

1. COMMENTARY ON SELECTED COINS IN THE CATALOGUE

The purpose of the following lines is to comment briefly upon noteworthy coins in the various Israeli collections which add to our knowledge about Sasanian and Sasanian-style coins. As stated already in the introduction, despite the limited total number of coins assembled here, the number of outstanding specimens is remarkable.

22, 23: Copper coins such as these two pose an attribution problem. They feature on the obverse a king's bust with a plain diadem and a crown cap with a ball of hair, the *korymbos*, above it; the reverse shows the Zoroastrian fire altar with attendants. There are no legible legends on either obverse or reverse of these two specimens. Because the treatment of the crown on the obverse at first glance looks like the crown of Ohrmazd I, the copper coins in question have been assigned to that regent.⁴ There are, however, several reasons why this attribution cannot be correct: first and foremost, the attendants on the reverse wear the mural crown of Shapur I, which can be clearly recognised by three vertical strokes. Furthermore, as regards the obverse, the row of waves above the diadem, typical of the crown of Ohrmazd I, is missing on all these coppers. Thus, there is a marked difference between this king's crown and the depiction on the coins in question. All of this indicates that they must be attributed to a different ruler. Because of the form of the attendant's headdress, the logical candidate is Shapur I. This attribution is well in accord with their style; the successors of Ohrmazd I can be ruled out since the attendants on the copper coins discussed here do not wear a *korymbos* as becomes canonical from Ohrmazd I onwards, while on almost all Shapur I coins, both attendants lack the *korymbos*.⁵ Because of all this, coins such as nos. **22** and **23** represent a special type issue of Shapur I. The special crown on the obverse resembles the headdress the king wears on the famous cameo depicting the capture of the Roman emperor Valerian.⁶ A quite similar treatment can also be found on the local copper coins of the Marw Shah on third century issues from that Central Asian city.⁷ If one accepts a connection of this Shapur I obverse type with that cameo, it could be that this special type has a military connotation, and also a dating after 260 – the date of Valerian's capture – would become feasible then. Notwithstanding the fact that this interpretation remains hypothetical, there can be no doubt about their attribution to Shapur I.

47: This drachm combines an obverse die of Wahram IV and a reverse die of Yazdgerd I. Such hybrid die combinations⁸ which link dies from different reigns are a moderately common phenomenon in the late fourth and early fifth century. The following combinations are known: Shapur II/Ardashir II, Shapur II/Wahram IV, Shapur III/Wahram IV and, as in this catalogue, Wahram IV/Yazdgerd I.⁹ The phenomenon of hybrid die combinations shows that the mint authorities preferred to use older dies instead of procuring new ones, although no explanation why this

⁴ Göbl 1971, pl. 3, no. 37.

⁵ Alram/Gyselen 2003, p. 191f.

⁶ For a photo Alram/Gyselen 2003, pl. 47.

⁷ Loginov/Nikitin 1993/1, p. 229f.

⁸ Göbl 1978, I, p. 55.

⁹ Schindel 2004, I, p. 61f; this topic has been dealt with already by Gurnet 1994; Mochiri 1998/1.

phenomenon is much more common in this period of Sasanian coinage than in any other can be given. To deal with no. 47 in more detail: the obverse die of Wahram IV belongs stylistically and typologically to his “Western group” which is attested in mints such as AS (Asuristan), BBA (the court), but due to central die production also in more remote minting places such as AT (Azerbaijan) or KL (Kerman), as well as an unsigned mint.¹⁰ Actually, considering minor pictorial details such as the trefoil at the back end of the diadem, it is the latter (“unsigned A” according to SNS 3) which seems to be the most likely production place for the obverse die of no. 47. The reverse is of Yazdgerd I as is clearly shown by the legend naming Yazdgerd, as well as by the crescents above the attendants’ foreheads. Taking into account the treatment of the altar ribbons which resemble trefoils, it would appear that the reverse die was produced in Yazdgerd’s mint HYL, which I have equated with the Lakhmid capital Hira.¹¹

53: Due to stylistic criteria, this copper coin can be safely attributed to the mint of AT (Azerbaijan). It represents one of the rare cases where copper coins after Shapur II, which do not yet bear a mint indication – a feature which was to become common only from Yazdgerd II onwards – can be assigned to a specific production place. The same reverse type was also employed for gold issues of AT. Since it seems obvious that Sasanian gold coinage primarily served propagandistic purposes,¹² it is very likely that the AT dinars were struck in connection with the Hunnic invasion in 395 which Sasanian troops finally managed to repel. The garrison stationed in Azerbaijan, even if unable to repel the incursion right at the beginning, must have played an important part in these endeavours.¹³ The use of the special reverse type of the dinars on no. 53 makes it likely that its issue is chronologically linked with these events.

56: This is truly a very intriguing coin. It bears the bust of Wahram IV on the obverse, however, the obverse die has been recut from an old die of Shapur II, and still shows the typical stylistic features of the latter’s mint I/“Ctesiphon”. The reverse, too, dates to the reign of Shapur II and has not been altered since the typical three strokes on the crowns of the attendants, representing the mural crown of Shapur II, clearly can be made out. This coin and a similar one published by Gurnet are of great importance for the separation of the Shapur II issues struck at “Ctesiphon” from those which were produced in “Kabul”.¹⁴

72: This Walkash drachm is very curious since it has been gilded and brought into a scyphate form. It is not possible to judge, however, whether this was done in antiquity, or in modern times. In the former case, it seems feasible that the intention was to make the coin pass for a scyphate gold coin, under the influence of either the eastern Kushano-Sasanian dinars – I owe this suggestion to Bob Schaaf – or, less likely by some 11th century Byzantine scyphate issues.

94: A very well-preserved specimen of a rare group of copper from the 2nd reign of Kawad I which I have labelled “copper drachms” since in contrast to the remainder of Sasanian copper coins, their diameter and size is fully in accord with that of the drachms.¹⁵ On the reverse, these coins feature a bust to the right the identity of which has not yet been established beyond doubt.

¹⁰ Schindel 2004, I, p. 300; 303.

¹¹ Schindel 2004, I, p. 161f.

¹² Schindel 2006.

¹³ Schindel 2004, I, p. 303; 315.

¹⁴ Schindel 2004, I, p. 235; the Gurnet coin is Schindel 2004, II, no. A66.

¹⁵ Schindel 2004, I, p. 469.

While Göbl has claimed that a satrap is depicted,¹⁶ Mochiri on the basis of the legend in front of the bust has taken it to depict Shahrewar, “the best rule”.¹⁷

67, 74, 78, 80, 82, 87, 90, 91, 95, 97, 100: These eleven form a coin hoard which was found in the excavations at the Temple Mount, directed by E. Mazar. Some of the coins were published in detail by Sears and Ariel,¹⁸ but the entire hoard could be covered only in a short postscript. While I certainly cannot add any information on the context of the hoard,¹⁹ a full listing together with my attributions might be useful (*tab. 1*). There are no relevant differences between my list and the list in the article of Sears and Ariel²⁰, apart from some readings of dates for which I believe it is possible to arrive at reasonably reliable interpretations.

Tab. 1: Rulers, mints and regal years attested in the Jerusalem Hoard

<i>Ruler</i>	<i>Mint</i>
Peroz	KL
Walkash	AS
Kawad I / 1 st reign	KA
Kawad I / 2 nd reign	AH, regal year 36
	AS, regal year 36
	DYWAS, regal year 33
	ML, regal year 40
	LD, regal year 16
	Barbarised
Khusro I	AM, regal year 9
	AS, regal year 4

When it comes to the interpretation of the hoard, the most noteworthy fact is that it is one of the very few Sasanian coin hoards from the Syrian region which predates the Arabic conquest of the seventh century: There can be no doubt that the Jerusalem hoard was lost in the mid-6th century, judging from the latest coins which date to the first decade of the reign of Khusro I. The wide range of mints – among them the Khurasani mint ML (Marw, no. **90**) and an imitation (no. **95**)²¹ – is typical of Sasanian drachm hoards; considering the small total number, the occurrence of quite a lot of drachms markedly earlier than the closing ones is a little bit unusual, but still no big surprise. The hoard was found in a latrine, and one can imagine that its owner, even in case he noticed the loss, was not prepared to make the efforts to recover the coins. Considering that there is no evidence that substantial numbers of Sasanian drachms circulated in Byzantine Syria before the Sasanian and Arabic conquest,²² it is tempting, and in fact not too absurd, to assume that the original owner came from Persia. Whether he was a merchant, a Jewish or Christian pilgrim, or something else remains unknown.

169: This coin bears the clearly legible date 26, and whatever era was employed, it is not in accord with the governorship of Khurasan which Salm b. Ziyad held from 61AH to his expulsion by ‘Abd Allah b. Khazim in 64 AH. The numeral 26 thus makes no sense as a Hijri date since

¹⁶ Göbl 1971, p. 20.

¹⁷ Mochiri 1998/2, p. 49; 52f.

¹⁸ Sears/Ariel 2000, p. 148f.

¹⁹ Sears/Ariel 2000, p. 148.

²⁰ Sears/Ariel 2000, p. 149.

²¹ Schindel 2004, I, p. 479f, group A; II, pl. 138, A30.

