupee	Double Rupee
April	20,000	14,000	0	11,400	0
May	0	0	80,000	500,000	0
June	0	0	24,000	281,000	83,500
July	0	4,000	4,000	361,000	67,000
August	0	0	0	220,894	12,500
September	0	0	0	496,247	2,000
October	0	0	0	168,000	0
November	22	22	22	3,365	42
December	0	0	0	500	0
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
Total	20,022	18,022	108,022	2,144,506	165,542



Two Rupees



Single Rupee



Half Rupee



Quarter Rupee



Eighth Rupee

Fig. 3. The 1807 Silver Rupee coins.

TABLE 5. Mintage of Gold and Silver Pagodas and Silver Fanams between April 1807 and March 1808

Month	Double Pagoda	Single Pagoda	Half Pagoda	Quarter Pagoda	Five Fanams	Double Fanam	Single Fanam
April	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0
June	0	0	0	0	137,088	214,200	0
July	0	0	0	0	264,384	740,520	208,080
August	0	0	67,500	43,000	115,006	507,960	269,280
September	0	0	27,500	76,000	76,000	18,360	36,720
October	0	0	45,125	313,096	39,252	18,444	49,052
November	0	0	33,000	72,995	51,408	6,120	0
December	0	0	79,500	38,000	322,020	79,560	24,480
January	0	0	101,500	7,000	159,120	153,000	12,240
February	0	0	233,500	103,000	359,856	379,440	0
March	7,500	9,000					
Total	7,500	9,000	587,625	653,091	1,524,134	2,117,604	599,852

TABLE 6. Mintage of Copper Cash between April 1807 and March 1808

Month	Two & a half Cash	Five Cash	Ten Cash	Twenty Cash	Forty Cash
April	0	0	0	0	0
May	0	0	0	0	0
June	0	0	0	0	0
July	0	0	0	0	0
August	0	0	0	62,000	0
September	0	0	25,200	214,200	15,300
October	0	0	25,500	801,000	112,500
November	57,622	424,822	277,222	914,422	172,922
December	115,200	129,600	72,000	322,200	28,800
January	187,200	280,800	190,800	594,000	67,500
February	0	0	0	0	0
March	201,600	381,600	1,537,200	9,000	117,900
Total	561,622	1,216,822	2,127,922	3,016,822	514,922

June 1807

By June, things were not going smoothly and on 4th June Roebuck sent a letter to Bentinck detailing the machinery and enlarging on the problems that he was having.²⁵ As well as detailing the difficulties that he was having, this letter also gives an insight into the methods that were used to produce the coins. Roebuck stated that the machinery 'such as it is' had been erected by Mr Da Costa. Roebuck, who had succeeded in harnessing bullocks to the machine, had modified the laminating mill, which in Bengal was worked by twenty-four to thirty-six men. However, even four pairs of bullocks were hardly enough to drive the machine, mainly because the poor design caused great friction in converting the direction of thrust from perpendicular to horizontal. At the time of writing Roebuck was altering the equipment and expected to conduct a trial after about fourteen days.

Another problem with the laminating process concerned the metal that was being reduced. In Bengal, where the machinery had originated, only pure silver or gold was used, but in Madras the silver was of Dollar fineness, which meant that it was alloyed with about 1/11th part of copper. Roebuck claimed that this made the metal much harder. In fact, it would appear that Roebuck was receiving Spanish dollars into the mint, and for the larger denominations (i.e. double rupees at this time, but, later, also half and quarter pagodas) he was passing these directly through the laminating mill to produce blanks, which were then cut to size. This is confirmed by existing examples of half pagodas and double rupees with the legends of the Spanish Dollars not completely obliterated by the recoinage process.



Fig. 4. Example of Spanish coin used as blank for the larger silver denominations.

²⁵ Public Consultations 14/6/1808. Includes letter from Roebuck to Bentinck dated 4/6/1807. India Office Collections F/4/299, No. 6932.

For the smaller denominations Roebuck was collecting the scissel produced from cutting the blanks for the larger coins, adding more dollars, and producing ingots that he then had to reduce to the correct thickness. The rollers themselves were made of bell metal (a mixture of copper and tin) and, whilst they were adequate for pure metal or for achieving small reductions in thickness when the Dollar coins themselves were put through the mill, they were not really suitable for reducing the ingots. All this was aggravated by the fact that the machinery for regulating the rollers was incomplete, leading to the bars that were produced varying greatly in both thickness and specific gravity.

The operation that followed the reduction of the metal to the correct thickness was the cutting-out of the blanks. Problems had been encountered here because the original cutters sent from Bengal were too small and the equipment to increase the size of the cutters was incomplete. The new cutters did not produce perfectly round blanks.

The next step in the process was to adjust the blanks to the correct weight. This was achieved either by filing if they were too heavy or by driving in wedges of silver if they were too light. The department responsible for this job had not been properly managed and Roebuck was addressing this problem.

Finally the blanks were cleaned, milled and stamped. The milling machines had been working well, as had the stamping process, but the dies needed a lot of attention. Some of the double rupee dies had only lasted for fifteen coins. Again the problem was that the Dollar-fine silver was too hard. The short life of the dies is both supported by and helps to explain the fact that numerous die varieties exist, particularly of the silver coins.

The exact nature of the machines used for stamping the blanks is not certainly known. However, a copper medallion that may depict the machines has recently been found.²⁶ The design of the medallion is similar to that of the silver pagoda coins, with a garter and buckle on the obverse bearing English and Persian legends, and a ribbon on the reverse bearing a legend in Tamil and Telugu (the native legends translate as Chinapatan Mint). These features clearly associate the medal with the Madras Mint at the time in question. The reverse shows in the centre a classic manually operated machine for striking coins, implying that this was the type of machine introduced into the Madras Mint for the new coinage.



