

# The rise and fall of the Roman "Sestertius" at Alexandria

Autor(en): **Burnett, Andrew**

Objektyp: **Article**

Zeitschrift: **Schweizerische numismatische Rundschau = Revue suisse de numismatique = Rivista svizzera di numismatica**

Band (Jahr): **88 (2009)**

PDF erstellt am: **02.08.2018**

Persistenter Link: <http://doi.org/10.5169/seals-179788>

## **Nutzungsbedingungen**

Die ETH-Bibliothek ist Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Inhalten der Zeitschriften. Die Rechte liegen in der Regel bei den Herausgebern.

Die auf der Plattform e-periodica veröffentlichten Dokumente stehen für nicht-kommerzielle Zwecke in Lehre und Forschung sowie für die private Nutzung frei zur Verfügung. Einzelne Dateien oder Ausdrucke aus diesem Angebot können zusammen mit diesen Nutzungsbedingungen und den korrekten Herkunftsbezeichnungen weitergegeben werden.

Das Veröffentlichen von Bildern in Print- und Online-Publikationen ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. Die systematische Speicherung von Teilen des elektronischen Angebots auf anderen Servern bedarf ebenfalls des schriftlichen Einverständnisses der Rechteinhaber.

## **Haftungsausschluss**

Alle Angaben erfolgen ohne Gewähr für Vollständigkeit oder Richtigkeit. Es wird keine Haftung übernommen für Schäden durch die Verwendung von Informationen aus diesem Online-Angebot oder durch das Fehlen von Informationen. Dies gilt auch für Inhalte Dritter, die über dieses Angebot zugänglich sind.

---

ANDREW BURNETT

THE RISE AND FALL  
OF THE ROMAN “SESTERTIUS” AT ALEXANDRIA<sup>1</sup>

PLATES 17–18

The sestertius was the basic unit of account in the western half of the Roman empire, but in the Greek-speaking eastern half of the empire the denarius was the preferred unit<sup>2</sup>. It was never used as a unit of account in Egypt, and the Greek word *sestertios* is almost entirely absent from the papyri which survive today from Egypt<sup>3</sup>. The largest bronze coin in use in Roman Egypt was the drachm, and in this article I consider its history and development, and link both to the history and development of the sestertius. I don't want to overstate the strength of this link, but rather draw attention to its existence, and in this way I want to argue for a modification of the modern orthodoxy that sees the coinage of Egypt as something entirely separate from that of the rest of the Roman empire<sup>4</sup>.

Part 1 looks at the evidence for the introduction at Roman Alexandria of the largest bronze denomination, generally known today as the drachm. Part 2 looks at its role in the monetary circulation of Egypt. Part 3 explores the nature of the denomination, and makes some comparisons with the sestertius. Part 4 discusses the evidence for the end of the drachm in the third century AD, comparing the Egyptian pattern with that found elsewhere.

*1. The bronze drachm in the first century AD*

By ‘drachm’ I mean the large bronze coins made at Alexandria, initially with a diameter of about 35mm. Until very recently, the earliest bronze drachms were known only from the reign of Nero, but a new piece has now been discovered for the reign of Augustus.

<sup>1</sup> I don't think Silvia Hurter ever took a great personal interest in this field of ancient numismatics, but one of her many admirable qualities was her genuine interest in and quiet enthusiasm for all ancient coins. Many thanks to R. Bland, A. Geissen and W.E. Metcalf for their helpful comments.

<sup>2</sup> This can be seen as early as the bilingual text of the *Res gestae divi Augusti*.

<sup>3</sup> E. CHRISTIANSEN, On Denarii and other Coin-Terms in the Papyri, ZPE 54 (1984), pp. 271–99.

<sup>4</sup> This paper amplifies the remarks I made in: The imperial coinage of Egypt in the first century AD, in F. DUVRAT – O. PICARD (eds.), *L'exception égyptienne? Production et échanges monétaires en Égypte hellénistique et romaine*, Actes du Colloque à Alexandria 13–15 Avril 2002, Études alexandrines 10 (2005), pp. 261–77. For another discussion of the integration of Egyptian and Roman currency, see R. BLAND, The Roman coinage of Alexandria, 0 BC – AD 296: interplay between Roman and Local designs, in D.M. BAILEY (ed.), *Archaeological Research in Roman Egypt*, JRA Supplement 19 (Ann Arbor, 1996), pp. 113–27.

Poorly preserved, it was found among the collection of the late Soheir Bakhoum and has now been acquired by the Bibliothèque nationale de France, and published by Gerin. It will in due course appear in the third *Supplement* to *RPC*, as follows:

**S3-I-5002A** AE. 35mm, 34.30g (1). Axis: 12. (*Plate 17, 1*)

ΣΕΒΑ-ΣΤΟΣ; bare head of Augustus, r.

ΚΑΙ-ΣΑΡ (in two lines) in laurel wreath

1. P 2008.66 ex Collection of S. Bakhoum (D. GERIN, in D. GERIN ET AL. (eds.), *Aegyptiaca Serta in Soheir Bakhoum Memoriam* (Milan, 2008), pp. 21–2 and 33 no. 15), 34.30.

On the obverse one can just read ΣΕΒΑ-ΣΤΟΣ (with square sigmas) on either side of the neck, from l. to r. field. The combination of the obverse and the reverse ΚΑΙ-ΣΑΡ (in two lines, and also with a square sigma) indicates that it belongs with the undated series of coins of Alexandria, *RPC* 1, 5003–12 (*Plate 17, 2*). The reverse (inscription, design, even style) is exactly the same as on the much smaller coin, *RPC* 1, 5010.

This series is regarded as the second (?) series of Augustan coinage from Alexandria by *RPC*, following Milne<sup>5</sup>. A date of after 19 BC has been suggested since some coins of the series copy cistophori minted in 19/18 BC, and the series was perhaps made c. 10 BC<sup>6</sup>.

The large size of the new coin is very surprising for this date, as otherwise the denomination (traditionally called the bronze drachm) isn't attested until seventy years later, in the reign of Nero, and otherwise we have nothing larger than 25mm for Augustus, Tiberius, Caligula or Claudius.

Under Nero, the first occurrence of this large denomination takes place in his year 9 = AD 62/3 – a very rare coin with the unexpected dedication to Nero in a wreath: ΤΩΙ CΩΤΗΠΙ ΤΗC ΟΙΚΟΥΜΕΝΗC (*RPC* 1, 5271)<sup>7</sup>. Unexpected in the sense that coins tend to be more restrained in their honour even of Nero, though of course the description 'Saviour of the World' occurs in other media<sup>8</sup>.

There is then a gap, for a few years. The next occurrence had previously been dated to Nero's year 11 by *RPC* 5285, following Dattari and Christiansen, but Pincock has decisively redated the relevant coins to year 14 = AD 67/8<sup>9</sup>.

Drachms were then made for a period of four years under Galba, Otho, Vitellius and Vespasian, although they are all rare until 70/1. The table below shows that, for a time, they adopted a standard design, a winged bust of Nike.