²² Heidemann 1998; Sears/Ariel 2000.

it would correspond 646 CE. If it was a date in the Yazdgerd era, we arrive in 37 AH; and even a post-Yazdgerd date would equal only 58 AH. A drachm struck from the same pair of dies can be found in Gaube;²³ as is our no. **231**, it is countermarked. Album has published an ST drachm of Salm in his catalogue of the Ashmolean collection which is also dated year 26.²⁴ The problems of the date are the same; furthermore, ST certainly refers to Stakhr in Fars, a province which was never governed by Salm b. Ziyad, whose power was limited to Khurasan. Album has tried to explain this by the assumption that the Ashmolean coin was struck from an old reverse die of Khusro II, a phenomenon not altogether unknown in Arab-Sasanian numismatics.²⁵ On the basis of this parallel, one could claim that no. **231** simply features a misspelling of the well-known mint signature ART for Ardashir-khwarrah, another Fars mint. Doubts remain. The reign of Khusro II spanned 38 years; that the reuse of old dies from the same year in two different mints was merely the result of chance would be truly surprising. Furthermore, while the two letters “A” and “H” resemble each other on late Sasanian and Arab-Sasanian coins, it is normally the “H” which takes the form of an “A”; that the “A” was written in the rounded form of an “H” would be quite unusual. For my part, I can offer no better explanation for this interesting coin than Album; perhaps when the material basis has become broader, a sound answer can be found.

225: This is one representative of a rare group among the posthumous Khusro coins which is much later than the bulk of these issues (ca. 33–50 AH²⁶) and which bears mint name and date in Arabic rather than in Pehlevi. It has been published by its former owner Paul Balog in 1950.²⁷ He also tells us that it was found in hoard of ca. 100 Sasanian, 19 Arab-Sasanian drachms, and 283 Umayyad post-reform dirhams the latest of which is dated 131AH. The hoard is said to have been found in Damascus. Looking in more detail at no. **225** and the few other specimens of Syrian drachm coinage with mint and date in Arabic might be appropriate. A short survey on these issues has been compiled by Ilisch, and recently, a more complete list was published by Treadwell.²⁸ A few more specimens have turned up meanwhile. In *appendix 3*, I have collected all the specimens known to me from photos; I finished this before Treadwell’s study of 2005 came to my notice. The number I arrived at was by and large the same as Treadwell’s, the main difference being that I catalogued only those coins for which I could find photographs. One specimen published in 1858 apparently has disappeared.²⁹ Nonetheless, according to the accurate description this is a fully regular 73 AH issue, apparently the first Dimashq drachm to have been published. Another one reported by Walker as a new acquisition of the Archaeological Museum Istanbul is not listed in Artuk/Artuk 1970, and thus cannot be traced.³⁰

²³ Gaube 1973, pl. 6, 71.

²⁴ Album/Goodwin 2002, no. 373.

²⁵ Gyselen/Nègre 1982, p. 175; pl. 13, AS 1 publish a drachm which combines an obverse die showing the effigy of Khusro II and the Arabic marginal legend *bismillah* with a reverse dated year 3 (not 8, as the authors believe) from AYLAN, which appears to be an original Sasanian die of Khusro II since it also features the attendants’ headdress in the style of Khusro’s RY 2–11 reverse type SN 2; in the case of a drachm issued in the name of Ziyad b. Abi Sufiyan dated year 30 also an old might reverse die of Khusro II might have been used, the coin itself is irregular anyway: Album/Goodwin 2002, no. 243 with note on this coin.

²⁶ Album/Goodwin 2002, p. 7.

²⁷ Balog 1950. Strangely enough, Balog gives as weight 3,80g.

²⁸ Bates 1986, p. 249–250; Busso Peus auction sale 363, 26. 4. 2000, p. 54 on no. 5649; Album/Goodwin 2002, p. 27f.; Treadwell 2005, p. 23. I owe the reference to the latter study to Lutz Ilisch.

²⁹ Nesselmann 1858, p. 12 (p. 28 of reprint), listed by Walker 1941, p. 23, N1; reported as lost by Ilisch in Busso Peus auction sale 363, 26. 4. 2000, p. 54.

³⁰ Walker 1941, p. 177.

So much for the material basis. Even if it is meagre, I think that a sound reconstruction of the sequence of issues is possible. There can be no doubt that no. **A1** marks the beginning of Syrian silver issues (emission 1): it employs a fourth rim on the reverse, a feature found on one more Dimashq coin from 72 AH (**A2**) and the only published Hims drachm (**A16**), also dated 72 AH. The remaining Dimashq 72 AH issues (**A3**, **A4**), as well as all later coins show only the usual three rims on the reverse. Even more important is the obverse legend of **A1**: in front of the bust, instead of the usual name *hwslwb* in Pehlevi, we read *Muhammad rasul Allah* in two lines in Arabic. The Pehlevi formula *GDH/pzwty* to the left of the bust is retained. There are only two parallels for this: A unique coin from AKWLA (Kufa) dated 73 AH which in all probability was struck by Bishr b. Marwan, brother of the caliph ‘Abd al-Malik and governor of Kufa, later also of Basra,³¹ and an issue struck in 70 AH at GLM KLMAN which features the Pehlevi form of *Muhammad rasul Allah*, *mhmt pgtmy Y d’t*, in front of the bust. Since the Kharijite anti-caliph Qatari b. al-Fuja’a struck coins in Kirman in 69 AH, as did another Kharijite, ‘Atiya b. al-Aswad, in 71 AH, it seems plausible that the anonymous 70 AH coins were also issued under Kharijite authority.³² Starting with **A2**, the legend *Muhammad rasul Allah*³³ is moved to the margin, preceded by the usual formula *bism Allah*. From **A2** onwards, the Sasanian royal name *hwslwb* can invariably be read in front of the bust. Let us look at a strange phenomenon: that the Arabic inscription placed on the earliest issue is replaced with a Pehlevi one, in a region where we can be sure that Persian was not spoken, let alone read. The obvious reason for returning to the old royal name seems to me to lie in the fact that the place in front of the bust apparently was seen as the location for the name of a temporal ruler. This is certainly true of the Sasanian issues themselves, as well as the early posthumous Arab-Sasanian drachms. That from the early 40’s AH onwards, governors³⁴ put their own names presents no problem. It was not only local dignitaries, however, but also caliphs who were cited with name and often also with title in the place of the Sasanian royal name – and not only members of the Umayyad dynasty, who are seen as merely temporal rulers in Arab historiography, but also religious fanatics such as the Qarijite anti-caliph Qatari b. al-Fuja’a.³⁵ In the case of these men who were, or at least claimed to be supreme rulers of the Islamic world, the parallel and precursor of the use of governors’ names can serve as an easy explanation why this was done. Things are different, however, with Muhammad: After the first emission represented by **A1** was issued, it seems to have occurred to the minting authorities that inscribing the name of the prophet on the place where usually the name of a temporal ruler was inscribed was at least easy to be mistaken, at worst outright blasphemy. It has to be added that the prophet’s name is also linked on this coin with the Sasanian religio-propagandistic formula *GDH/pzwty*, “may his glory increase”, the Zoroastrian phrase *GDH=khwarrah* specifically referring to the royal splendour of the ruler of Iran. One could say that the existence of the 73 AH drachm by Bishr b. Marwan with exactly the same obverse legend speaks against this explanation. However, apart from the reverse typology, Bishr’s issues follow, when it comes to the marginal legends as well as the number of rims on the reverse, the patterns of the Syrian silver coins, just with one year delay. Bishr’s earliest issues are dated 73AH, which clearly proves that they followed the models set by the central government in Dimashq. The reason why he issued a coin with *Muhammad rasul Allah* at the usual place of a temporal ruler’s name in 73AH most probably can be explained by assuming that this was arranged according to information and instructions from Dimashq. The news that, for the

³¹ Treadwell 1999, p. 233.

³² The first specimen was published by Sham-Eshrag 2004; for another specimen and historical notes see Foss 2005.

³³ On this legend and its impact Treadwell 1999, p. 243–245.

³⁴ Album/Goodwin 2002, p. 10.

³⁵ E.g. Album/Goodwin 2002, no. 32-34.

reason suggested above, this legend was deemed inappropriate in Dimashq might have taken some time to reach Iraq; as in the case of **A1**, Bishr's *Muhammad rasul Allah* drachm is unique so far, which suggests that this issue too was in no way substantial. Thus, we can explain the seemingly senseless return to a Pehlevi legend which was certainly meaningless in former Byzantine Syria.