Fig. 5: Medal depicting minting press used at Madras.

July 1807

On 3rd July Roebuck reported that he had begun to receive requests from merchants about having gold and silver coined into pagodas and rupees and that he had begun experimenting with gold. He considered that he would be able to work with a fineness of 89 1/6 gold plus 10 3/6 alloy to 100 parts but he definitely could not produce gold coins with as much alloy as the pre-existing star pagodas.²⁷

²⁶ Photograph provided by Shailendra Bhandare.

²⁷ Letter from Roebuck 3/7/1807. India Office Collections F/4/276, No. 6158.

By 14th July Roebuck had produced enough rupee coins to suggest to the Madras Council that all Collectors should issue a proclamation in the different districts of the Madras Presidency, in the appropriate native language, detailing the new coinage.²⁸ This proclamation began by stating that all silver coins of the Madras Presidency would be coined from Spanish Dollars and be of Dollar fineness. It then went on to specify the weights of the new coins, which included: double rupee, rupee, half rupee, and quarter rupee; also the smaller denominations of the silver pagoda coins, namely, five fanams, two fanams and single fanam. There was no mention made in the proclamation of the half and quarter pagoda, the eighth rupee, or the gold or copper coins. At the same time Roebuck requested permission to strike the half and quarter pagodas and enclosed a specimen of the half pagoda. This request was approved.

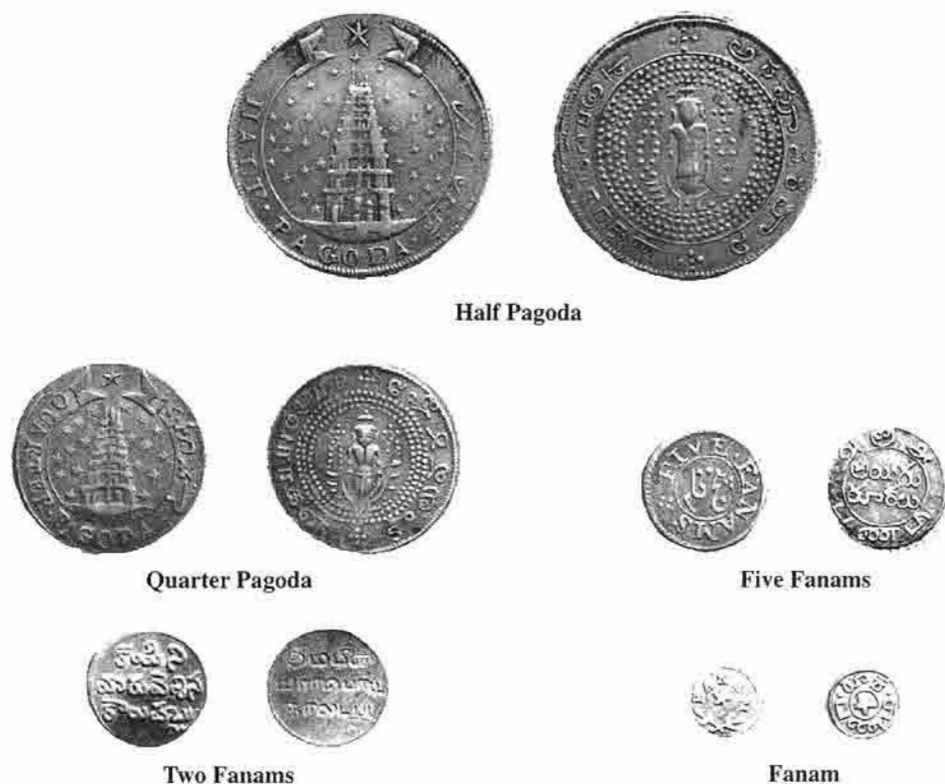


Fig. 6. The 1807 Silver Pagoda and Fanam coins.

This was the first official announcement of the use of Dollar standard fineness. Bentinck had originally proposed that the silver coins should be coined in metal of the same standard as that of the Arcot rupee. This had obviously changed, and was to be the cause of many problems throughout the life of the coinage.

August/September/October 1807

On 21st August Roebuck proposed that another proclamation be issued declaring that the copper coins and the silver half and quarter pagodas were to become legal tender. This proclamation covered: double dub, dub, half and quarter dub; forty cash, twenty cash, ten cash and five cash; half and quarter pagoda.

²⁸ Letter from Roebuck 14/7/1807. India Office Collections F/7/1807. No. 6158.

By now the challenge of how to get the coins into circulation was beginning to gain some attention and it is worth considering this aspect in the light of the overall coining process. The mint obtained silver and gold from two sources: firstly, from coins paid into the government bank and then passed to the mint for recoinage (this having the effect of removing unwanted coins from circulation); secondly, from bullion, either in the form of bars or bullion coins such as Spanish Dollars, all of which came from the government Treasury. The metal was processed and turned into coins, which were then passed back to the Treasury or the government bank and then had to be distributed amongst the populace and accepted into general use. In the immediate area of Madras itself, there was less problem in getting the coins into circulation, particularly the larger denominations, although it was soon found that the local shroffs were overcharging for the exchange of these larger denominations for the smaller ones such as fanams. This overcharging would, of course, have restricted the distribution into circulation of the lower denominations of coins. In October 1807, Roebuck suggested to the Madras Council that they should take a more active part in getting the coins into circulation by employing their own shroffs. These, he suggested, should consist of a head and three subordinates, all of whom should be available in a central place in Black Town between 11 o'clock and 4 o'clock each day. The Council agreed with this and instructed the town major to provide a guard.²⁹ Thus, within Madras itself, the Company used its own shroffs to help get the coins into circulation, an action that was later to be criticised by London.