<sup>5</sup> J.G. MILNE, The Alexandrian coinage of Augustus, *JEA* 1927, pp. 135–40.

<sup>6</sup> See *RPC* 1, pp. 692–3.

<sup>7</sup> Described as 'size II (halfdrachm)' by E. CHRISTIANSEN, *The Roman Coins of Alexandria. Quantitative Studies* (Aarhus, 1988), vol. I, p. 82. But the diameter of the Paris coin is 34mm, and its weight 23.90g (SNG 331).

<sup>8</sup> Nobody ever seems to have suggested that the coins are not genuine, and indeed there is nothing obviously wrong with them.

<sup>9</sup> R. PINCOCK, Nero's large bronze coinage for Egypt, *NC* 1995, pp. 266–71.



Emperor	Year	Date	RPC	Design	Frequency <sup>10</sup>
Nero	9	62/3	5271	Inscription in wreath	1
	14 <sup>11</sup>	67/8	5285	Capitoline Jupiter	1
			5286	Sarapis	0
Galba	2	68/9	5346	Bust of Nike	7
	2		5347	Temple of Capitoline Jupiter	1
Otho	1	69	5363	Bust of Nike ( <i>Plate 17, 3</i> )	3
Vitellius	1	69	5374	Bust of Nike	2
Vespasian	1	69	2406	Bust of Nike	2
	2	69/70	2417	Bust of Nike	9
	3	70/1	2427	Bust of Nike	23

There is then another gap in production, until Vespasian's years 7–8 = AD 74/5–75/6, and after that another longer gap, of almost 20 years, until Domitian's years 13–15 = AD 93/4–95/6 (even though bronze was produced in appreciable quantities in the earlier part of Domitian's reign).

Emperor	Year	Date	RPC	Design	Frequency
Vespasian	7	74/5	2448	Head of Titus	7
	8	75/6	2456	Head of Titus	13
Titus	1–4	79–81	–	No bronze coinage	
Domitian	13	93/4	2694	Emperor in elephant quadriga	0
			2695	Emperor in centaur biga	0
			2696	Shrine enclosing ?emperor	4
			2697	Triumphal Arch	2
	15	94/5	2703	Emperor in elephant quadriga	3
			2704–5	Emperor in centaur biga	6
			2706–7	Emperor on curule chair	0
			2708	Triumphal Arch	6
			2709	Herakles and 4 seasons	0
	16	95/6	2721–3	Emperor in elephant quadriga	11
			2724–6	Emperor in centaur biga	10
			2727	Emperor on curule chair	0
			2728–30	Triumphal Arch	9
			–	Herakles and 4 seasons	0 <sup>12</sup>
Nerva	1–2	96–8	–	No bronze coinage	

So we have a very isolated issue under Augustus, followed by small issues on rare occasions in the second half of the first century. Appreciable quantities were struck in only two years, AD 70/1 and 95/6. The picture was to change dramatically in the second century, and very large quantities were produced, from the very first years of Trajan's reign. They were produced in his years 1–2 and 4; thereafter there was another break (hardly any bronze coinage was produced in Trajan's years 5–10), until very substantial issues commenced in year 11 = AD 107/8. From then on they were produced for many years in the second century, in large quantities and with an astonishing abundance of differing designs.

<sup>10</sup> As defined in *RPC*.

<sup>11</sup> Corrected from 11 – see note 9.

<sup>12</sup> Dattari 500; DS 6744 is another specimen.



## 2. *The drachm in the monetary circulation of Egypt*

The evidence of surviving specimens is borne out by the pattern of coin finds from Egypt.

There is very little evidence for the circulation of bronze coins in Egypt, whether of hoards or of site finds. Christiansen recently summarised the poor evidence for hoards<sup>13</sup>. None of the hoards of bronze coins recorded by Milne or known to Christiansen are recorded in sufficient detail to allow us to do more than glimpse the situation. Milne knew from Dattari of two enormous hoards, consisting of 1200 and 2000 coins, many specimens from which can now be found in the trays of the Ashmolean Museum or (probably) the Royal Ontario Museum collection. These allow some remarks to be made, such as the commonness of Trajan's years 11–20 (“the issue of bronze coins, especially of the drachma size ... [was] on a scale hitherto unparalleled at Alexandria”)<sup>14</sup>, but, as Christiansen points out, some of Milne's other remarks seem quite erroneous<sup>15</sup>. In fact Christiansen could give real information about only one hoard, from Dimai (ancient Soknopaiou Nesos in the Fayum). He identifies 41 coins from the hoard in the collection of the ROM. There are 12 of Trajan, 5 of Hadrian and 22 of Antoninus Pius, but there is no reason to suppose that the figures reflect the relative output of those reigns, and indeed the ‘proportions’ are different in the case of the coins from the two hoards mentioned above and acquired by the Ashmolean (11 + 80 of Trajan, 14 + 129 of Hadrian, and 18 + 239 of Antoninus Pius).

We do not, either, have very much evidence of site finds from excavations, but there is perhaps sufficient to allow us to draw some tentative conclusions. Here, we can consider two sites. The first, from Bakchias in the Fayum has been published by Parente in two groups<sup>16</sup>:

<sup>13</sup> E. CHRISTIANSEN, *The Dimai hoard and related evidence*, RIN 109 (2008), pp. 57–66.

<sup>14</sup> MILNE, *op. cit.* (note 5), p. xxi, quoted by CHRISTIANSEN, *op. cit.* (note 13).

<sup>15</sup> E.g. that coins of Trajan's year 10 were struck “in a considerable quantity” or that bronze drachmas “are common in all years 2–8 except 7” (MILNE, *op. cit.* (note 5), pp. xxi–xxii). In fact they are scarce in years 2 and 4, non-existent in years 3 and 5–6 and 8, and perhaps 7 (*RPC* 3 (forthcoming)).

<sup>16</sup> Bakchias, Fayum: A.R. PARENTE, *Bakchias: I ritrovamenti monetali 1993–2002*, *Fayyum Studies* 1 (2004), pp. 21–47; and A.R. PARENTE, *Monete da Bakchias. Campagne di scavo 2003–2007*, in D. GERIN ET AL. (eds.), *Aegyptiaca Serta in Soheir Bakhout Memorial* (Milan, 2008), pp. 165–84. PARENTE 2004: no. 87 seems to be an unpublished 25mm bronze of Claudius for year 6 (*RPC* 5169 is the same design but a smaller denomination); PARENTE 2008: no. 75 is a coin of Claudius, not Antony; 79 is not a coin of Tiberius, who does not have bronze coins of this size (the reverse looks like a wreath suggesting Augustus, but the portrait is not very like that on his Alexandrian coins with wreath reverse; however it is included here under Augustus); the portrait on 80 looks more like Tiberius than Claudius (see *RPC* 1, 5075 or 5082); 81 is of Claudius, as *RPC* 1, 5120 (date illegible).