The second issue in chronological order (emission 2) is represented by **A2**. In the case of such variants we certainly can speak of emissions, i.e. single production groups which were marked as being different from each other by the minting authorities. An overview of the various emissions can be found in the catalogue in *appendix 3*. **A2** retains the fourth rim on the reverse. Also **A16** from Hims belongs in the chronological layer of emission 2 since it also has four reverse rims. The arrangement of the marginal legend *bism Allah Muhammad rasul Allah* varies a little bit – on **A2** it commences in the first quadrant, on **A16** in the second quadrant. A second minor difference is that in Hims the word *sanah*, “(in) the year” is placed after the mint name at 3h, even if it is written in very small letters. Here, the distribution of mint and date is the same as on **A1**, while on **A2** the mint is moved to 9h where it was to remain until 73 AH. The obverse typology also varies, albeit inconspicuously: **A1** bears obverse type Ic, the main reason for this certainly being that the two-line legend left no place for the right diadem ribbon. For **A2**, type Ia, typical of the posthumous Khusro drachms, is employed, while on **A16** the unusual obverse type Ig, which omits the crescent on the ruler's left shoulder, is used. I do not believe that deeper reasons lie behind these small variants. The Syrian drachms are typical examples of experimental coinage, and thus such variations are to be expected. Two more specimens from 72 AH (emission 3; **A3**, **A4**) omit the fourth ribbon on the reverse and thus return to the basic types of Arab-Sasanian silver coinage. The arrangement of the marginal legend once again is changed, since the marginal legend *bism Allah Muhammad rasul* now starts in the second rather than in the first quadrant, and runs to the fourth quadrant. Mint and date are placed as on **A2**, i.e. at 3h and 9h respectively. In 73 AH the marginal legend *bism Allah Muhammad rasul Allah* is replaced by *bism Allah la ilah ila Allah wahdahu Muhammad rasul Allah*, i.e. the *shahada*. On all issues from this year, the division of the words runs *wa-hdahu* and *ra-sul*, and thus is quite unusual. A more elegant separation of the single words comes into being only in 74 AH. Four of the five 73 AH drachms from Dimashq feature the mint at 9h and the date at 3h (**A5–A8**), while on one single coin the arrangement is reversed (**A9**). Since all three coins from 74 AH show the mint at 3h, it is obvious that **A9** represents a second emission in 73 AH which was later than the apparently more numerous issue of **A5–A8**. Thus, there are two emissions in 73AH, a larger one featuring the mint at 9h (emission 4, **A5–A8**), and a later, smaller one (emission 5), so far attested only by **A9**. In the year 74 AH several minor modifications can be observed (**A10–12**): First of all, a symbol is placed in front of the bust. It will be discussed in detail below; for the time being, suffice it to say that I believe it links the 74 AH drachms with the “standing caliph” dinars and fulus, and that the issue of the Dimashq drachms in 74 AH can have begun only after the earliest “standing caliph” coins in the other two metals began to be issued. As already stated above, the arrangement of the marginal legend is slightly modified. As for the reverse, the type is changed from Ia to Ig, with the left attendant holding the sword with his left hand above his right one, the right with right above left. The difference compared, with reverse type Ic, is the absence of the diadem ribbon of the left attendant, which is certainly caused by the quite long Arabic date at 9h. It also appears that the style of the 74 AH is a little bit different when it comes to the facial outlines, especially the treatment of the cheek and the rendering of the whiskers. It seems plausible that different die cutters were at work here: One who produced rather slim, tall busts, and who was responsible for the 72 and 73 AH issues, as well as for the “standing caliph” and almost all “mihrab/‘anazah” drachms, and another one who cut the Dimashq 74 AH dies, as well as one of the “mihrab/‘anazah” dies (Treadwell's no. 7). There are no differences in typol-

ogy or legends among the three 74 AH specimens, therefore we can recognize only one single emission (emission 6).

So much for a short overview on the typological variants of the Syrian drachms. Let us have a short look at the number of dies involved in producing them. **A3** and **A4** were struck from the same pair of dies. The same applies to **A6** and **A7**. **A11** and **A12** share the same obverse die. We thus arrive at the following number of dies:

72AH: 3 obv/3 rev. (4 coins)	3 emissions
73AH: 4 obv/4 rev. (5 coins)	2 emissions
74AH: 2 obv/3 rev. (3 coins)	1 emission

Even if there are scarcely any Arab-Sasanian coins for which die studies have been done so far,³⁶ one can learn from these numbers that the entire issue of Syrian drachm was no way substantial. The only parallel material are two comparably rare special types, namely the “orans” drachms struck by Bishr b. Marwan in Kufa and Basra, and the “mihrab/‘anazah” drachms which will be discussed below. For the latter, Treadwell was able to trace seven specimens struck from six obverse and seven reverse dies.³⁷ This is to say that despite the spectacular typology of these coins, which makes them easily traceable nowadays, the survival rate of specimens per die is very low. As for the “orans” drachms, Treadwell lists 22 coins well-preserved enough for a die analysis, and was able to distinguish 19 obverse and 20 reverse dies.³⁸ Thus, the numbers are comparable with that of the Syrian drachms. Certainly more specimens will turn up in the future, but as long as no hoard full of such coins comes to light, they will remain quite rare. For the interpretation of this series this means that we cannot assume that the Dimashq and Hims coins had any really strong impact on the monetary circulation in Bilad al-Sham. Some of these coins’ features, however, spread to the East, to the original circulation area of drachms, as will be examined below. The number of emissions decreases. The highest number –three different emissions – occurs in 72 AH, i.e. the first year of Syrian drachm issues, which fits well in the overall picture of an experimental coinage.

The first detail deserving of interest is the fourth reverse rim of the earlier 72AH issues (emission 1, 2; **A1**, **A2**, **A16**). It is not a totally new invention: Rare special type drachms of Khusro II featuring a bust in flames, which were struck in the regal years 21 or 23, 26, 27, 36 and 37 employed for the first time this additional rim, which encircled the astral symbols.³⁹ Both the reverse type and the fourth rim had a remarkable impact on the coinage of the Iranian Huns, more specifically, on the issues of the Nezak Huns featuring the title “Sahi Tigin”.⁴⁰ When it comes to Arab-Sasanian coinage proper, however, it is the 72 AH drachms of Dimashq and Hims which employ for the first time the fourth reverse rim. True, the “Arab-Hephthalite” issues of ANBYL also employ the fourth rim in 68 AH (no. **166**, **167**), but due to the use of Bactrian legends and tamgas, these coins are separated from the Arab-Sasanian main series. In their case, an influence from the coins of the Iranian Huns is easily discernable. But why does the fourth rim turn up in the very westernmost parts of the Umayyad Empire for the first time in the Arab-Sasanian main series? It does not seem very likely that the fourth rim was newly invented in Dimashq in 72 AH; I rather believe that it was copied from one of the already existing issues. The special type Khusro II drachms are the least likely candidates: First of all, they are not very common, which means that it is unlikely that they were widely known even in late 7th century Iraq or Iran, let alone in Syria in the early 70’s AH. Apart from this, since these issues employ

³⁶ Album/Goodwin 2002, p. 65.

³⁷ Treadwell 2005, p. 10.

³⁸ Treadwell 1999, p. 228.

³⁹ Göbl 1971, Prägetabelle 12: Gyselen 2000/2.

⁴⁰ Göbl 1968, I, em. 208f, 211–215.

a special reverse type, and not the usual fire altar with attendants, it is thinkable that the Khusro II drachms might have given the minting authorities an idea of employing a special reverse type, even if the depiction on the Khusro II issues certainly was not perfectly suited for the purposes of an Islamic state.

Let us turn away here from the main subject – from where was the fourth rim derived? – for a second, and have a look at the typology of coins struck under Arab rule up to the year 72 AH. Even if not all of the Arab-Byzantine obverse depictions have easily identifiable models in Byzantine coinage, there are no elements which are markedly Arabic or Islamic on them. True, the depictions of birds on some coppers from Dimashq have been interpreted as evidence for falconry,⁴¹ a typical leisure time occupation of Arab noblemen, and the depiction of a standing figure holding what appears to be a human head in one hand has been seen, not very convincingly, as a reference to the cult of John the Baptist in Damascus.⁴² Still, there are no typical and clearly recognisable pictorial elements which could have served as marking an issue as Arabic and Islamic. As for the Arab-Sasanian coins, the marginal legends in Arabic are the only obvious addition that separates them from Sasanian issues, but there are no special type coins yet. In Syria, it is once again the addition of Arabic legends, which is the only indication of the Arab domination under which the “Umayyad Imperial Image” coins were struck. As for the gold coins, the dechristianisation of the cross potent on the reverse, by removing the middle bar, and the lack of crosses at all on the obverses could be – and apparently was⁴³ – seen as an indication for their non-Christian and non-Byzantine origin. The earliest datable special type which is clearly and intentionally different from the traditional non-Arabic coinages is an issue by the Zubayrid governor of Sistan, ‘Abd al-‘Aziz b. ‘Abd Allah from 72 AH, which shows on the reverse a Pehlevi legend in three lines, which renders the Islamic *shahada* in Pehlevi.⁴⁴ Then comes the “orans” type of Bishr b. Marwan, first struck in 73 AH in Kufa. As I believe, the Syrian “mihrab/‘anazah” drachms are roughly contemporary with the “orans” type; the date question will be discussed below. The classical “standing caliph” type of Syrian gold and copper coinage as well as some rare Syrian drachms came into being only in 74 AH, which suggests that the idea of creating new types first was put into practice in the East of the Islamic Empire, and was taken over from there to Syria. Still, in 72 AH when the first Syrian drachms were issued, no special type issues yet existed in Early Islamic coinage, except for possibly ‘Abd al-‘Aziz’ coins.

Let us now return to the fourth rim. What about the dating of the Nezak issues? Göbl has interpreted the date on emission 208, which clearly reads 77, as a PYE date, stating that Sahi Tigin certainly did not use the Hijra for dating his coins.⁴⁵ This would bring us to 728 CE. As for emissions 212–216, some of which bear the dates 8, 9 and 15 (?), Göbl has claimed that these represent regal years of the same ruler who in emission 208 still had used a PYE date, and thus have to be dated later. However, this is very unlikely. Emissions 212 to 216 show a full frontal bust of a ruler with all the regalia of Khusro II, while emission 208 bears a three-quarter facing bust with a Hunnic crown. Also, the rendering of the facing bust on the reverse is stylistically more remote from the Sasanian model on emission 208 than on emissions 212–216. Therefore, I am convinced that the order of these two groups has to be switched, and that 212–216 are

⁴¹ Oddy 1991.

⁴² Popp 2004.

⁴³ A 7th century Syriac chronicle states that Mu’awiya “...also minted gold and silver, but it was not accepted because it had no cross on it” which just shows – despite all the chronological and numismatic problems involved – that the idea existed in contemporary Syria; Album/Goodwin 2002. p. 91 with note 57.

⁴⁴ First published by Mochiri 1982. Sears 1989 has tried to date this coin to 79/80 AH, but his arguments are not convincing, and have been refuted by Ilisch 1992; in favour of the 72 AH dating also Album/Goodwin 2002, p. 27.