However, getting the new coins into circulation was not so easy in places that were some distance from Madras itself. In August 1807, the Madras Council discussed a problem concerning the district of Tanjore and Trichinopoly.³⁰ The principal collector there, Mr Wallace, had written to the Board of Revenue on 6th May and to the Accountant General on 24th May, suggesting that the Tanjore gold fanam should be replaced by a silver coinage. These letters were passed to Roebuck, who seized upon the opportunity offered to help distribute the new coinage. The Tanjore gold fanam was about equal in value to the new silver double fanam, and the treasury had about 50,000 of the new double fanams in stock. Roebuck suggested that these should be sent to Tanjore as soon as possible. He added that he thought that he could produce about 53,000 more per month. The Council agreed with this proposal and, on 22nd August 1807, Roebuck was asked to arrange for the transfer of the double fanams to Tanjore. In the same letter from the Council to Roebuck, the President also expressed his view that copper coins should be sent to Tanjore. That the fanams actually reached their destination is confirmed in a letter from the Accountant General in September of 1807, wherein he questioned the rate at which the fanams should be brought to account, 42 or 45 to the pagoda.³¹ This episode provides an interesting documented example of how opportunities that arose were exploited to help to get the coins into circulation in more peripheral areas of the Madras Presidency.

November 1807

On 27th November, Roebuck wrote to the Chief Secretary of the Madras Government enclosing copies of two proposed proclamations and specimens of all of the new coins.³² These were to be forwarded to all of the Collectors of the different districts within the Madras Presidency. Reference to the mintage figures indicates that twenty-two of each denomination were specially struck during November, presumably for this purpose, and reference to the Pridmore sale catalogue (lots 369, 370, 410 and 437) reveals the existence of several coins labelled as 'Mint Specimen Sets', and one could speculate that these might be representatives of this special issue.

²⁹ Madras Public Consultations, 3rd November 1807, India Office Collections F/4/276, No. 6158.

³⁰ Madras Public Consultations, 21st August 1807, India Office Collections F/4/276, No. 6158.

³¹ Public Consultations 22/9/1807, India Office Collections F/4/276, No. 6158.

³² Letter from Roebuck 27/11/1807, India Office Collections F/4/276, No. 6158.

The first proclamation concerned the rates of exchange between the larger denominations (i.e. pagoda, half pagoda, quarter pagoda, rupee and half rupee) and the smaller silver fanam denominations and the copper cash coins. These rates had been agreed by the shroffs as follows:

TABLE 7. Rates of exchange of large and small denominations

	<i>F[anams]</i>	<i>C[ash]</i>
For every pagoda to give	44	70
For every half pagoda	22	35
For every quarter pagoda	11	17½
For every rupee	12	65
& for every half rupee	6	32½

The proclamation was to be published by Tom-Tom. The second proclamation was a revised version of the August proclamation declaring the half and quarter pagoda and the copper coins current. This was almost identical to the earlier version but now included the two and a half cash denomination.



Fig. 7. Copper Cash coinage.

February 1808

On 2nd February, the introduction of gold single and double pagodas was announced. This left the eighth rupee and regulating dub still to be proclaimed current. The proclamations authorising these last coins have not been found. Perhaps they were just released into circulation without any formal announcement being thought necessary.



Fig. 8. Gold Pagoda coins. First issued February 1808.

On 9th February, Benjamin Roebuck and John Balmain, the Deputy Assay Master, wrote to the Chief Secretary of Government enclosing five specimens of each of the new gold double and single pagoda coins. The coins were 22 carats fine, the two pagoda weighing 91 $\frac{7}{11}$ grains and containing 84 grains of gold and the one pagoda weighing 45 $\frac{9}{11}$ grains and containing 42 grains of gold. Roebuck and Balmain asked that the coins be sent to the Court of Directors for their approval.

April 1808

In London, the Court of Directors were considering the reports that they had received about the Madras coinage.³³ On 6th April they issued a letter to Fort St George in which they stated that they understood that Dollar standard silver had been selected in place of the Arcot standard for two reasons. Firstly, there had been a belief that the silver would be harder and therefore would wear less, and secondly that the silver half pagoda and double rupee could be struck without the necessity of melting the dollar coins and that this would give a standard fineness without the necessity of assaying all the silver. The Court now believed both of these assumptions to be wrong. They had conducted experiments that suggested that Dollar standard coins would in fact wear faster than English standard coins. With respect to the Dollar 'Standard' there was, in fact, a wide range in the standard of the silver coins that were supposed to be of Dollar standard. The Court therefore considered that the standard should have remained the same as that for the old Arcot rupee. However, since the coinage had now been put in place they did not consider it worthwhile changing the standard at that moment.

May 1808

By May of 1808, Barlow had replaced Bentinck as Governor of Madras, and the financial affairs of the mint began to come under closer scrutiny. On 6th May, a letter from the Accountant General, Cecil Smith, was placed before Council expressing his views on the financial control of the mint during the first year of its operation.³⁴ The letter included a statement of charges and issue of stores to the new mint from its establishment in March 1807 up to 31st March 1808. Smith noted that the amount of copper supplied to the mint appeared high and he reported that he had written to the Mint Master asking him to account for this. He had also asked Roebuck to supply figures for other items issued by the Military, Commercial and Marine Departments. Furthermore, he suggested that the Mint Master should provide a roll of the mint employees. All of this implied criticism was mollified somewhat by his statement that, in his opinion, the new mint was more efficient than the old.