THE RISE AND FALL OF THE ROMAN "SESTERTIUS" AT ALEXANDRIA

	Tetra	33mm	30mm	25mm	20mm	15mm	10mm
Augustus				2	3		
Tiberius					2		
Caligula							
Claudius				5	1		
Nero	3						
68–69							
Vespasian				5			
Titus							
Domitian							
Nerva–Trajan						1	
Hadrian		1				3	
Antoninus		1					
M. Aurelius		1					
Commodus							
<b>Total</b>	3	3	–	12	6	4	–

The second site is that of Sokopaiou Nesos, also in the Fayum, excavated by the University of Michigan early in the 20<sup>th</sup> century<sup>17</sup>:

	Tetra	33mm	30mm	25mm	20mm	15mm	10mm
Augustus				2	2		
Tiberius					1	2	
Caligula							
Claudius				1			
Nero	8						
68–69	1						
Vespasian				3	1		
Titus							
Domitian		2			1		
Nerva–Trajan	1	4					
Hadrian	1	5		2			
Antoninus		6					
M. Aurelius							
Commodus							
<b>Total</b>	11	17	–	8	5	2	1

The evidence of these two sites shows that coins of 20 and 25mm were most common in the first century, but that the larger 33mm denomination was dominant in the first half of the second century. This is, indeed, what we would have expected from the surviving number of specimens (part 1). We can conclude that the bronze drachms, though made on various occasions in the second half of the first century, were abundant only in the second century, especially the first half.

<sup>17</sup> Soknopaïou Nesos, Fayum: A. HAATVEDT, The coins, in A.E.R. BOAK (ed.), Soknopaïou Nesos. The University of Michigan excavations at Dimê in 1931–32 (Ann Arbor, 1935), p. 37.

### 3. The nature of the 'drachm'

There is general agreement among scholars that the 33mm bronze denomination at Alexandria represents a bronze drachm, i.e. a quarter of the standard silver coin, the tetradrachm.

It seems likely that, just as the tetradrachm was equivalent to a silver denarius, then so a bronze drachm was equivalent in value to a sestertius.

However, the identification of the different Alexandrian bronze denominations and the question of their relationship to Roman bronze coinage are not easy, and much scholarly ink has been spilt on its discussion<sup>18</sup>.

A useful starting point was the discussion provided by Milne. Basing his views on his observations on the coinage of Hadrian, he suggested the following system (*Plate 17, 4–6*):

I	34mm	23.27g	1 drachm ( <i>Plate 17, 4</i> )
II	29mm	13.02g	½ drachm (3 obols) ( <i>Plate 17, 5</i> )
III	24mm	8.61g	Diobol (2 obols)
IV	19mm	4.85g	Obol ( <i>Plate 17, 6</i> )
V	14mm	1.68g	Dichalkon (= ¼ obol)

Christiansen has observed that Holm had suggested that there do in fact seem to be two, rather than one, of the smallest denomination. That is certainly my view for both the late first and early second century, although the absence of any identifying imperial inscription on the smallest denominations makes it really difficult to attribute any of them to an individual reign with confidence.

The view taken in *RPC* has been much the same. Summarising and simplifying the discussion given in *RPC* 1, pp. 689–90 and *RPC* 2, 320–21, we find:

	Nero	Vespasian	Domitian	Possible value <sup>19</sup>
A. 35mm	23.90 (1)	21.68 (31)	23.79 (32)	drachm
B. 28mm	14.79 (7)	11.96 (15)	12.29 (22)	4 obols
C. 25mm	9.93 (31)	8.42 (96)	8.24 (100)	2 obols
D. 20mm	4.98 (29)	5.72 (42)	4.07 (77)	obol
E. 15mm	1.98 (13)	1.88 (15) <sup>20</sup>		½ obol
F. 10mm	0.93 (15)	1.17 (23)		¼ obol

I would not now be inclined to regard B as a 4-obol coin; Milne's system with it being worth 3 obols of half a drachm seems much simpler.

While there seems general agreement that A is a drachm, other possibilities have been suggested for B–F<sup>21</sup>, Christiansen himself suggesting drachm, ½ drachm, 1½ obol, ¾ obol, trichalkon, and dichalkon, giving a neat equivalence

<sup>18</sup> CHRISTIANSEN, *op. cit.* (note 7), vol. I, p. 309, and II, pp. 7–10.

<sup>19</sup> See *RPC* II, pp. 28–9.

<sup>20</sup> This, and the next line, combine the Flavian data into one average.

<sup>21</sup> See the contrasting views of Schuman, Schwartz and Gara, discussed by CHRISTIANSEN, *op. cit.* (note 7), and set out in the table at the bottom of *RPC* 1, p. 690.



between the Alexandrian and Roman systems: drachm = sestertius,  $\frac{1}{2}$  drachm = dupondius,  $1\frac{1}{2}$  obol = as,  $\frac{3}{4}$  obol = semis, trichalkon = quadrans, and dichalkon.

Christiansen believed in the equivalence between Roman and Alexandrian coins, hence his system. But there is no independent justification for it, and the assignment of any Roman equivalents is in fact contentious. What would be the point of it? Roman bronze and Alexandrian bronze coins did not mix with each other. Scholars tend, it seems to me, to take a position which depends on the degree to which they believe in integration. If you believe the two sets of bronze coins were integrated then you argue for a system like Christiansen's. If you do not then you get a system more like Milne's, one which, it is obvious, would have been much easier to understand in contemporary Egypt. I don't believe in such a close integration, but, as I shall suggest below, the shape and nature of the largest coin, the drachm, was much influenced by the Roman sestertius.

However, the situation at the very beginning of imperial times was different. Luckily for us, the earliest bronze coinage of Augustus from Alexandria bears value marks  $\Pi = 80$  (bronze drachmae) and, on its half piece,  $M = 40$  (bronze drachmae). These coins continued the denominational structure of the bronze coins of Cleopatra VII which have the same value marks, and we can refer to it here as 'the late Ptolemaic system'.

At some time afterwards this system was abandoned and replaced by the one familiar from later imperial times (which we can refer to here as 'the imperial system', whereby the bronze coins were fractions of the silver: the drachm, the hemidrachm, the diobol, the obol and the dichalkon (assuming that is what they were!)).

The date at which this change took place is uncertain. There are traces of the continuation down to the reign of Nero. The numeral  $K = 20$  occurs on both the Augustan coinage (*RPC* 1, 5009–10), but also under Nero (*RPC* 1, 5250 and *RPC* Supplement I, S-5260A); both reigns also have coins with  $I = 10$  (*RPC* 1, 5015–6 for Augustus, and 5262, for Nero year 6; cf. *RPC* Supplement I, S-5262A)<sup>22</sup>. The weights of these coins are compatible with the system of bronze drachmae at the start of Augustus' reign, and they seem to show that this system continued until Nero's reign.

Perhaps we should at this point introduce the controversial question of the date at which an equivalence was established between the tetradrachm and the denarius. The earliest papyrological evidence still seems to be from Flavian times<sup>23</sup>, and recent discussion has focussed on the relative amounts of silver in the tetradrachm and the denarius, both of which changed during the first century. Walker and King thought it dated from the reign of Claudius<sup>24</sup>, a view followed in *RPC* ('Claudius or Nero': p. 30). Previous views of the silver coinage were, of course, based on the erroneous silver values given by Walker, which have

<sup>22</sup> Under Nero we also have the unique coin with  $\epsilon = 5$  (*RPC* 1, 5251), but it's not clear if the *epsilon* is a date (though there is no L) or a value mark.