⁴⁵ Göbl 1967, I, p. 143f.

actually the earliest of the Sahi Tigin issues. Considering the fact that these coins retain the original reverse type of the Khusro II coins, and also the fourth reverse rim, it is natural to assume that at least the group of emission 212–216 predates the earliest of the normal-type “Arab-Hephthalite” coins with a fourth rim, i.e. that they have to be earlier than 67 AH. Since the fourth ribbon is canonical on all these Hunnic coins, it is also obvious that because of its common use, it served as model for the “Arab-Hephthalite” issues. After the additional rim has been taken over on the “Arab-Hephthalite” coins of 67 and 68 AH, its next datable occurrence is on the Dimashq issues of 72 AH. Once again, I do not believe this to be the result of mere chance. In Jumada I, 72 AH (October 691), the Umayyad caliph ‘Abd al-Malik defeated the Zubayrid governor of Iraq, Musa‘b b. al-Zubayr, and thus regained control of the Eastern half of the Islamic Empire, with only Mecca still holding out under the anti-caliph ‘Abd Allah b. Zubayr himself.⁴⁶ Bates has already argued that this event, the factual reunification of the Arab Empire, was the starting point for the experimental coinages of Syria,⁴⁷ even if his chronological connection of ‘Abd al-Malik’s victory with the beginning of the “Umayyad Imperial Image” coinage of Bilad al-Sham does not seem convincing to me. Following Bates, it is possible at least to put forward how the fourth rim found its way from remote Khurasan to Syria: We can assume that Musa‘b b. Zubayr had with him a cashbox to pay his troops, and that also “Arab-Hephthalite” issues were among these coins. After his defeat, his treasure came into the hands of ‘Abd al-Malik whom we can assume to have taken the surpluses with him when returning to Syria. For a reason unknown to us, the fourth rim was attractive to him and his advisors, and so was put on the earliest Arab-Sasanian drachm struck in Syria. It seems most improbable that Khurasani drachms, which could have served as a model, circulated in Syria before ‘Abd al-Malik’s victory, and certainly the Zubayrids sent no taxes at all to Dimashq. Apart from all this, the coincidence between the use of the fourth rim in 72 AH and the Umayyad victory in the same year is not likely to be merely the result of chance. From Bilad al-Sham, the fourth rim travelled back to the East, where it is first found on Bishr’s “orans” drachms of 73 AH. As in Dimashq, it is dropped in the second year of the issue – in this case, 74 AH – and these patterns, as well as the earlier date of Dimashq convinces me that Bishr took over the fourth rim from his brother’s Dimashq silver coinage. The same applies to the Umayyad governor Khalid b. ‘Abd Allah in Basra, who also used four rims in 73 and 74 AH.⁴⁸ Bishr himself also employed the extra rim on a unique drachm from GD (Jayy) struck in 74 AH. The next massive use of the fourth rim can be observed on the “radial” issues of al-Hajjaj b. Yussuf, Bishr’s successor as governor, which were first struck in 76 AH (no. **199**). In Syria, the fourth rim occurs on all “mihrab/‘anazah” drachms, which I believe to date to 73/74 AH; I will put forward my arguments for this dating below.

To sum it up: Even if using a fourth rim on the reverse might seem quite obvious an idea, it is attested only very rarely, with the few attestations most likely being linked to each other. First comes Khusro II, then Sahi Tigin, who retains Khusro’s special type reverse. From these Nezak drachms, the fourth rim is taken over to the “Arab-Hephthalite” coins of Anbyr dated 67 and 68 AH. It is these coins, brought to Iraq and there falling in the hands of ‘Abd al-Malik, which served as an inspiration for the Marwanid government when the Syrian drachms were designed in 72 AH. From Dimashq, the fourth rim was brought back to Iraq, and is attested at the beginning of Bishr b. Marwan’s Kufan coinage, as well as in Basra, and then once again under al-Hajjaj. Certainly, this sounds a little bit far-fetched, but the only alternative explanation would be to claim that the use of the fourth rim, which dates between 67AH and 77 AH, is the result

⁴⁶ Rotter 1982, p. 231; Treadwell 1999, p. 225.

⁴⁷ Bates 1986.

⁴⁸ Treadwell 1999, p. 242.

of mere chance, and that no connection at all exists between the various occurrences of this rare phenomenon. Especially in Bishr's coinage, one can observe heavy Syrian influence, so in this case the take-over from Dimashq presents no problem at all. For the main question, "where did the fourth rim come from in the case of the 72AH Dimashq and Hims drachms?" the connection with the "Arab-Hephthalite" issues from the later sixties AH is much less certain, but I still think that it is a possible explanation for an otherwise quite enigmatic phenomenon.

Having discussed the Syrian silver coins dated 72–74 AH, it is appropriate to consider briefly another rare group of drachms which bear no mint indication, but which are generally believed to have been struck also in Dimashq. On the obverse, the bust of Khusro II is depicted, with the ball of hair at the neck missing because it is replaced by the first part of the Arabic legend *duriba fi sanah hams wa saba'in* ("struck in the year five and seventy") which is distributed both to the left and the right of the bust. Treadwell has rightly stated that the omission of the mint place was certainly influenced by the "standing caliph" dinars which employ the same date formula, beginning with *bism Allah*. He explained the lack of the minting indication: "...perhaps because it was assumed that precious-metal regalian coinage of this type could only have been issued from the capital mint".⁴⁹ By the way the date formula is separated, two different emissions, 7 and 8, can be distinguished, their order being uncertain (**A13**, **A14** and **A15**). On the reverse, the Zoroastrian fire altar and the attendants are replaced by the single figure of the standing caliph in Arab dress, clearly identified as *amir al-muminin* ("commander of the Faithful") and *khalifah Allah* ("God's caliph") by Arabic legends to the left and the right. While on **A13**, the "girdle band"⁵⁰ typical of the gold and copper coins is depicted, it is missing on **A14** and **A15**. Since **A13** and **A14** share the same obverse die, it does not seem very likely that the omission is intentional, and was used for identifying various emissions. Since the obverse die cracks are heavier on **A14** than on **A13**, it seems plausible that the first issues featured the "girdle band", which was later dropped. A possible explanation could be that the linear legend to the left of the caliph did not leave enough place for the inclusion of the "girdle band" which is also quite inconspicuous on **A13**, being much shorter than on "standing caliph" gold and copper coins. Only issues dated 75 AH are known, struck from two obverse dies – as stated above, **A13** and **A14** share the same die – and three different reverses. This data, as well as the overall numbers, is the same as for the Dimashq issues from 74 AH, which shows that the basic patterns of minting were the same for the "standing caliph" drachms as, by and large, for all the individual years of issue of the Dimashq drachms.

Where to place the mintless "standing caliph" drachms? Generally, they have been attributed to Dimashq, e.g. by Bates, on stylistic grounds,⁵¹ by Gaube for typological reasons,⁵² and this has also been accepted by Album.⁵³ Since the mint attribution is pivotal for the question whether these coins should be included in this short overview on Arab-Sasanian drachms from Bilad al-Sham, let us see what arguments exist in favour of a localisation in Dimashq, and whether there is any argument against it. I can find no evidence which speaks against Dimashq. As for the points in favour, let us start with the obverse. Stylistically, the two obverse dies are closely related with the 72 and 73 AH Dimashq obverses, even if there is a marked difference with the two obverse dies from 74 AH. One also has to take into account that the mints in the East active at this time employ a markedly different style, hence the stylistic similarity of the Dimashq and the "standing caliph" drachms becomes even greater. Apart from the overall sty-

⁴⁹ Treadwell 2005, p. 11.

⁵⁰ Album/Goodwin 2002, p. 92f.

⁵¹ Bates 1986, p. 254.

⁵² Gaube 1973, p. 49.

⁵³ Album/Goodwin 2002, p. 28.

listic similarities, there is also the calligraphy of the legends: The rendering of *saba'in*, “70”, is the same on the Dimashq and the “standing caliph” issues. Even more conclusive is the quite unusual writing of *bism* at the beginning of the *shahada*, both when it comes to the rigged layout of the first four vertical strokes, as well as to the elongated, oval form of the “M”. As for the reverse, the depiction of the standing caliph certainly offers no direct link with the Dimashq drachms, but with mintless “standing caliph” dinars which were certainly struck in Dimashq.⁵⁴ Stylistically, the 75 AH issues are very closely related to the corresponding drachms. So it is not only the use of this basic type, but also details of its rendering which firmly place the “standing caliph” drachms in Dimashq. It also seems logical, judging from the reconstruction of the patterns of minting, that the generally speaking Sasanian-type drachms of 72–74 AH were followed by a further issue, representing a yet another stage in the experimental phase observed in the first half of the 70’s AH. Therefore, the “standing caliph” drachms continue the Dimashq silver issues, representing two more emissions which can be added to the 72–74 AH drachms.