Roebuck must have replied immediately on the matter of the copper because his reply was available at the same meeting on the 6th May.³⁵ He stated that only $\frac{5}{8}$ of the copper received into the mint could be turned into coins and that the rest was scissel that was just lying around the mint. His intention was to collect all this scissel together and melt it into bars, which could then be

³³ Letter from Court of Directors 6.4.1808. India Office Collections F/4/477, No. 11486.

³⁴ Cecil Smith's letter 30/4/1808 in the Public Consultations 6/5/1808. India Office Collections F/4/299 No. 6932.

³⁵ Public Consultations 6/5/1808. India Office Collections F/4/299 No. 6932.

sold. He also included statements for the other articles that Smith had asked about. Also attached was the table showing the production of gold, silver and copper coins from the mint, month by month since minting began (see Tables 3–6).

Council was obviously not happy about the state of the new mint and the President proposed that a letter should be sent to the mint master asking him to clarify a number of points and instructing him to take a number of actions.³⁶

1. Roebuck was instructed to prepare a revised establishment with a calculation of the probable contingent charges on 1000 of each description of coin.
2. He was asked to state whether or not the machinery was now complete. If not, he was to inform them how long it would take to complete. They were particularly concerned about this because it was supposed to have been ready by May of the previous year.
3. He was asked to state what had been done to the machinery since the previous May.
4. No new building or repairs were to be undertaken without the express permission of Government.
5. He was asked to state what new buildings had been built and how much they had cost.
6. He was to produce a statement of the number of bullocks that were required by the mint.
7. He was to provide accounts for all of the copper that had been received and was to return to the stores any copper that was not immediately required.
8. He was to state how much gold and silver bullion was required to be on hand for the full and smooth operation of the mint.
9. No supplies of bullion other than those that were absolutely necessary were to be ordered.

June 1808

In June Roebuck responded to the questions raised. However, his reply was not good enough and he received a sharp rebuke.³⁷ The Governor was not convinced that unnecessary delays had been avoided and was concerned that all of the copper had not yet been returned to the stores. Roebuck was told that this must be done at an early date. Also, Council considered that the account of the gold coinage was inadequate because the mint had been sent Porto Novo pagodas to the value of 150,020 star pagodas on the 19th April and, as at 4th June, no gold coin had been returned to the Treasury. Furthermore, no more than 41,000 pagodas had been produced in total.

It would seem that the introduction of a gold coinage had compounded Roebuck's problems because he now had to learn how to refine gold from different sources. Thus in May 1808 Roebuck asked permission to build an extra refining room. He stated that with the present facilities he could only refine the Porto Novo pagodas and other inferior coins at the rate of about 3000 pagodas per day, or the Seringapatam coins at about twice that rate. He added that an extra refining room would only take about a week to build and would not cost much.

Soon after this, Roebuck provided a detailed response to all this criticism and this provides an interesting insight into the capacity of the mint and the problems that he was facing.³⁸

1. He stated that the mint was capable of producing 70,000 to 80,000 pieces per day, and from the time that silver or gold was received into the mint there was a delay of about six days before it could be redelivered as finished coins. If the gold required refining, as was the case with the Porto Novo pagodas, then this required another eight days.
2. 100,000 dollars could immediately be cut into between 92,000 and 94,000 half pagoda pieces, the remainder going to make quarter pagodas. The scissel was turned into bars and thence into smaller silver denominations.
3. The refining process had only recently been learnt and as soon as the Porto Novo pagodas had been refined, Roebuck stated that he would provide the figures for the output.

³⁶ Public Consultations 6/5/1808. India Office Collections F/4/299 No. 6932.

³⁷ Public Consultations 10/6/1808. India Office Collections F/4/299. No. 6932.

³⁸ Public Consultations 10/6/1808. India Office Collections F/4/299. No. 6932.

4. For the previous three months the laminating rollers had been in a bad state and the presses were broken, the screws and boxes having given way. However, it was not until the end of April when there was insufficient bullion to keep the mint in work that the output was noticeably affected. In fact, the new mint had achieved much more than the old mint could have done. In other words, despite all the problems, the mint had met all the demands placed upon it.
5. Some of the copper scissel had been used to produce a green pigment called Brunswick Green and Roebuck suggested that some of this should be sent to England to test the market for this material.
6. Finally, he provided an account of the usage of all of the copper received into the mint from 1st April 1807 until 6th June 1808, and an account of the number of coins held in the copper and cleaning rooms.

In a second letter,³⁹ he denied having said that the machinery would be ready in May 1807, a charge directed at him by the Madras Council, and drew Barlow's attention to the letter that he had sent to Bentinck in June of 1807,⁴⁰ in which he had explained the problems that he had been having with the machinery. Since then, two of the stamping presses had broken and had been thrown out and he had nearly completed building two more. Nine out of the fourteen screws that had been sent from Bengal had entirely broken and, although he had managed to make two more, this still left seven broken. He was in the process of making new screws but at that time he could only strike 30,000 half pagodas per day, although more could be produced with night work.

In fact, Roebuck went on, no part of the apparatus sent from Bengal was useful except for the mere skeleton. Amongst the problems that he lists was the fact that two new cutting frames and tables had been built, two new milling machines had been made for the large and small coins, as had several cast iron moulds for gold and silver. The new dies for minting the 'larger coins with letters' were nearly ready and the coins could then be struck in a better collar than before, making them less likely to suffer from wear.

This reference to new milling machines and dies is interesting because, to date, no evidence has been found to confirm the date when the second type of silver pagoda/fanam coins was issued. The first type single and double fanams had plain edges and the second type had edges that were obliquely milled. Pridmore believed that the new designs appeared in the middle of 1808, and this statement of Roebuck's could be construed as lending support to this date. This would also fit with the fact that a die cutting room was built in April 1808,⁴¹ implying that up until that time dies originated in Calcutta. New dies were probably prepared between April and June, and this could be the time when the design was altered. However, this is obviously speculation and no firm evidence currently exists to confirm when the change in design took place.