<sup>23</sup> *RPC* 1, p. 689, following D. Walker and C. King, in D. WALKER, *The Metrology of the Roman Silver Coinage* (Oxford, 1976), p. 155. I am grateful to A. Geissen and K. Maresch for their advice that this is not certain.

<sup>24</sup> *Loc. cit.*

now been rectified by Butcher and Ponting<sup>25</sup>. They have shown Walker's values to be too high for Tiberius:

	WALKER	BUTCHER – PONTING
Tiberius	31	26
Claudius	23	23
Nero year 3	23	–
Nero later	17	18 (all year 10)

With some hesitation I would like to suggest that both changes – the new bronze system and the equivalence between the tetradrachm and denarius – took place in the reign of Nero. The chronological evidence discussed above points to (and I would put it no stronger) such a date, and Nero's reign is one in which numerous changes were made to the currencies in use across the empire, apparently in a co-ordinated manner (see *RPC* 1, pp. 52–4).

This might perhaps also explain the existence of the very rare drachms (and didrachms) made in silver during the reign of Claudius, in his year 3 = AD 42/3, and indeed the even rarer pieces attested for Nero's years 3 and 4<sup>26</sup>. They can perhaps be understood better if there the 'imperial system' had not started by that date<sup>27</sup>.

But I would not press this conclusion unduly since, while it is perhaps attractive, we should recall that the two changes could have taken place separately, at different times, and – as we know from a much later period, AD 301<sup>28</sup> – reforms may sometimes have taken place about which we would know absolutely nothing without the chance survival of an inscription.

Whether or not this was the actual moment of change, I would like to consider further the sense in which the Alexandrian drachm might be considered 'the same' as the Roman sestertius. As already stated, there was no need for any close correspondence, since the two sorts of coin never circulated together and since any need to rationalise sums of money inside and outside of Egypt could always have been carried out with calculations in tetradrachms and denarii alone.

Yet there are striking similarities between the two coins. First, physical. The drachm is more or less the same size as the sestertius (compare *Plate* 17, 4 with 17, 7) and much bigger than anything that had been made in Egypt for a very long time. Of course the weights differ, as no doubt do the alloys, the Egyptian coins being made of (leaded) bronze and the Roman of orichalcum. But the similar

<sup>25</sup> K. BUTCHER – M. PONTING, *The Egyptian Billon Tetradrachm under the Julio-Claudian Emperors*, SNR 84 (2005), pp. 93–124. They accept the equivalence of tetradrachm and denarius (p. 111), but I'm not clear when they think it started.

<sup>26</sup> *RPC* 1, 5211 and 5220.

<sup>27</sup> This would not, however, explain the existence of the unique and apparently authentic silver drachm minted by Hadrian in his year 15: Paris FG 1689, unique. Note that the obverse bust is the same as that used on small AE denominations; however the coin cannot be a cast forgery in silver since the reverse design is not used on small denominations. In addition, the fabric of the coin is different from that normal for AE (e.g. the edge is not bevelled). Angelo Geissen agrees that it's genuine and thinks it is connected with Hadrian's visit to Egypt in 130/1 as some of special issue: as the design is of Sarapis, perhaps while visiting the monumental temple of Sarapis?

<sup>28</sup> K. ERIM – J. REYNOLDS – M. CRAWFORD, *Diocletian's currency reform: a new inscription*, JRS 61 (1971), pp. 171–77.



size is itself surprising – why a coin this size and one which was the same as the sestertius unless those responsible for its introduction had the sestertius in mind.

Also, nothing bigger was ever produced – and there is no particular reason why a one-and-a-half-drachm or double-drachm should not have been produced, just as very large denominations were produced in other parts of the empire, especially during the third century AD<sup>29</sup>. That it was not does indeed support the case that the drachm is modelled on the sestertius.

There are further parallels. The work of Reece has, over many years, shown conclusively that the as and the dupondius were the most Roman common coin denominations circulating in the first century AD, and that it was only in the second century that the sestertius became dominant<sup>30</sup>. That too is what we have just seen for the circulation of Egypt: it was only in the second century that the drachm became dominant.

A second parallel concerns the development of the denominations of bronze coins in other parts of the early empire, especially in Asia, and to some extent Syria. There, as is described in *RPC* 2, we can see a gradual growth in the physical size (again, not weight or alloy) of the bronze coins and by the Flavian period we can see a number of cities had produced or were producing sestertius-sized coins (*Plate 18, 8*): eight cities in Asia produced such a large denomination (31–5mm): Magnesia, Samos, Alabanda, Rhodes, Nysa, Tralles, Midaëum and Laodicea; Ancyra and Tavium in Galatia; several cities in Cilicia Pedias; and even in Judaea (Agrippa II, Judaea Capta and Caesarea). This was a continuation in the Flavian period of a phenomenon which had already commenced under Claudius and Nero<sup>31</sup>.

This development – a beginning under Claudius and Nero, and then becoming much more common in the Flavian period – fits very well with what has been observed for Egypt, and suggests that in all areas there was a tendency for the bronze denominations to be 'Romanised' by the introduction of new, larger denominations, up to and including one the size of a sestertius<sup>32</sup>.

The one jarring note to all this concerns the new 'drachm' of Augustus. It hardly fits the patterns described above.

How, indeed, could it be a 'drachm', if it is correct to think the Imperial system was introduced only under Nero? I think that the answer to this question must be that it was not a 'drachm'. Indeed its weight (34.30g) is much heavier than later drachms (31 of Vespasian averaged 21.68g, and 32 of Domitian 23.79g)<sup>33</sup>. For both reasons I think that we should look elsewhere to explain it.

<sup>29</sup> A. JOHNSTON, *Greek Imperial Denominations*, ca. 200–275 (London, 2007).

<sup>30</sup> The classic formulation is R.M. REECE, *Roman coinage in the Western Empire*, *Britannia* 4 (1973), pp. 227–51.

<sup>31</sup> See the relevant discussions in *RPC* 1 and 2.

<sup>32</sup> One could go on. For example, we could compare the pattern (i.e. the absence) of drachms in the third century with the similar absence of new sestertii in circulation in northern Europe during the early and mid third century (T. V. BUTTREY, *A hoard of sestertii from Bordeaux and the problem of bronze circulation in the third century AD*, *ANSMN* 18 (1972), pp. 33–58; R. ABDY, *Worn sestertii in Roman Britain and the Longhorsley hoard*, *NC* 2003, pp. 137–46). But I would hesitate to press that parallel, as there may well have been very different explanations; and northern Europe is not typical of other parts of the empire at this date.

<sup>33</sup> As for the alloy, I would guess that, if it were analysed, it might well prove not to be bronze but orichalcum.