Another very rare type, the “mihrab/‘anazah” drachms discussed in detail by Miles and recently by Treadwell,⁵⁵ bears neither date nor mint. While the first specimen was published in 1952 by Miles as then unique, Treadwell has been able to gather as many as seven different specimens, thus more than double the number of the 75 AH “standing caliph” drachms. Only two coins among them are obverse die-linked; we thus arrive at a number of six obverse and seven reverse dies.⁵⁶ Where do we place these coins geographically and chronologically? By observing the similar weight standard of the “mihrab/‘anazah” coins and the Syrian drachms from 72–74 AH, Treadwell has strongly advocated a Syrian provenance: This is also easily recognisable from the data in *tab. 2*. The weights are discussed in more detail below; for the time being let us content ourselves with noting that the clearly lighter weights of the “mihrab/‘anazah” drachms have parallels only among issues which were certainly issued in Syria, i.e. the 72–74 AH issues and the “standing caliph” drachms. However, this just means that the geographical region Syria has to be where the “mihrab/‘anazah” drachms were struck. It does not necessarily follow that they were struck in Dimashq itself, as were with all plausibility the “standing caliph” drachms. I also feel quite uneasy about placing the “mihrab/‘anazah” coins after the “standing caliph” issues from 75 AH, thus closing the gap in Syrian silver issues between 75 AH and late in 78 AH, the date of the earliest post-reform dirhams, which are so rare that it is very likely that their issue began only towards the end of that year. Treadwell has argued that it is most probable that the “mihrab/‘anazah” drachms were struck after the “standing caliph” coins because on the one hand, issuing two novel coin types simultaneously would have been too confusing for the users. On the other hand, according to this author, the “mihrab/‘anazah” drachms can date only after the “standing caliph” coins because of the use of the caliphal depiction on the obverse, and because the two phrases *amir al-muminin* and *khalifah Allah* to the left and right of the reverse image were taken over from the “standing caliph” silver coinage. Still, there are many points which are quite hard to explain if one were to follow Treadwell. First, while the “standing caliph” drachms feature no Pehlevi inscriptions at all, the “mihrab/‘anazah” coins return to the old obverse legend *hwslwb GDH `pzwty* to the right and left of the bust. Treadwell suggests that “the engraver may have been reluctant to place mundane data of an administrative nature in close proximity of an image of the caliph”.⁵⁷ Still, the parallel he draws to the absence of administrative information on the obverses of the “standing caliph” dinars fails to convince. The explanation is simply that in Byzantine coinage from which these issues were

⁵⁴ Album/Goodwin 2002, p. 94f.

⁵⁵ Miles 1952; Treadwell 20005.

⁵⁶ Treadwell 2005, p. 10.

⁵⁷ Treadwell 2005, p. 14.

ultimately derived, administrative data was almost always restricted to the reverse. Its absence on the obverse has nothing to do with any scruples of the issuing authorities. But this is only of minor importance, since the real obstacle to Treadwell's suggestion is the following: If it was politically incorrect to place administrative data near the caliph's bust, then the dynastic name and the designation of a religio-political concept (*GDH=khwarrāh*, "royal splendour") of the vanquished heathen Sasanians was all the more unacceptable, if the issuing authorities were at such pains about the choice of legends. Admittedly, just a few lines above, I too have tried to explain the similar case of the return to Pehlevi after the employment of Arabic on the anonymous 72 AH drachm. But there, the question was just where to place the inscription *Muhammad rasul Allah*, while here, the question is much more general, and on a markedly later stage in this experimental phase. But whether or not my idea is accepted, this coin still retains the Pehlevi formula to the left of the royal bust, while the "standing caliph" drachms totally omit any Middle Persian. It would seem much more logical also to expect, as the next step in the Syrian silver series, coins bearing only Arabic legends, the only candidate being the aniconic post-reform dirhams issued from 78 AH onwards. But apart from the language of the obverse legends, there are other strange features about the "mihrab/'anazah", if dated to 76/77 AH. Invariably, they bear a fourth reverse rim. We have already discussed this feature above. Once again, the re-employment of the fourth rim two years or so after it was last employed on Syrian drachms is strange, even if this is no conclusive argument against such a dating. As for Treadwell's argument that the obverse type is feasible only after the introduction of the "standing caliph" type in gold, in 74 AH, the differences in dress, headdress, position, etc. are so pronounced that this does not follow. For one thing, the "standing caliph" of the Syrian gold, silver, and copper issues is invariably shown as a full standing figure. Then, he is always facing. Further, he is either bare-headed, or wears a kafiya, and his dress is shown in a form very different from the "mihrab/'anazah" drachms. Finally, while the "standing caliph" is in dress and gesture a fully Arabic and Islamic image, on the "mihrab/'anazah" issues there are many Iranian elements e.g. the earrings, quite impossible a thing to wear for the head of the Islamic state; the main elements of the headdress – double pearl diadem, crown cap, korymbos – are still Iranian despite the typological transformation, and no way compatible with Islamic and Arabic costumes; there is the Iranian ball of hair at the neck, an element already dropped – even if for lack of space, and not for religious reasons – on the obverses of the standing caliph drachms. Certainly, all these phenomena can be explained by the model of the Sasanian drachm, yet, if the "mihrab/'anazah" issues represent the final stage in the experimental phase of Umayyad coinage of the 70's AH, then, compared with the artistically perfect "standing caliph" image, the prominence of Iranian elements on the "mihrab/'anazah" obverses place it some distance behind the former, both in terms of its artistic outlines, and also its religio-propagandistic impact. In following Treadwell, one would have to assume that the depiction of caliph was invented twice, first in a way which for four years became canonical for Syrian coppers and the dinars, and once again, when this common image was already widely used, at the same mint (Dimashq, according to Treadwell), in a quite different, very Iranian form. It must also be emphasized that the only truly "Arabic" element, in so far as it can be clearly connected with what we know of Early Islamic depictions of caliphs, namely the sword held by the obverse figure is so small and inconspicuous that it escaped the notice even of modern numismatists for a long time.⁵⁸ Treadwell remarks on the "standing caliph" drachms that they are an "unwieldy and clumsy hybrid concoction" since the Sasanian-style bust on the obverse overshadowed the figure of the standing caliph on the reverse.⁵⁹ But then, the "mihrab/'anazah" drachms, invented according to him to remedy the shortcomings of

⁵⁸ Treadwell 2005, p. 8.

⁵⁹ Treadwell 2005, p. 11.

the “standing caliph” drachms, are even more of a concoction, and beyond this, bear more anachronistic features – anachronistic at least under the assumption that they were struck after the “standing caliph” silver. Apart from this, because of the many and grave differences in the depiction of the caliph on the “standing caliph” and the “mihrab/‘anazah” drachms, Treadwell’s argument that the latter have to be modelled after the former is in no way cogent, and thus the possibility exists that the obverse type of the “mihrab/‘anazah” coins was designed when the canonical “standing caliph” image did not yet exist, i.e. before 74 AH. Let us have a look at the style of the “mihrab/‘anazah” drachms. Save for one specimen, they show rather tall and thin busts comparable with the 72 AH and 73 AH Dimashq drachms, as well as the “standing caliph” silver issues. This is also true of the rendering of the legends, e.g. the *bism* at the begin of the *shahada*, even if these palaeographic features can also be found on the “standing caliph” drachms (for which I have used these similarities as a further argument for their attribution to the mint of Dimashq). One coin however, no. 7 in Treadwell’s catalogue,⁶⁰ shows not only minor typological variations – the treatment of the cap, the outer line of which is rendered with short parallel strokes, as well as a different division of the *shahada* on the obverse – but also a markedly different style. The broader bust, the rounder rendering of the chin, as well as the somewhat more prominent nose link this coin stylistically to the 74 AH Dimashq issues which show a style very distinct from the 72/72 and 75 AH Syrian drachms. Treadwell has placed this single coin at the end of the “mihrab/‘anazah” series. Another point are the reverse legends: Treadwell has claimed that the phrases *amir al-muminin* and *khalifah Allah* to the left and the right of the object on the “mihrab/‘anazah” coins were taken over from the earlier “standing caliph” drachms. Even this does not seem altogether certain to me. There can be no doubt that the reverse depiction of the “standing caliph” silver coins was taken over from the Dimashq gold and copper coinage which, as is certain for the dinars from 74 AH, predate them. All these Dimashq dinars, and the vast majority of all the “standing caliph” coppers from the other mints, bear circular legends around the standing figure, which give the *shahada*. In contrast, the “standing caliph” drachms bear *khalifah Allah* to the right of the caliph, written inwards, and *amir al-muminin* to his left, written outwards. This is clearly influenced by the location of mint abbreviation and date on standard Arab-Sasanian coinage. Space cannot be the reason for this choice of legend arrangement: The inner diameter of the innermost rim is 16 and 17mm, thus almost the same as the dinars (c.18mm) and more than on most coppers (c.15–18mm inner diameter). Apart from this, such a legend arrangement did not leave enough space for the depiction of the “girdle band” on the “standing caliph” drachms, as discussed above. Therefore, one had to ask why, if the “standing caliph” drachms are to be dated before the “mihrab/‘anazah” issues, such an unusual arrangement of the legends was chosen for the former. However, in case the latter are in fact earlier than the “standing caliph” drachms, then the arrangement makes more sense. On the one hand, there is less of a space problem with the two columns of the “mihrab/‘anazah” reverses than with the figure of the standing caliph. On the other hand, the parallel of both the Arab-Sasanian standard coinage, as well as also Bishr’s “orans” coins, is a good argument for placing the reverse legend on the “mihrab/‘anazah” issues the traditional way it was done. It was then continued on the “standing caliph” drachms, even if it made less sense there. Also, the writing of the word *khalifah* without the long “ya” (thus *خيفه خلفه*) would make more sense if the chronological arrangement were as I believe: On the Syrian “standing caliph” coinage, it is almost always written in the correct form (*خليفة*). If the model is the plentiful copper issues – on gold, the caliphal titlature does not turn up – then the consistent defective rendering on three different reverse dies of the “standing caliph” drachms is difficult to explain. Admittedly, the explanation could also be a mistake of

⁶⁰ Treadwell 2005, p. 7–10 with note 26, discussing and finally (rightly, as I believe) accepting the authenticity of this coin.

the mint authorities who issued a faulty drawing of the type to the die cutters, but given the fact the *خلفه* also is found on all the seven different “mihrab/‘anazah” reverses, an influence of the latter on the “standing caliph” drachms seems more likely.

Interpretations of style are quite subjective. It is certainly true that I cannot quote a single conclusive argument against dating the “mihrab/‘anazah” drachms after 75 AH. All the same, I believe that there is no proof for the late date, either. When taking into account the various observations made above, dating the “mihrab/‘anazah” coins before the “standing caliph” drachms seems more likely to me.