October 1808

The Madras Council were still not satisfied that the affairs of the mint were being properly handled by Roebuck, particularly from a financial point of view, and the Public Letter from Fort St George, dated 24th October, 1808⁴² stated that it had been considered necessary to establish a committee to control the mint. This committee was initially composed of Cecil Smith, John Hodgson and Edward Greenway. Their duties were to fall into two categories: the interior management of the mint, and the reformation of the coinage. Henceforth this committee would control the mint although, of course, the composition changed from time to time.

³⁹ Letter from Benjamin Roebuck to George Barlow, 9/6/1808 in Public Consultations 10/6/1808. India Office Collections F/4/299, No. 6932.

⁴⁰ See above.

⁴¹ Letter from Benjamin Roebuck to George Barlow, 9/6/1808 in Public Consultations 10/6/1808. India Office Collections F/4/299, No. 6932.



Half Pagoda



Quarter Pagoda



Five Fanams



Two Fanams



Fanam

Fig. 9. Silver Pagodas and Fanams. Second Type issued 1808–1812.



Two Dubs (Picture from Pridmore)



Single Dub



Half Dub



Regulating Dub

Fig. 10. Copper Dub coins. Issued between 1808 and 1812.

1809

Roebuck died in 1809 and was replaced by Ogilvie as Master of the Mint. The detailed records of mint activity during this year have not been found, although Ogilvie signed the financial accounts in April,⁴³ indicating that he took over fairly early in the year.

March 1810

By 1810, Ogilvie was having trouble getting a sufficient supply of rollers from the powder mills to supply the mint, and the production of gold coins had been interrupted because of this. Ogilvie stated that he required eight pairs of rollers per month and provided details to show that he had only received between two and four pairs each month since September 1809. The Madras Council instructed the Military Board to provide the rollers that Ogilvie needed.⁴⁴

The matter of the metal left over from the minting process and subsequently collected, was not resolved until 1810, when the Mint Committee reported the successful sale of the gold dross that had resulted from the coinage undertaken by Roebuck and the sale of which had been ordered on 10th February 1809.⁴⁵ They also said in their letter to the Madras Council that they had requested more information (from Ogilvie) about the amount of the copper recovered and value of the verdigris (presumably Roebuck's Brunswick Green).

On 6th March the Court of Directors, in London, issued a letter to the Madras Council in which they were highly critical of the new coinage of Madras.⁴⁶ Their attack was based on a letter that they had sent to Calcutta in April 1806, in which they had explored the possibility of introducing a uniform coinage for all British possessions in India. This letter formed the basis of almost all changes in the coinage of the British controlled parts of India right up until the actual introduction of a uniform coinage in 1835. In short the Court of Directors wanted the main silver coin to be the rupee with a weight of 180 Troy grains and a fineness of 11/12th pure silver (this would be English Standard). In their opinion, this did not vary very much from the Sicca rupee of Bengal, the Arcot rupee at Madras, or the Bombay rupee. Nor did it vary very much from other rupees such as those struck at Banaras, Lucknow and Bareilly, so they considered that the introduction should not be a great problem except for the shroffs, who should be ignored. The proposal also included consideration of $\frac{1}{2}$ and $\frac{1}{4}$ rupees and a silver anna (1/16 rupee). Copper coins were to be struck in England and were to consist of 6 pice (or $\frac{1}{2}$ anna), 3 pice (or $\frac{1}{4}$ anna) and 1 pice (1/12 anna). Gold coins, which should be called gold rupees, with halves and quarters, should be struck with the same weight and fineness as the rupee. The Court had also considered how to replace pagodas with $\frac{1}{4}$ gold rupees. The $\frac{1}{4}$ gold rupee would be worth about $3\frac{1}{2}$ new rupees just as was the Star Pagoda.

This 1806 letter had been sent to Calcutta with instructions to consult with the other Presidencies over the implications. However, judging by the way that the Court constantly drove the Presidencies to adopt a consistent rupee standard at every opportunity up until 1835, this letter seems to have been more of an instruction than a consultation, a fact which may have been missed, at least at Madras. Calcutta had forwarded the letter to Madras in December 1806⁴⁷ and Madras had responded in March 1807 that they would give it their attention as soon as possible,⁴⁸ whereupon they seem to have forgotten about it.

Thus by 1810, the Court were expecting the different Presidencies to be moving towards a common rupee standard with a reduced number of standard coin types. They therefore expressed very serious objections to the multiplicity of types of coin that comprised the new coinage at

⁴³ Public Letter from Fort St George 24/10/1808. India Office Collections F/4/299, No. 6932.

⁴⁴ Mint accounts. India Office Collections P/339/26–40.

⁴⁵ Letter from Ogilvie 22/3/1810 and letter to Mint Committee 24/4/1810. India Office Collections F/4/477.

⁴⁶ Letter from Mint Committee 29/3/1810. India Office Collections F/4/477.

⁴⁷ Court's letter to Madras 6/3/1810. India Office Collections F/4/477, No. 11486.

⁴⁸ Public Letter from Bengal, 11th December 1806. India Office Collections F/4/1016, No. 27849.

⁴⁹ Public Letter from Fort St George, 6th March 1807. India Office Collections F/4/1016, No. 27849.