A good context is provided by the changes to the base metal coinage that were taking place early in Augustus's reign. At that time we find an attempt to introduce large bronze or brass coins in a number of different locations, which we call sestertii. We find them minted in the following locations:

Spain	Uncertain mint (NW?)		<i>RPC</i> 1, 1 <sup>34</sup>
Italy	Rome	about 20 BC	<i>see RIC</i>
Asia	?Ephesus	20s BC	<i>RPC</i> 1, 2227–9, 2233
Syria	?Antioch	?10s BC	<i>RPC</i> 1, 4101
Egypt	Alexandria	10s BC	<i>RPCS</i> 3, 5002A ( <i>Plate</i> 17, 1)

The unusually large size of the new Alexandrian coin recalls the large size of the similar coins minted in Spain, Rome, Asia and Syria – and now Egypt. They all lack the name of an issuing city; this consideration, together with the unusual size of the coins, all like the sestertius from Rome, suggests an experiment to introduce a 'Rome'-pattern of bronze sestertii in the east. The new coin suggests the experiment extended in the east beyond Asia and Syria, to Egypt.

The experiment, however, was short-lived and not repeated. But it shows an attempt to impose a new pattern of currency across a wide extent of the empire. The absence of any city names on the coins is a good indication that the idea did not come from the cities, and the only other possibility is the 'Roman authorities', which must mean something central since the experiment extends over several provinces.

On this explanation, the new Augustan coin would have really been a 'sestertius', in a much more real sense than was ever the case with the later drachms, from the reign of Nero onwards.

#### 4. *The end of the drachm*

The last issues of sestertii at Rome were made by Gallienus at the beginning of his sole reign, at about the same time as (though independently of) the sestertii, and indeed double sestertii, minted by his rival Postumus, usurper in the western empire<sup>35</sup>. Thereafter, at Rome, we have only the curious *Genius P R* coins which have been attributed to 268 (*Plate* 18, 9)<sup>36</sup>, although it seems that a bronze coinage of setertii, dupondii and asses was partially revived by Aurelian, though generally minted in minute quantities<sup>37</sup>.

<sup>34</sup> Though no analyses have been made, the smaller denominations are of leaded copper; the only weight known is 37.95g. Metal and weight suggest a sestertius, but of the heavier leaded bronze sort that one finds in Spain, rather than the lighter (as Rome) orichalcum pieces that one finds minted by Spanish cities during the reigns of Tiberius and Caligula (*RPC* 1, p. 64). The Spanish coinage signed by P. Carisius and minted at Emerita (*RIC* 11) includes pieces made of orichalcum but nothing is known (so far?!) greater than a dupondius.

<sup>35</sup> P. BASTIEN, *Le monnayage en bronze de Postume* (Wetteren, 1967).

<sup>36</sup> D. YONGE, *The so-called interregnum coinage*, NC 1979, pp. 47–60.

<sup>37</sup> S. ESTIOT, *Monnaies de l'Empire romain. Tome XII.1. D'Aurélien à Florian (270–276 après J.-C.)* (Paris, 2004), 21, 41, 102. For specimens (all from the mint of Rome), see pp. 287, 298, 306 (all Aurelian); 310 (Tacitus); 316 (Florian). These are all very rare, implying a very small mintage, except for Aurelian's issue of 275 (Estiot's 11<sup>th</sup> emission of 275 – see her pp. 298ff).

Throughout the provinces of the empire there was a similar decline in the production of bronze coinage: little was minted after the sole reign of Gallienus, and coinage is attested for only a few cities afterwards:

Emperor	Date	no of city coinages
Gallienus	261–68	c. 100
Claudius II	268–70	5
Quintillus	270	0
Aurelian	270–75	5
Tacitus	275–76	1 (Perga)

Such was the pattern in the rest of the empire. Sestertii continued to be made into the 260s and large provincial bronzes into 270s, but both effectively fell out of circulation at about that time, or a few years later<sup>38</sup>.

As we have seen, Alexandrian bronze coinage was produced in abundance in the second century. But in the third century it was very rare:

Alexander	222–35	Year 10 (AD 230/1) <sup>39</sup>
Maximinus	235–38	One specimen known <sup>40</sup>
Gordian III	238–44	None
Philip	244–49	Rare pieces in years 5–6 (AD 247/8 and 248/9)
Decius	249–51	None
Gallus	251–53	None
Aemilian	253	None
Valerian	253–60	None
Macrian	260–61	None
Gallienus	261–68	Year 12 (AD 264/5) ( <i>Plate 18, 10</i> )
Claudius	268–70	See below, and appendix ( <i>Plate 18, 11–17</i> )
Quintillus	270	None
Aurelian	270–75	See below ( <i>Plate 18, 18</i> )

Thus in the fifty years after the accession of Severus Alexander in AD 222, bronze drachms were made on only three significant occasions, with long intervals between: AD 230/1, 247/8–248/9 and 264/5<sup>41</sup>.

The last substantial – if isolated – issue of drachms was, as we have seen, made for Gallienus and Salonina in his year 12, AD 264/5 (*Plate 18, 10*), a date that fits well enough with the last issues of Gallienus from Rome or Postumus in Gaul.

Thereafter, we must consider three other issues, each of which has some claim to be an issue of bronze coinage, though the evidence is not absolutely clear. I think, however, we can conclude with some degree of confidence, though certainty could be found through metal analysis. However, visual examination reveals that some

<sup>38</sup> C. HOWGEGO, *Greek Imperial Countermarks* (London, 1985), p. 67 discusses some of the latest hoards in the west and east. See also ABDY, *op. cit.* (note 32).

<sup>39</sup> Some other years poorly attested: 3, 4, 7 and 9; see K. EMMETT, *Alexandrian Coins* (Lodi, 2001).

<sup>40</sup> One specimen attested for year 1: EMMETT 3309 = Jungfleisch 183, a plausible looking coin.

<sup>41</sup> I have suggested above a tentative parallel with the lack of circulating sestertii in the part of the Roman empire that lay in northern Europe, but, as stated there, I am not very sure of its validity.



of the coins in question have a different fabric from the normal tetradrachms. Tetradrachms are normally well formed and fairly round; coins of what we may call the 'bronze fabric' look more roughly made; they often are not very round but have jagged corners or edges that in part may be straight rather than curved; and generally are thinner than the tetradrachms. These characteristics can be observed on the drachms of Gallienus' year 12.

First, Claudius II. Debased billon tetradrachms were made in very large numbers for Claudius (and indeed for Quintillus), but there are also some shadowy larger coins which are probably bronze drachms.

I have been able to trace a total of seven pieces which seem to be reliably attested, and, as the corpus has not been well established in the past, I have listed them in Appendix 1 (*Plate 18, 11–17*). Their average diameter is 26mm, and the average weight of the 4 un-holed specimens is 11.30g. They were produced from very few dies and perhaps only in his years 1 and 2, though we cannot be sure about year 3.

All previous commentators have regarded them as bronze, and, in the absence of any analyses, I continue that assumption. Markl thought that they were 'Dydrachmen', i.e. double drachms but all subsequent commentators have regarded them as probably being drachms. They have the 'bronze fabric' described above.