I propose an alternative dating for the “mihrab/‘anazah” issue. Considering the fact that the Syrian drachms of 72–74 AH exhibit standard Arab-Sasanian typology, and that the first experimental type to appear is the “orans” reverse of Bishr b. Marwan first issued in 73 AH, it seems certain that the “mihrab/‘anazah” drachms cannot have been struck earlier than 73 AH. Also, the use of the full *shahada* on the obverses, another innovation of 73 AH – both in Dimashq and under Bishr b. Marwan – hints at the same date. As to the division of the *shahada*, interestingly enough the “mihrab/‘anazah” drachms display all of the – admittedly many – variants how the single letters are arranged around the astral symbols as the Dimashq 73 AH drachms: The separation runs *bism Allah – la ilah ila Allah wa – hdahu Muhammad ra – sul Allah*. In 74 AH, the more elegant form *bism Allah – la ilah ila Allah – wahdahu Muhammad – rasul Allah* is employed, while the “standing caliph” drachms of 75 AH return to the odd division of *ra – sul*, while retaining the more regular one of *wahdahu*, thus reading *bism Allah – la ilah ila Allah – wahdahu Muhammad ra – sul Allah*. While these divisions vary from year to year, they are consistent within the same Hijri year – apart from the earliest emissions from 72 AH – display the same division of the obverse marginal legends. This is true also for the “mihrab/‘anazah” issues, since all but one – the stylistically markedly different no. 7 of Treadwell – employ the form *bism Allah – la ilah ila Allah wa – hdahu Muhammad ra – sul Allah*, and one has to take into account that no less than five different obverse dies are attested for the “mihrab/‘anazah” drachms. Therefore, the division of the legends cannot be the result of mere chance, but was planned and executed carefully for the respective issue. Treadwell’s no. 7 features the division *bism Allah – la ilah ila Allah – wa – hdahu Muhammad – rasul Allah*. Admittedly, this does not correspond the model of the 74 AH Dimashq drachms; but this variant is not attested in any other year, either. The stylistic similarity of the portraits, as well as the division of the marginal legends make me believe that the bulk of the “mihrab/‘anazah” coins was struck in 73 AH, with the latest specimens – represented by Treadwell’s no. 7 – possibly stretching into the year 74 AH, this assumption being based on the stylistic similarities of this single coin to the portraits of the Dimashq 74 AH drachms. As for the place of issue, I cannot offer a really satisfying answer. As much as I have claimed that the “mihrab/‘anazah” issue does not fit in the series of Dimashq silver coinage according to Treadwell’s dating, they do not fit in the sequence of the 72–74 AH Dimashq issues. Therefore, one has to forgo an attribution to Dimashq. An alternative candidate could be Hims, another mint known to have issued pre-reform silver coins. Stylistically, the single drachm known to date (**A16**) is within the range of the 72 AH issues, so style at least would not be a conclusive argument against this attribution, even if **A16** lacks the crescent on the right shoulder which is always depicted on the “mihrab/‘anazah” coins. One could claim that the reason why Hims drachms are that much rarer than Dimashq issues (1 : 12 without adding the “standing caliph” drachms) was that it was the “mihrab/‘anazah” coins which were struck there after the initial normal type drachm of 72 AH. Still, the problem remains that even if the Hims mint issued substantial numbers of copper coins during the entire Umayyad period, apart from **A16** there is no evidence at all for precious metal issues there, or in any other Syrian mint – meaning the five *ajnad* Qinnasrin, Hims, Dimashq, Urdunn and Filastin – save for Dimashq. It is also true that Hims issued normal “stand-

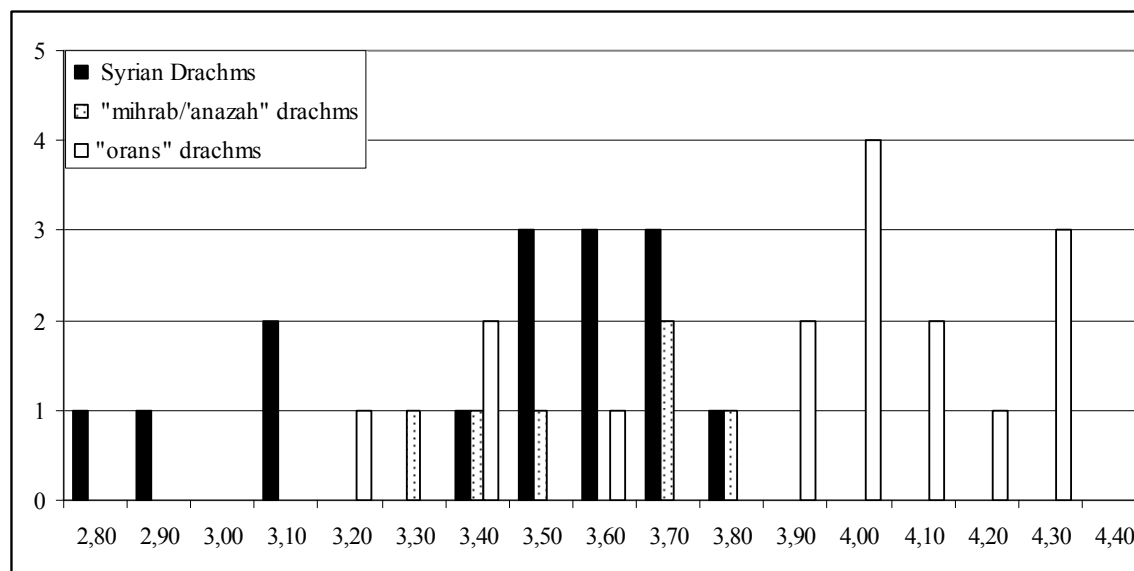
ing caliph” coppers starting from 74AH onwards, as will be discussed below, so the innovative type of 73/74 AH does not really fit into this mint’s activities as we can reconstruct them when looking at the really hard facts. In sum, Hims does not appear to be a very plausible candidate as place of issue for the “mihrab/‘anazah” drachms. Given the fact that dies or die cutters travelled any place within the area where such light drachms were accepted is possible.

Certainly, this explanation of mine offers the problem that the seemingly certain attribution of the “mihrab/‘anazah” drachms to Dimashq has to be abandoned, and since I cannot offer any sound idea of where they were struck, they have to be regarded as the products of an unknown mint. Still, I believe that the chronological problems of dating these coins after the “standing caliph” drachms are so grave that the sequence reconstructed here makes more sense.

The total lack of dated drachms which can be safely dated between 75 AH and 78 AH makes it certain that in Syria after 75 AH, silver coins were not struck with the same regularity as from 72 to 75 AH. Even if Treadwell’s dating of the “mihrab/‘anazah” coins is accepted, it seems very unlikely that their issue stretched from the end of 75 or the beginning of 76 AH to the very begin of post-reform silver coinage, i.e. the second half of 78 AH. Thus, a gap in Syrian silver coinage between the various experimental types and post-reform dirhams exists in any case.

A very important general point about the Syrian drachms is their metrology, which has already been alluded to briefly above. It differs from the bulk of Arab-Sasanian issues from the former Sasanian Empire. With only 14 specimens for which dates are recorded – twelve from Dimashq and Hims, as well as two mintless “standing caliph” drachms – it goes without saying that the statistical basis is too small for any reliable analysis. The “mihrab/‘anazah” drachms are also included here, but under a heading of their own, due to the attribution problems they offer. The general trend, though, clearly shows that both groups were struck on a lighter weight standard (*tab. 2*):

Tab. 2. Weight statistics of the Arab-Sasanian drachms from Bilad al-Sham (in grams)



Leaving aside the heavily clipped nos. **A4**, **A10** and **A16**, there still is not one single coin which comes even near the ideal weight of Sasanian drachms from Peroz onwards and Arab-Sasanian silver issues of ca. 4.15g.⁶¹ No. **225** for example does not show the slightest trace of

⁶¹ Album/Goodwin 2002, p. 38f.; Schindel 2004, I, p. 103–112.

clipping, but despite that, with a weight of 3.65g it is at least 0.4g underweight, i.e. around 10%. The two “standing caliph” drachms, the weights of which are known to me, also fit in this pattern, weighing 3.75g and 3.55g (with slightly broken edges) respectively. For the sake of comparison, I have also included the ‘orans’ drachms issued by Bishr b. Marwan.⁶² Even these are not too common, but one can easily see that these three weakly attested groups have totally different weight peaks. As is the case with the Syrian drachms, some of the “orans” coins listed by Treadwell are clipped or pierced, which explains their low weights. The majority, however, lie in the region around 4.00g and 4.10g which is perfectly in accord with the standard weight of Sasanian and Arab-Sasanian drachms, even if the number of clearly overweight specimens which are heavier than 4.30g is remarkable.⁶³

I have already postulated that, from Ardashir I onwards, Sasanian drachms were struck at a ratio of 20 Syrian carats per piece, equalling ca. 4.25g, and from Peroz onwards on a standard reduced by one quarter carat.⁶⁴ If this idea is accepted, then it seems obvious that the Syrian drachms were struck on a weight standard which consisted either of a smaller number of carats apiece, or on a lighter carat standard. The classical Roman carat used for Late Roman precious metal coinages weighs ca. 0.192g. A drachm of 20 such carats should have an ideal weight of ca. 3.8g, more or less the same as 18 Syrian carats, a standard used for gold coins under Peroz.⁶⁵ Alternatively, if using a method of reckoning similar to that for the post-reform dirham which weighs 2.97g⁶⁶, which is 7/10 of the classical Sasanian drachm, the Syrian issues could have been struck at a standard of 9/10 of a normal drachm, or 3.75g, once again a number in the range of what can be guessed from *tab. 2*. Given the small number of specimens, no decision as to which of these three possible explanations is the correct one can be made.⁶⁷

Using a local weight standard which is considerably lower than the classical Iranian one might have served the purpose of keeping out the older, heavy drachms from the monetary circulation in Bilad al-Sham according to Gresham’s Law. However, with the small number of Arab-Sasanian drachms from Dimashq and Hims which are known today, and no tradition of silver money in Syria for centuries, it does not seem that this issue had any really relevant impact on coin circulation in Syria. Yet a much more incisive conclusion arises from the metrology of the Syrian drachms of the early and mid-70’s AH: They are the first example of silver coinage clearly deviating from the Sasanian standard weight, thus the direct precursors of the post-reform dirham struck at an ideal weight of 2.97g, even more markedly different from the Sasanian weight standard. This proves that even though silver coinage was, in practice, an Iranian and not a Syrian thing, the invention of the post-reform dirham took place in Dimashq, and not in Iraq. The metrological evidence thus adds further support to the idea that the Umayyad dirham was invented at the caliphal court itself.⁶⁸

As mentioned above, the coins of 74 AH do have a feature typical for this year only: a small symbol which is added in front of the bust. It consists of a small dot, a circle, a stroke, and another dot (*tab. 3*).