Madras. In view of the fact that as far back as 1799 a committee of reform at Madras had recommended that the Arcot rupee should become the money of account, they were very surprised to discover that gold double and single pagodas had been struck and that the accounts were still kept in pagodas. In their opinion the new coinage should not have contained any gold coins at all. But worse still the Madras council had sanctioned the production of silver half and quarter pagodas and silver fanams as well as silver rupees, so that they had established a double set of coins, one based on rupees and one on pagodas. Furthermore, the Board were amazed by the issue of a regulating dub with a value of $229 \frac{1}{11}$ part of a pagoda. How any normal person could be expected to use a coin of this peculiar value in their daily business was quite beyond the Court's ability to determine!

The letter went on to state that the principle on which the new coinage had been undertaken was to reduce the number of different types of coin in use and produce a coinage that was extremely simple to use and one that would not require the intervention of shroffs to manage. Yet, the new Madras coinage appeared to contain a multiplicity of coin types and to be complicated enough to require the authorities, themselves, to employ shroffs to help to get it into circulation. The Court therefore ordered that the coinage of Madras should consist of a silver rupee coinage composed of denominations of: a single rupee, 8 annas, 4 annas and 2 annas; and a copper coinage composed of: 3 pice ($\frac{1}{8}$ of 2 annas), $1\frac{1}{2}$ pice ($\frac{1}{16}$ of 2 annas) and $\frac{3}{4}$ pice ($\frac{1}{32}$ of 2 annas).

The Court's letter, of course, did not reach Madras for some considerable time and was not considered by the authorities there until December 1811 (see below). Meanwhile, in Madras, the roles of the Mint and Assay Masters were under consideration.⁴⁹ The Mint Committee had previously proposed (30th November, 1809), that the duty of refining and alligating metals should be passed to the Mint Master, and that the Assay Master should be responsible only for assaying metal received into the mint and coin delivered from the mint. In this way the two departments could act as a check on each other, and in 1810 this became the subject of a formal proposal. This clarified the job of the Mint Master and the Assay Master particularly where there may have been some confusion in their respective roles.

1. The Mint Master had control over every department of the mint.
2. Nothing should go in or out of the mint without his permission.
3. The Mint Master would indent the General Treasury for the quantity of bullion necessary to keep the mint going, and, once this had been approved by the Mint Committee, then the sub-treasurer should comply with the indent and send with each supply of bullion or old coins an invoice of the exact rate at which the coins and bullion had been received into the treasury. The Mint Master would then issue a receipt specifying the weight of the bullion and coins.
4. Each type of coin or bullion would be weighed separately and put into the crucibles for melting in the presence of the Mint Master and Assay Master or their deputies, melted and then weighed again. The wastage on melting was to be ascertained and recorded in a book kept by the Mint Master. The Assay Master would then take specimens from each cake for assay.
5. The amount to be melted should be enough for fifteen days' operation of the mint, so that the activities of the mint were not continually disrupted by this procedure.
6. After assay the cakes would be refined, or alligated, as necessary, and cast into ingots for laminating. The Assay Master or his deputy would make assays of the ingots.
7. If the ingots varied from the standard by more than one pennyweight in the troy pound for silver, or twelve grains in the troy pound for gold, then they would be returned to be re-alligated.
8. The Mint Master would be responsible for establishing methods to detect fraud in the departments under his control.
9. The Mint Master would correspond with the Mint Committee on all subjects relating to the mint.
10. The Deputy Mint Master would perform the duties of the Mint Master if the latter were indisposed.

⁴⁹ Letter from Mint Committee to A. Falconar 29/3/1810. India Office Collections F/4/477.

11. The Assay Master was responsible for seeing the coins and bullion delivered into the mint, and overseeing the melting and casting of the cakes. He was responsible for taking samples for assay.
12. The Assay Master would furnish reports specifying the weight of coin or bullion when put into the crucibles, the weight after melting and the fineness of the resultant cakes. He would also calculate the weight of standard bullion in each cake.
13. The Assay Master would assay specimens of the ingots.
14. The fineness would be stamped on each ingot.
15. In the absence of the Assay Master, the Assistant Assay Master would preside.
16. The Assay Master or his assistant would personally conduct the assays. These would not be delegated to natives.
17. The Assay Master would keep a book of every assay.
18. The Mint Master would initially be debited for the whole amount of each invoice of bullion or coins.
19. The difference between the invoice and the actual value would be accounted for as profit or loss, the Mint Master being debited for the excess and credited for the deficiency on the invoice.
20. The Mint Master was to continue the system of accounts for refining, alligating and other departments as had been established by his predecessor (Benjamin Roebuck).
21. The Mint Master was also to keep a book of the weight of coin and bullion before melting and the weight of the cakes. This was to be jointly signed by the Assay Master and the Mint Master.
22. The Mint Master was to prepare a quarterly account of the coinage showing the profit and loss.
23. A selection of coins from the Pix Box would be assayed in the presence of the Mint Committee and the result would be submitted to the Madras Government.
24. A Pix Box would be kept in the mint under the joint keys of the Mint Master and the Assay Master, and one coin in every thousand would be deposited in the box.

The Madras Council approved the proposal and this essentially defined these jobs for the next few years except for some minor changes made in November 1811.⁵⁰ At the same time as the Council approved the role descriptions, they expressed themselves unhappy about the possibility that there might have been some friction between the Assay Master, Balmain, and the Mint Master, Ogilvie.

By August 1810, the dispute between the Mint Master and the Assay Master had been investigated.⁵¹ The Mint Master claimed that the Assay Master had not turned up to perform some of his duties and had also prevented his assistant from doing this work. The Assay Master claimed that he was ill and that the Mint Master was exaggerating. Nevertheless, this had interrupted the smooth operation of the mint and Balmain, the Assay Master, was told to behave or he would be dismissed.