Second, during the joint reign of Aurelian and Vabalathus (year 1/4 = 270/1), we find, as well, as the normal tetradrachms, some coins which have the rougher 'bronze fabric' already described (*Plate 18, 18*): the coins have larger diameters, between 22 and 25mm<sup>42</sup>, and, for those few specimens I have been able to examine, are slightly thinner than the tetradrachms:

	Diameter	Thickness	Weight <sup>43</sup>
Tetradrachm	19–23mm <sup>44</sup>	4.5–5.0mm <sup>45</sup>	9.17g <sup>46</sup>
Bronze	22–25mm <sup>47</sup>	2.9–3.3mm <sup>48</sup>	7.67g <sup>49</sup>

As Bland observes, the 'exceptionally wide range of weights, which is typical of bronze coins' suggests they are drachms; and this view is supported by the various points given above. I wonder if their rather unexpected production was prompted by Aurelian's revival of the bronze coinage at Rome.

<sup>42</sup> I omit the two Osnabrück coins 2101–02, whose illustrations suggest diameters of 29 and 30mm. This is so much larger than any other coins I have noted that I suspect that the illustrations may be slightly enlarged.

<sup>43</sup> The weights are taken from an unpublished paper by R. BLAND, *The coinage of Vabalathus and Zenobia from Antioch and Alexandria*. I am very grateful to the author for allowing me to use his thoughts.

<sup>44</sup> *BMC* 2394–96: 22, 24 and 24; *Cologne* 3057: 22; *Oxford* 4327–29: 25, 24, 22.

<sup>45</sup> *BMC* 2384–86, 3385: 4.6, 4.9, 3.6, 5.0.

<sup>46</sup> 6.93–11.54; mean 9.17, median 9.10 (based on 69 tetradrachms of year 4) (data from BLAND).

<sup>47</sup> The 38 specimens in London, Oxford and Cologne show the pattern: 18mm: 1; 19mm: 5; 20mm: 7; 21mm: 10; 22mm: 6; 23mm: 8; 24mm: 1.

<sup>48</sup> *BMC* 2394–96: 3.3, 3.2, 2.9.

<sup>49</sup> 4.69–10.14g; mean 7.67; median 7.76g (based on 14 coins) (data from BLAND).



Third, during the brief usurpation of Domitius Domitianus, we again have coins which are larger than the normal tetradrachms (*Plate 18, 19*)<sup>50</sup>, but I am confident, in this case, that we are dealing with multiple tetradrachms: the coins have a radiate crown instead of the normal laureate, they are round, and they are also heavier and thicker than the tetradrachms. Four specimens easily tracked down have diameters of 22, 23, 21 and 23mm<sup>51</sup> and 18 specimens known to W.E. Metcalf have an average weight of 11.98<sup>52</sup>, whereas eleven other smaller pieces have diameters of 18–20mm, and weights between 7.12 and 8.89<sup>53</sup>. Whether they are double tetradrachms or 1 ½ tetradrachms, as their weights would suggest, is not relevant to this discussion, so they are not considered further in this article.

To summarise our findings for Gallienus, Claudius and Aurelian/Vabalathus:

	Tetradrachm		Drachm	
	Diameter	Weight	Diameter	Weight
Gallienus <sup>54</sup>	20mm	9.80g <sup>55</sup>	28mm	12.50g <sup>56</sup>
Claudius	19mm	9.74g <sup>57</sup>	26mm	10.77g
Aurelian <sup>58</sup>	19–23mm	9.45g <sup>59</sup>	22–25mm	7.67g

The decline in weight and diameter of both tetradrachm and drachm is clear enough; for some reason, the weight of the drachm sank much faster so that the

<sup>50</sup> See MILNE, *op. cit.* (note 5), p. xliii, J. LALLEMAND, *Le Monnayage de Domitius Domitianus*, RBN 1951, pp. 89–103; J. SCHWARZ, *L. Domitius Domitianus* (Brussels, 1975); W.E. METCALF, *From Greek to Latin Currency in Third-century Egypt*, in H. HUVELIN – M. CHRISTOL – G. GAUTIER (eds.), *Mélanges de Numismatique offerts à Pierre Bastien* (Wetteren, 1987), pp. 157–68, at p. 165, note; G.M. STAFFIERI, *Testimonianze sulla fine della monetazione autonoma alessandrina (296–298 d. C.)*, in C. ALFARO – C. MARCOS – P. OTERO (eds.), *XIII Congreso Internacional de Numismática*, Madrid 2003: *Actas* (Madrid, 2005), pp. 937–46.

<sup>51</sup> BMC 2623–24, Cologne 3367, Oxford 5245.

<sup>52</sup> Thanks to him for the information.

<sup>53</sup> BMC 2625–28, 3550, Cologne 3368–70, Osnabrück 2397. Osnabrück 2398 seems to be 23mm in diameter but not all the Osnabrück photos are convincingly 1:1: see note 42. I leave on one side the question of whether or not there are two smaller denominations (one with Sarapis head, the other with Nike). This was suggested by J. VOGT, *Die Alexandrinischen Münzen* (Stuttgart, 1924), I, p. 227, and followed, e.g., by Emmett, who tentatively calls them tetradrachms and didrachms. It's not immediately obvious from the (admittedly small) sample of specimens I have seen. W. Metcalf tells me he knows 10 examples with Sarapis with an average weight of 8.17g, and 23 with Nike with an average weight of 7.26g.

<sup>54</sup> Only year 12.

<sup>55</sup> Average of 376 specimens of year 15 known to W. Metcalf; thanks to him for the information.

<sup>56</sup> The diameters and weights are an average of a small sample of 21 pieces of Gallienus and Salonina in the BM, Dattari, Osnabrück, Frankfurt and Oxford collections; the weight is an average of the 10 specimens in the same collections (apart from Dattari).

<sup>57</sup> Average of 895 specimens known to W. Metcalf. A. MARKL, *Das Provinzialcourant unter Kaiser Claudius II. Gothicus*, NZ 33 (1901), pp. 51–72, on p. 53, gives an average of 10.05g. The average weight for each of the three years for Claudius is the same for Markl, but slightly different for Metcalf.

<sup>58</sup> Only year 1/4.

<sup>59</sup> Average of 354 specimens known to W. Metcalf.

drachm of Aurelian was lighter than the tetradrachm. But there is probably little or no significance in this.

These coins represent the last 'sestertii' made in Egypt. However, they are not as rare as one might have expected, especially in the light of the rarity of the Claudian pieces. They are certainly more common than the drachms of Claudius, and we might perhaps say that they are about as common as the year 12 drachms of Gallienus and Salonina. Consequently, they remain something of an unexplained anomaly, as there is no obvious reason why there should be such an apparently plentiful issue of bronze drachms at such a late date. At the same time, however, their existence is much the same as the overall picture we have painted of the decline and cessation of bronze in the west and in the other eastern provinces, thereby continuing and bringing to a finish the parallelism between sestertius and drachm.