⁶² The metrological data is derived from Treadwell 1999.

⁶³ The odd phenomenon of a rather large number of overweight coins has been noted by Treadwell 2005, who like me does not offer an explanation for this.

⁶⁴ Schindel 2004, I, p. 112f.


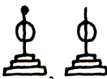


⁶⁵ Schindel 2004, I, p. 99f.

⁶⁶ Walker 1956, p. XCV.

⁶⁷ Equally inconclusive Treadwell 2005, p. 25, note 31: “Was it (sc. the lighter Syrian drachm weight) a proportion of the Arab-Sasanian standard, or a local Syrian standard?”.

⁶⁸ Schindel 2003, p. 63f.

Tab. 3. The “symbol” on the Dimashq 74AH drachms and on Arab-Byzantine issues

 Dimashq 74AH	 “standing caliph” AE	 Umayyad Imperial Image AV, “standing caliph” AV, N-African AE	 Imitative AV, N-African AV
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Judging from its position, it cannot be a part of the crown or the diadem, nor can it be a letter in Pehlevi or in Kufic Arabic. But this object – let us simply call it a “symbol” – closely resembles the upper part of reverse depiction of most of the “standing caliph” copper coins from Syria, which, however, rest on three or four steps taken over from the cross potent of Byzantine *solidi* (see *tab. 3*). The fact that the “standing caliph” dinars are almost contemporary with the Syrian drachms since they were issued from 74 to 77 AH, as can be learned from the dates they invariably bear, must be emphasized. It cannot, in my opinion, be by mere coincidence that it is precisely in 74 AH that the symbol discussed here appears on the Dimashq drachms. It seems certain that it was taken over from the indigenous Syrian copper issues. What follows is that the 74 AH drachms with the symbol were struck at the same time, or slightly later, than the earliest “standing caliph” dinars. Before discussing the further implications of this idea, a short remark on the dating of the “standing caliph” fulus seems appropriate, even if the coppers themselves are always undated. There are two different theories on whether gold or copper coins with this obverse type were struck first. The “gold before copper” line was most vigorously advocated by Michael Bates;⁶⁹ the “copper before gold” theory was first formulated by Shraga Qedar.⁷⁰ As Goodwin has shown in his survey on the chronological problems of Syrian pre-reform coinage,⁷¹ both theories have their weaknesses. If my idea should be accepted, that the symbol on the Dimashq 74 AH drachms aims at depicting the same device as do the reverses of the “standing caliph” fulus, the fact that it is not attested on the 72 and 73 AH coins demonstrates that it was not known before 74 AH, even if this is an *argumentum ex silentio*. Therefore, one has to assume that the year 74 AH saw the first use of this reverse depiction. Thus the first known date of “standing caliph” dinars really marks the first occurrence of this typology in Umayyad copper coinage as well. Certainly, there are other arguments against the “copper before gold” theory. It would seem more likely that such an important typological reform was carried out for gold and copper issues at the same time, as it seems to have been the case with the reform of 77 AH, which introduced new epigraphic types for dinars as well as fulus. Thus, the issue of “standing caliph” dinars and fulus commenced simultaneously, in my opinion.

Now let us turn to the interpretation of the reverse image of the “standing caliph” on dinars and fulus, as well as to the modified versions attested on the 74 AH drachms. Unfortunately, there is no consensus as to what the reverse depiction of the “standing caliph” coins represents or means. It has been interpreted merely as de-christianised version of the cross potent of Byzantine *solidi*.⁷² Modern research has claimed that it is “a significant and specifically Islamic image”.⁷³ Among the explanations published so far is a quite elaborate one which claims that this reverse type symbolizes the caliph as centre of the world.⁷⁴ Anyway, whatever the original

⁶⁹ E.g. Bates 1976.

⁷⁰ Qedar 1991.

⁷¹ Album/Goodwin 2002, p. 99–101.

⁷² Walker 1956, p. XXXII–XXXIV.

⁷³ Album/Goodwin 2002, p. 93.

⁷⁴ Jamil 1999.

meaning and source of this depiction may be, it seems very likely that, one way or another, the “transformed cross” as well as the object on the Dimashq drachms were symbols of the Islamic dynasty of the Umayyads, and were broadcast through the medium of coinage as a replacement of the Christian cross. Only recently, a lead bulla featuring what seems to be the upper part of the symbol, but no steps, flanked by two palm branches has turned up.⁷⁵ This seems to be the first occurrence of this object on another medium than a proper coin, and even if the depiction shows strong Byzantine influence, it could further prove that the symbol in fact existed in reality. The fact that this object is found only on coins from Syria proves the close relationship between the Umayyad court at Damascus and the symbol in question. Finally, if my interpretation that the symbol on the Dimashq drachms represents the “Umayyad symbol” in its clearest form is accepted, one could claim that the steps depicted on the “standing caliph” issues are no integral part of the Umayyad symbol since the Dimashq drachms do not exhibit them. We therefore have to assume that in its most common form, namely that on the Syrian gold and copper issues, it consists of the “original” symbol, whose exact form could vary, and the steps taken over from the Byzantine solidi and transferred to the copper coins as well, in an attempt to create a typological unity between dinars and fulus.

255: This drachm of ‘Ubayd Allah b. Ziyad features the extremely rare mint signature TSPWN, or since there are three strokes after the “P”, maybe rather TSPWNY with final “Y” (طسبنه). It has been misread as TAP by Gaube,⁷⁶ but DeShazo has convincingly shown that it has to be read as TSPWN(Y) and stands for Tisfun, or Ctesiphon, the former capital of the Sasanian Empire.⁷⁷ To the best of my knowledge, this is only the second such drachm to be published. The other one can be found in Gaube.⁷⁸ It employs the same types, but was struck from a different pair of dies.

Very rarely, contemporary drachm forgeries consisting of a copper core covered with a thin layer of silver exist.⁷⁹ This phenomenon is known, albeit in limited quantities, for Sasanian (cf. no. **159** of Khusro II), Arab-Sasanian (cf. no. **259**) and Tabaristan issues.⁸⁰ The governor named on no. **259** apparently was Ziyad b. Abi Sufiyan, the mint might have been either BCLA or BYŠ.⁸¹ As far as I can see so far, these fourrée drachms exhibit an inferior style and thus were apparently not struck from official dies or with dies derived from official issues, but rather from dies made by less skilled artisans. Therefore, they are clearly products of ancient money forgers.

There are also imitations of bad style, with mostly barbarised legends which are not plated. Other than the issues of the Iranian Huns or Arab-Sasanian coins from which they have to be clearly separated, they do not deviate from the typology of their models, and also do not bear an indication who actually had them struck, so it is most likely that at least some of them were struck in Iran by money forgers. One specimen of this category is no. **71**, a Peroz drachm bearing this king’s third crown. Apart from the style which has no parallels among official coins of

⁷⁵ Publication by the present author is planned for the near future.

⁷⁶ Gaube 1973, p. 108.

⁷⁷ DeShazo 1992.

⁷⁸ Gaube 1973, pl. 8, 96.

⁷⁹ Göbl 1961, listing coins from Khusro I onwards. Nowadays, the earliest known specimens date from the reign of Shapur III; I have to thank Bob Schaaf for sending me photos of such early fourée drachms.

⁸⁰ Gyselen 2000/1, 185f.

⁸¹ Göbl 1961; see also Nebehay 1988/89, no. 2 (unidentified Sasanian, 6th cent.); no. 4 (‘Abd Allah b. al-Zubayr, DA 60YE).

this ruler, the obverse legend is shortened and garbled, while on the reverse, mint indication and king's name at 9h consist merely of some parallel strokes. No. **95** from the second reign of Kawad I is a contemporary imitation of reasonably good style, but with garbled legends on both coin sides.⁸² Perhaps this coin originates in the East of the Sasanian realm. No. **160**, too, looks quite irregular. The style of the portrait on the obverse is of unusually low quality, and the letter forms both in the royal name on the obverse and in the date on the reverse are degenerated to a mere series of short, parallel strokes. Apart from this, the date seems to aim at something in the 20's of Khusro's reign, while the basic outlines of the obverse portrait fit in the first decade or so of his reign. Because of all this, it seems very unlikely that no. **160** is the product of an official Sasanian mint.