At a meeting of the Court of Directors, held in London on Tuesday 11th April 1809,⁵² a Mr Herbert Ryder was appointed Assay Master at Madras on a salary of £1000 per annum. The authorities at Madras did not appear to be aware of this until, in October 1810, Mr Ryder arrived in Madras and presented his compliments to the Madras Council declaring that he was the new Assay Master sent from England.⁵³ Since Balmain was unable to perform his duties, apparently owing to illness, this was quite a fortuitous event, and in November, the Mint Committee reported to Council that Ryder would now take over the job as Assay Master. However, they proposed that Balmain should be kept on the books for as long as it took him to produce his final accounts.

⁵⁰ Letter from Mint Committee 22/11/1811. India Office Collections F/4/477, No. 11485.

⁵¹ Letter from Mint Committee to Barlow 14/9/1810. India Office Collections F/4/477, No. 11484.

⁵² Meeting of the Court of Directors 11/4/1809. India Office Collections. F/4/274, No. 6114.

⁵³ Letter from Ryder to Thackeray 16/10/1810. India Office Collections. F/4/477, No. 11484.

Council agreed with this and the Mint Committee was urged to ensure that Balmain did indeed complete his accounts as soon as possible.⁵⁴

Balmain seems to have taken all this rather badly, perhaps not surprisingly since he was a sick man. He wrote directly to the Madras Council, not via the Mint Committee, drawing their attention to the fact that the mint was using Dollar standard silver for their silver coins and that this may not have been in the best interests of the coinage. He stated that the Dollar Standard was originally adopted to save the necessity of having to melt Dollar coins when minting double rupees and pagodas (quarter and half) which could then be struck by using the dollar coins themselves as blanks. His view was that, whilst the extra copper in the silver did make the coins harder, they did not wear better because of this. Indeed the harder coins acted like files when rubbing against each other and the coins wore out more quickly as a result. Furthermore, he went on, the harder silver meant that the machinery wore out more quickly thus increasing the cost of production.

Balmain also believed that better machinery should be employed to strike the coins. In his letter he discussed the possibility of using steam power but he dismissed this because of lack of local technical knowledge. However he did believe that he could build better machines powered by bullocks.⁵⁵

The Madras Council forwarded Balmain's letter to the Mint Committee, who subsequently replied to his criticism. The new Assay Master, Mr Ryder, had suggested that the use of a convex die would reduce the wear that coins were suffering as a result of rubbing against each other, and the Committee recommended that this approach should be adopted. They informed Balmain that there were presently discussions in progress about adopting a new coinage based on rupees, and it was therefore inappropriate to change the silver standard just at that moment. The committee expressed their surprise that Balmain had worked for many months in the mint without reporting his concerns either about the silver standard or the machinery. They were happy that the machinery in use at that time was satisfactory for the job but would be pleased if Balmain could build better equipment. Before he went too far they would like to see the designs.⁵⁶

In the event, Balmain died not long afterwards without ever having submitted the long sought accounts for the Assay Office or building the new machines. The final part of this sad tale was a protracted argument between the Madras authorities and Balmain's brother about the amount of money that was owed to him for his work at the Mint.⁵⁷

July 1811

In July 1811, the Court of Directors issued another letter to Madras, in which they examined the cost of the machinery used to build coins over the previous few years. Their conclusion was that the cost was excessive and that, in future, machinery should be sent from England.⁵⁸

October 1811

A second example of documented evidence about attempts to improve the circulation of the new coinage in remote districts occurred in October 1811, when the collector at Tinevally reported that the new coinage was circulating well and gradually replacing the previous mixture of coins.⁵⁹ However, problems were being encountered because of the fact that there was an order to pay the salaries of the troops stationed at Tinevally in local coins called Cully fanams. These coins had acquired a premium value and the troops would not accept payment in any other coin. The collector drew attention to the fact that this order was preventing the removal of the

⁵⁴ Letters of 9/11/1810 and 10/11/1810. India Office Collections. F/4/477, No. 11484.

⁵⁵ Letter from Balmain 11/12/1810. India Office Collections. F/4/477, No. 11484.

⁵⁶ Letter from Mint Committee 14/2/1811. India Office Collections. F/4/477, No. 11484.

⁵⁷ Correspondence between Balmain's brother and Bombay Council etc. India Office Collections F/4/477, No. 11485.

⁵⁸ Letter from the Court of Directors to Madras, 10th July 1811. India Office Collections F/4/477 No. 11486.

⁵⁹ 25th October and 23rd November. India Office Collections F/4/477, No. 11485.

Cully fanams from circulation, and obviously impeding the acceptance of the new coins. In the following month, November 1811, the Madras Council accordingly ordered the Accountant General to supply Tinevally with a quantity of Madras fanams equal to the value of the Cully fanams held in the treasury at Tinevally, and to rescind the order that the troops should be paid in Cully fanams.

December 1811

In December of 1811, the Mint Committee finally received the letter that the Court of Directors had sent on 6th March 1810 and in which the Board criticised the new coinage that had been put in place in 1807. The initial reaction of the Mint Committee, only two of whom were present at the first meeting, was to ask the Madras Council to send various questions to the Collectors of the different districts in order to determine the degree of success that the new coinage had achieved.⁶⁰ This appears to have been a delaying tactic while the Committee considered what action to take as a result of the letter.

April 1812

By April 1812 they were ready, and completely acceded to the Board's demands,⁶¹ namely that the coinage would be simplified and based on the rupee.