#### *Appendix 1: the bronze coins of Claudius II*

Various lists of specimens have been given previously. In 1901 Markl cited three specimens<sup>60</sup>. The first was cited from Mionnet VI, 3419 which was supposed to be in Paris, but then and now cannot be found there. However, another coin which probably has the same rev. design, is known in the Cologne collection (no. 3026 = below, 1/1). Markl's second coin, cited and illustrated from his own collection, had rev. griffin (here 3/1); his third coin, cited and illustrated from Paris, had rev. Nilus (4/1).

In his excellent book of 1924, Vogt<sup>61</sup> cited two coins, both of which he (erroneously) listed under year 3:

Adler mit Kranz und Palm     D5418

Agathodaimon und Uraeus     B.

The first (here 5/1) was catalogued by Dattari as being of uncertain year, and the rubbing in DS makes the year no clearer. The Berlin coin is probably of year 1 (see below, 2/1).

In his Ashmolean catalogue of 1933, Milne<sup>62</sup> cited three pieces for year 2, presumably depending on Vogt and Markl (but for some reason ignoring the Dattari coin):

"AE dr. (?). Nilus, Griffin, Agathodaemon and Uraeus".

In 1997, Savio offered the following list in his Osnabrück catalogue:

"Durante il regno di Claudius II la zecca di Alessandria emise rarissime monete di bronzo negli anni 1? e 2. Il secondo anno è rappresentato nella collezione di Osnabrück. I seguenti tipi sono conosciuti o citati nella letteratura: 1. Aquila, anno incerto, mm. 29 (DATTARI 5418, il pezzo è rotto); 2. *Tyche* stante in tempio tetrastilo, anno 1, mm 31 (MIONNET 3419); 3. *Lectisternium* di *Tyche*, anno 1, mm. 24 (MIONNET SUPP 607); 4. *Tyche* stante a sinistra, anno 2, mm. 24 (MIONNET

<sup>60</sup> MARKL, *op. cit.* (note 57), pp. 51–72.

<sup>61</sup> VOGT, *op. cit.* (note 53), II, p. 160.

<sup>62</sup> J.G. MILNE, *Catalogue of Alexandrian Coins* (Oxford, 1933), p. xlv; cf. p. xxiv: "Some very rare bronze pieces of year 2 resemble those of Gallienus".



SUPP 608); 5. "Jeune homme imberbe ...", anno 2, mm. 24 (MIONNET SUPP 609); 6. Grifone seduto, anno 2, mm. 28 (OSNABRÜCK 2088); 7. *Nilus* reclinato, al suo fianco coccodrillo, anno 2, mm. 25 (MIONNET 3439; si veda HOWGEGO, HISTORY, ill. 172 [OXFORD]). Secondo Markl gli esemplari 2, 6 e 7 sarebbero didrammi (MARKL, PROVINCIALCOURANT, 55) ma nessun studioso ha seguito la sua proposata. Vogt ha catalogato gli esemplari 6 e 7 fra le monete di *billon*. Gli esemplari 1, 2, 3, 4 5 sono dubbii. Alcuni tipi di rovescio come il grifone seduto con zampa sulla ruota e *Nilus* reclinato con coccodrillo a fianco hanno pochi precedenti nella monetazione alessandrina<sup>63</sup>. Le leggende del bronze corrispondono a quelle del *billon*."

Of the seven listed by Savio, four are confirmed:

Savio		Location
1	5/1	Dattari
2	Cf. 1/1	(Cologne)
6	3/2	Osnabrück
7	4/2	Oxford

But three others (his nos. 3–5) remain uncertain. One might guess that 3 is a misreading of the *Nilus* coins, but it is not worth speculating very much about it or nos. 4–5.

Savio omitted several coins: the two coins cited by Markl from his own collection and in Paris (3/1 and 4/1), the coin in Cologne (1/1) and the coin in Berlin mentioned by Milne (2/1).

The most recent list was given by Emmett in 2001<sup>64</sup>:

Emmett	Design	Year	Citation		Comment
3900	Agathodaemon and Uraeus	3 <sup>65</sup>	Berlin	2/1	In fact probably year 1
3901	Altar of Agathodaemon with Eusebeia?	1	Cologne 3026	1/1	See commentary for identification of design; conflation with 3905
3902	Eagle standing r.	?	Dattari 5418	5/1	
3903	Griffin seated r., wheel	2	Osnabrück 2088	3/2	
3904	<i>Nilus</i> reclining r., crocodile	2	Jungfleisch 238	4/2	Now Oxford
3905	Tyche standing in tetrastyle temple	1?	Mionnet 3419 = Cologne 3026?	?1/1	Conflation with 3901

<sup>63</sup> But both designs occur regularly in the second century.

<sup>64</sup> EMMETT, op. cit. (note 39), pp. 197 and 259. Emmett only ever cites one specimen, so the absence of the Paris and Markl coins from his list does not mean they were unknown to him.

<sup>65</sup> Emmett points out that Vogt gives year 3, and Milne year 2.



In the catalogue below, seven specimens are securely attested, representing 5 varieties, and occurring definitely in years 1 and 2. Other specimens may well turn up, but none are represented in the London, Glasgow, Munich or New York<sup>66</sup> collections.

*Year 1*

1. AE. 27mm, 9.81g (1: holed). (*Plate 18, 11*)

AYT K ΚΑΑΥΔΙΟC CCB; laureate and cuirassed bust r.

L A; "Altar (?) mit vier Säulen, zwei Akroterien, brennendem Pinienzapfen (?); zwischen den mittleren Säulen steht verschleierte Gestalt opfernd vor kleinem Altar n. l."

1. Cologne<sup>67</sup> 3026, 9.91 (holed). In their catalogue, Geissen – Weiser quote Mionnet VI, 3419: "L A (an 1). La Fortune debout, avec ses attributs, dans un temple tétrastyle. Peller. Mél. I. p. 234 AE 9." Markl includes Mionnet 3419 as his p. 55 no. 1. ("Mionnet VI, 3419 und Zoëga nach Pellerin; Tanini nach Cabinet de France, befindet sich aber dort nicht.").

*Probably year 1*

2. AE. 27mm, 12.87g (1). Axis: 11. (*Plate 18, 12*)

AYT K ΚΑΑΥΔΙΟC CCB; laureate and cuirassed bust r.

L A (?); Agathodaimon snake facing Uraeus snake facing l.

1. Berlin 553/1911, 12.87. Cited by Vogt II, p. 160 as a coin of year 3; but by Milne p. xlv as a coin of year 2. The date is not clear, but the traces seem most compatible with A, though this is not at all certain. I examined the coin with Bernhard Weisser who concurs (but is not to blame!). The coin was acquired from a certain Dr Walla of Vienna.

*Year 2*

3. AE. 28mm, 10.82g (2). (*Plate 18, 13–14*)

AYT K ΚΑΑΥΔΙΟC CCB; laureate and cuirassed bust r.