June 1812

On 19th June a proclamation was issued confirming the cessation of coinage of the silver pagodas and double rupees and announcing that a new rupee coinage would be produced although the old coins would continue in circulation.⁶²

July 1812

The mint committee at Calcutta agreed that the removal of the gold and silver pagodas and the silver fanams from the coinage of Madras was a good idea and should proceed.⁶³

August 1812

The Madras Mint Committee confirmed that the new coinage of rupees should be issued in English standard silver with a weight of 180 grains for the rupee.⁶⁴ The Madras Council confirmed that, whenever a new silver coinage was to be undertaken, then the half and quarter pagodas and five fanams should be re-coined into the new coinage.⁶⁵

March 1813

In the revenue letter to the Court of Directors, the Madras Council confirmed that, in pursuance of the instructions from the Court of Directors dated 25th April 1806, 6th April 1808 and 6th March 1810, no more half or quarter pagodas or five fanams would be produced and that the silver coinage would be based on a rupee of 180 grains struck in English standard silver. However, the books of account would continue to be kept in pagodas until the rupee coinage had become well

⁶⁰ Meeting of the Mint Committee held on 20th December 1811. India Office Collections F/4/477, No. 11485.

⁶¹ Meeting of the Mint Committee held on 8th April 1811. India Office Collections F/4/477, No. 11485.

⁶² Pridmore, as in n.1, p. 37.

⁶³ Letter from Mint Committee at Calcutta to Madras, 11th July 1812. India Office Collections F/4/477, No. 11485.

⁶⁴ Revenue letter from Madras, 5th March 1813. India Office Collections F/4/477, No. 11485.

⁶⁵ Letter from Madras Council to Mint Committee at Madras, 28th August 1812. India Office Collections F/4/477, No. 11485.

established.⁶⁶ In fact, they seem to have adopted the Arcot standard for the silver fineness rather than English standard.

1814

In October 1814 Ogilvie confirmed to Calcutta that coinage of the double rupees, the half and quarter pagodas, the five and two fanams and the one fanam had ceased in 1812. The other rupee denominations had been replaced by the new rupee coinage. He provided the final mintage figures. The gold double and single pagodas seem to have continued to be minted until 1817.⁶⁷

TABLE 8. Statement Showing the quantity (and value) of gold and silver regular coins sent into circulation in the years 1807/8, 1808/9, 1809/10, 1810/11, 1811/12, 1812/13

<i>GOLD</i>	
Double Pagodas	596,154
Single Pagodas	1,326,850
<i>SILVER</i>	
Double Rupees	165,712
Single ditto	2,144,806
Half ditto	108,180
Quarter ditto	18,216
One Eighth ditto	20,046
Four Annas	44,225
Two ditto	64,530
Half Pagodas	2,500,401
Quarter ditto	8,864,483
Five fanams	4,942,117
Double ditto	7,533,437
Single ditto	1,931,764

This table is a good indication of the comparative rarity of the coins today. The quarter and eighth rupees are very difficult to find and the four annas and two annas are nearly as rare.



Four Annas



Two Annas

Fig. 11. Silver Annas coins for use in the Northern Circars.

1816

In 1816 the Board of Directors communicated to Madras that they were pleased to hear that a rupee of 180 grains had been adopted as the standard coin for currency, but they were not happy that the fineness adopted was that of the old Arcot rupee rather than the new proposed British standard. The Madras authorities were asked to consider moving to this standard at the earliest convenient opportunity.⁶⁸ Madras had reported that they would move to this fineness in 1813, so this must have been a reminder to ensure that they did indeed move to the new standard.

⁶⁶ Revenue Letter from Madras 5/3/1813. India Office Collections F/4/477. No. 11485.

⁶⁷ Calcutta Mint Committee proceedings. India Office Collections P/162/69, p. 209.

⁶⁸ Public Letter to Fort St George dated 12th June 1816. India Office Collections F/4/1016 & 1017.

1817

By September of 1817 a decision had been taken to issue a new coinage. The new silver coins would comply with the weight and fineness standard required by London and, although the gold coins would be struck, they would not be issued into circulation until permission was received.⁶⁹ On 9th December 1817, a proclamation declared that the coinage of star pagodas would be discontinued and the standard would thenceforth be the Madras rupee.⁷⁰

1818

On 7th January 1818, a proclamation declared that the gold pagoda and the silver Arcot rupee had been replaced by a new gold and silver rupee respectively.⁷¹ Furthermore, the rupee would replace the pagoda in the books of account at a rate of 100 pagodas to 350 rupees, the rate that had been argued over right at the beginning of the decision to reform the Madras coins back in 1805. New gold coins consisting of a gold rupee, half rupee and quarter rupee would be issued and would pass current at the rate of fifteen silver rupees to one gold rupee, although this might be changed from time to time. Lastly, a copper coinage would be issued consisting of pice, which would be exchanged at the rate of twelve pice for one anna.

In summary then, the Madras coinage was reformed starting in 1807 with a coinage containing a diverse set of types and denominations. The authorities in Madras were ordered by London to move to a coinage based on a silver rupee of English standard. In 1812 they took the first step by moving to a coinage based on the Arcot rupee, and in 1818 they finally moved into line with the standard that the authorities in London had set out in their Letter of 1806. The events surrounding this Madras coinage convinced the Court of Directors that effective coining machinery could not be built in India and they turned to Boulton in England to equip the mints at Bombay and Calcutta for the new uniform coinage that was eventually introduced in 1835.⁷²

⁶⁹ Madras Public Consultations, 16th September 1817. India Office Collections F/4/1016 & 1017.

⁷⁰ Pridmore, as in n.1, p. 37.

⁷¹ Madras Public Consultations, 7th January 1818. India Office Collections F/4/1016 & 1017.

⁷² Court's Letter to Madras 10th July 1811, India Office Collections F/4/477, No. 11486, p. 33, para 50:

'The conviction that India cannot provide machinery sufficiently accurate for a mint has induced a decision on our parts to furnish those articles from skilful artists in this country'.