L B; Griffin seated r., before, wheel

1. Markl, ex Moustier, 10.86 (= Markl, p. 55 no. 2, with Taf. II.2: "Ist im Katalog Moustier irrig als Moyaenbronze aufgeführt."); 2. Osnabrück 2088 (A. Savio, Katalog der alexandrinischen Münzen der Sammlung Dr. Christian Friedrich August Schleddehaus im Kulturgeschichtlichen Museum Osnabrück, Bd. 3 (Bramsche, 1997), 10.77). Probably same rev. die.

4. AE. 25mm, 10.70g (1). (*Plate 18, 15–16*)

AYT K ΚΑΑΥΔΙΟC CCB; laureate and cuirassed bust r.

LB; Nilus holding reed and cornucopia reclining r., on crocodile

1. Paris FG 3540 (= Markl, pp. 55–6 no. 3, with Taf. II.3), 10.70; 2. Oxford (= C. Howgego, Ancient History from Coins (London, 1995), pl. 172: "'copper' drachm") ex Jungfleisch (Sotheby 9 March 1972) lot 238. Probably same dies.

<sup>66</sup> Thanks to A. Meadows for checking.

<sup>67</sup> A. GEISSEN – W. WEISER, Katalog Alexandrinischer Kaisermünzen des Instituts für Altertumskunde der Universität zu Köln, Bd. 4 (Opladen, 1983).

*Uncertain year*

5. AE. 26mm. (*Plate 18, 17*)

[AYT K K]ΑΑΥΑΙΟC CЄB; laureate and cuirassed bust r.

L [ ]; Eagle standing r. with wreath in beak and palm on wing

1. Dattari (DS 5418) [the rubbing measures 26mm, but the text says 29].

Although die-linking is not easy due to the generally poor condition of the coins, there seem to be only three obverse dies. Two are used for both years 1 and 2, while the third is at the moment known only for year 2. The two coins with a griffin reverse both seem to be from the same die; the same is true of the two coins with Nilus. In summary:

2/1	Obv. 1	Rev. 1	Agathodaimon and Uraeus	Berlin	Year ?1
5/1	Obv. 1	Rev. 2	Eagle	Dattari	Year ?
3/1	Obv. 1	Rev. 3	Griffin	Markl	Year 2
3/2	Obv. 2	Rev. 3	Griffin	Osnabrück	Year 2
1/1	Obv. 2	Rev. 4	Temple	Cologne	Year 1
4/2	Obv. 3	Rev. 5	Nilus	Oxford	Year 2
4/1	Obv. 3	Rev. 5	Nilus	Paris	Year 2

The small number of dies and their apparent use over a relatively long period of time suggest a very small coinage, as we could anyway guess from the rarity of specimens today.

*Abstract*

A recently discovered and unique sestertius-sized bronze coin of Augustus can be attributed to the mint of Alexandria and is probably connected to the production of similar coins in Asia, Syria and Rome. Its discovery has also prompted a reconsideration of the production and circulation of Alexandrian bronze coins in the light of the patterns which can be observed elsewhere in the empire. It is argued that the Egyptian and non-Egyptian patterns are related, and that the large Alexandrian bronze coinage itself (the drachm) was influenced directly by the Roman sestertius – hence there are no larger bronze denominations in Egypt (as there were elsewhere). Finally, the history of the production of Alexandrian bronze coinage in the third century is re-examined, and it is argued that the pattern is again related to the similar pattern at Rome. An appendix lists the rare and poorly documented drachms known for Claudius II. The general conclusion of this study is, therefore, that the Egyptian coinage and currency during the period of the Roman empire was less isolated and *sui generis* than has previously been thought.

*Zusammenfassung*

Eine kürzlich entdeckte Bronzemünze des Augustus, ein Unikum in Sesterzengrösse, kann der Münzstätte Alexandria zugewiesen werden und hängt wahrscheinlich mit vergleichbaren Prägungen in Kleinasien, Syrien und Rom zusammen. Die Neu-entdeckung gibt Anlass, die Herstellung und den Umlauf alexandrinischer Bronzemünzen im Vergleich zu den Verhältnissen in anderen Regionen des römischen Imperiums zu untersuchen. Dabei werden verwandte Phänomene sichtbar, und insbesondere ist zu vermuten, dass die Prägung grosser alexandrinischer Bronzemünzen (Drachmen) direkt vom römischen Sesterzen beeinflusst wurde. Aus diesem Grund existieren keine grösseren Bronzenominale im kaiserzeitlichen Ägypten, ganz im Gegensatz zu anderen Regionen. Anschliessend untersucht der Autor die alexandrinische Bronzeprägung des 3. Jahrhunderts und zeigt, dass auch die Produktion in dieser Periode mit jener in Rom verbunden ist. Zum Schluss folgt eine Zusammenstellung der seltenen und schlecht dokumentierten Drachmen von Claudius II. Als Fazit geht aus der vorliegenden Untersuchung hervor, dass die kaiserzeitliche Münzprägung in Ägypten weniger isoliert und eigenständig war als bisher vermutet.

Andrew Burnett  
British Museum  
Great Russell Street  
London WC1B 3DG  
England  
aburnett@thebritishmuseum.ac.uk



*List of illustrations*

All coins are bronze (except 19), and all are illustrated from the British Museum collection, except 1 and 11–17.

- |                 |    |  |
|-----------------|----|--|
| <i>Plate 17</i> | 1  | Augustus, Alexandria. Paris, Bibliothèque nationale, 2008.66.  |
|                 | 2  | Augustus, Alexandria. BMC 11.                                  |
|                 | 3  | Otho, Alexandria. BMC 2723.                                    |
|                 | 4  | Hadrian, Alexandria. BMC 748.                                  |
|                 | 5  | Hadrian, Alexandria. BMC 751.                                  |
|                 | 6  | Hadrian, Alexandria. BMC 764.                                  |
|                 | 7  | Hadrian, Rome. BMC 1696.                                       |
| <i>Plate 18</i> | 8  | Domitia, Laodicea. BMC 187.                                    |
|                 | 9  | Genius P R, Rome. BM 1872-9-9-889.                             |
|                 | 10 | Salonina, Alexandria. BMC 2282.                                |
|                 | 11 | Claudius II, Alexandria. Köln 3026.                            |
|                 | 12 | Claudius II, Alexandria. Berlin 553/1911.                      |
|                 | 13 | Claudius II, Alexandria. A. MARKL, NZ 33, 1901, p. 55, no. 2.  |
|                 | 14 | Claudius II, Alexandria. Osnabrück 2088.                       |
|                 | 15 | Claudius II, Alexandria. Paris FG 3540.                        |
|                 | 16 | Claudius II, Alexandria. Oxford.                               |
|                 | 17 | Claudius II, Alexandria. Dattari DS 5418.                      |
|                 | 18 | Aurelian and Vabalathus, Alexandria. BMC 2394.                 |
|                 | 19 | Domitius Domitianus, Alexandria. Double-tetradrachm. BMC 2623. |





1



2



3



4



5



6



7



Andrew Burnett  
The rise and fall of the Roman "sestertius" at Alexandria







Andrew Burnett  
The rise and fall of the Roman "sestertius" at Alexandria