Many late Sasanian and Arab-Sasanian drachms are found clipped; in the present catalogue, about 15% of the Sasanian coins from the 2nd reign of Kawad I to Ardashir III are clipped (no. **88, 99, 103, 104, 112, 114, 121, 127, 130, 138, 141, 151, 153–155, 157**). The same applies to more than 15% of the Arab-Sasanian coins (no. **172, 174, 177, 184, 186, 194, 213, 216, 217, 227, 228, 232, 239, 245, 257, 259**). The aim of clipping certainly was to ensure that these coins could be used even after the introduction of the post-reform Umayyad dirham in 78 AH, which weighed 2.97g, that is, 7/10 of the Sasanian and Arab-Sasanian coins.⁸³

Finally, a word has to be said about the modern forgeries in the present catalogue.⁸⁴ They comprise a cast Ardashir I drachm with a conspicuously high weight of 4,77g (no. **13**) and a hemidrachm (no. **14**) which can be recognized by its strange surface. Further cast forgeries are no. **43** of Shapur II and no. **79** of Kawad I / 1st reign. Another modern forgery which is struck rather than cast is a Shapur I drachm (no. **24**); it is die-linked to a specimen catalogued by Gyselen.⁸⁵

⁸² Schindel 2004, I, p. 479f; for a similar specimen see Schindel 2004, II, no. A30.

⁸³ Walker 1956, p. XCV; conclusive Göbl 1973/74, p. 256.

⁸⁴ Cf. on this tedious topic Göbl 1971, p. 59–62 with pl. 16; Alram/Gyselen 2003, p. 180; 289; Schindel 2004, I, p. 196.

⁸⁵ Alram/Gyselen 2003, p. 289; pl. 38, 251.

APPENDIX 1:
A HOARD OF LATE SASANIAN COPPER COINS
IN THE ERETZ ISRAEL MUSEUM

The hoard is housed at the Eretz Israel Museum, Tel Aviv, and consists of 1842 late Sasanian copper coins. Such is the number of single coins in the trays; the original total cannot be reconstructed with certainty since many small fragments (listed as no. **H1843**) are also part of the treasure. The total weight of the single coins is 726.56g, while the fragments put together amount to 47.59g. To distinguish the hoard coins from those listed in the sylloge proper, all coins from the Tel Aviv hoard are preceded by an “H”.

The hoard is of unusual interest and high importance for our understanding of Sasanian petty coinage because it is by far the biggest hoard of Sasanian copper coins known to date. A very peculiar feature is that it contains mostly barbarous imitations of Khusro II. That small copper coins were also imitated is a phenomenon almost unknown until recently.⁸⁶ The few regular coins in the hoard provide interesting insights into the circulation patterns of late Sasanian copper coinage.

But the student of the Tel Aviv hoard faces grave impediments. First, no information whatsoever is available on when and where the hoard was found. The only thing that is certain about its provenance is that it does not come from present-day Israel; we do not have the slightest idea in which geographical context the coins have to be seen. Then, there is the usual question whether the hoard is complete. Considering the large number of specimens – 1842 coins – and their very low market value, it seems most probable that the hoard is more or less complete, even if the possibility can never be ruled out that some well-preserved regular coppers were sorted out before the bulk came to the Eretz Israel Museum. The homogenous patina, as well as the nature of the imitative material proves beyond doubt that the coins really were found together. Under the same numbering as the bulk of the hoard coins, some other issues were also listed which might come from the same source, but certainly did not form original part of the hoard. Apart from some Hellenistic coppers, there is a Shapur I drachm (no. **20**) and the fragments of one or more late Sasanian or Arab-Sasanian drachms (K-52812) which I have not included in the sylloge. Apart from the coins, the base of a copper container which might have held the coins is also listed under the same basic inventory number as the hoard coins (no. **H1844**). It may be that the coins were found in this copper box, but there is no way to be sure. However, the fact that several coins still stick together clearly shows that the hoard coins were stored in some kind of container.

A second and even more difficult problem is posed by the material itself. Corrosion is a major problem. Beyond this, the technical quality of the irregular coins is horrendous. They typically weigh around 0.30–0.35g, have a diameter of ca. 14mm, and as a result, blind spots are very common and often obscure one entire side of a coin. The striking also is very badly done, so that on most coins, only fractions of the die image are visible. On the very few regular specimens, royal name, mint and date are often illegible, a lamentable situation for their attribution and interpretation.

Despite these limitations, the Tel Aviv hoard is a fascinating numismatic source. Let us start with the statistics of rulers attested in the hoard (*tab. 4*).

⁸⁶ For barbarous copies of Sasanian coppers Schindel 2004, II, pl. 98, no. A65 (Peroz); pl. 138, no. A34f (Kawad I/2nd reign, “AE-Δ”).

Tab. 4. Rulers attested in the Tel Aviv Hoard

Ruler	Number
Kawad I / 2 nd reign	2
Khusro I	5
Khusro I or Wahram VI	2
Khusro I, Ohrmazd I or Wahram VI	12
Khusro II/regular	27
Khusro II/irregular	1454
Khusro II/regular or irregular	13
Khusro I or Khusro II	1
Un-struck flans	40
Unidentifiable	286

A very peculiar feature is the overwhelming number of imitations: 1454 compared to altogether only undoubtedly 49 regular specimens. Out of latter, the majority – 27 safely attributable coins – were struck by Khusro II. Due to this king's use of double rims on the obverse and triple ones on the reverse, the identification is easier than that of the coins of his predecessors. By their low weight, as well as traces of the image, we can safely exclude the possibility that any type SNS Id/1c issues of Kawad II's 2nd reign might be mistaken for issues of Khusro II. Kawad I, however, is attested by two coins with single rims on both sides (**H1**, **H2**). It would seem that these, the earliest pieces in the hoard, were struck before the introduction of his reverse type SNS 1b in regal year 33, i.e. 521 CE.⁸⁷ The relatively small number of old coins is well in accord with late Sasanian drachm hoards. Also, the issues of Kawad's successor Khusro I are not numerous in the hoard: Due to wear and often fragmentary state, only five specimens can be safely attributed to him (**H3–7**). Two of his coins bear the mint abbreviation AS (**H3**, **H4**). One quite interesting coin is **H7**: On the reverse, the border of dots is quadrangular, and not round. The attribution to Khusro I is certain because there is another, better preserved specimen in the Bibliothèque National, Paris. Any sound comment on these unusual issues will be possible only after more coins have been gathered, which I hope to do in the course of preparation of SNS 4. No clear specimens of Ohrmazd IV are attested, and neither are any of Wahram VI or the 1st reign of Khusro II. In several cases, it was not possible to identify the ruler; single rims prove that these coins were struck earlier than Khusro II, and the facing attendants show that they were issued after the death of Kawad in 531. Therefore, altogether 14 coins could belong to any ruler from 531 to 591 (**H8–21**). The form of the attendants' headdress follows the pattern of those pre-regal year 11 of Khusro II⁸⁸, making it impossible that some Kawad II or Ardashir III coins are among these uncertain issues. One can therefore say with certainty that no coins of the successors of Khusro II occur. For establishing the terminus post quem, one has to look at the regular Khusro II issues. Admittedly, even here there are many unidentifiable coins, but still some clear patterns emerge. On three specimens, the regal year certainly reads 20 (no. **H23**, **H24**, **H38**); one is dated regal year 21 or 23 (no. **H25**). On three more coins, only the decade can be read, which once again falls in the 20's of Khusro's reign (no. **H26**, **H39**, **H40**). Therefore, the terminus post quem for the official coins are the 20's of Khusro II, the latest date which can be made out with some probability being regal year 21 or 23. The chronological interpretation of the unofficial issues will be dealt with below. To cover all the readable dates, it should be added that two coins (no. **H32**, **33**) were struck in regal year 2.

⁸⁷ Schindel 2004, I, p. 464.

⁸⁸ Göbl 1971, Prägetabelle 12.

Regrettably, out of the 49 regular issues, on only 17 specimens, i.e. one third, can the mint signature be read with any degree of certainty. Plotting this data produces the following picture (*tab. 5*):

Tab. 5. Mint distribution of regular issues in the Tel Aviv Hoard

<i>Signature</i>	<i>Province</i>	<i>Region</i>	<i>Number</i>
AS	Asuristan	Asuristan	2
ART	Ardashir-kwarrah	Fars	1
AYL (?)	?	?	1
BBA	For Khusro II: ?	?	8
GD (?)	Jay	Media	1
HWC	Khuzistan	Khuzistan	1
NAL/WAL	?	?	2
ŠY	Shiraz	Fars	1

When interpreting this evidence, one first has to look at the other Sasanian copper hoards found so far (*tab. 6*).

Tab. 6. Sasanian copper hoards (except the Tel Aviv hoard)

<i>No.</i>	<i>Ruler(s)</i>	<i>Number of coins</i>	<i>Mint(s)</i> ⁸⁹	<i>Reference</i>
1	Shapur III	ca. 30 AE	Marw ⁹⁰	Loginov/Nikitin 1993/2, p. 292
2	Yazdgerd II	ca. 20 AE	Marw ⁹¹	Loginov/Nikitin 1993/2, p. 292
3	Peroz	32 AE	AMW ⁹²	Loginov/Nikitin 1993/2, p. 292f
3	Kawad I / 2 nd reign	1 Δ, 4 AE	ML, MLW	Loginov/Nikitin 1993/2, p. 293
4	Kawad I / 2 nd reign, Khusro I	3, 14 AE	ML	Loginov/Nikitin 1993/2, p. 294
5	Khusro I	17 AE	ML	Loginov/Nikitin 1993/2, p. 294
6	Khusro II	ca. 75 AE	ART (1), AT (3), AW (9), BBA (4), NY (1), ST (3), WYHC (1)	Unvala 1938, p. 24

As is evident, the number of Sasanian copper hoards is extremely small; additionally, most of the hoards known so far come from the Central Asian oasis Marw and consist of local coins from that mint. An exception is the Susa hoard, dating, like the Tel Aviv hoard, to the reign of Khusro II. With 75 specimens, it is considerably smaller in total number, but comparable when it comes to the regular issues.⁹³ However, the coins are stuck together, so that only part of the entire material is identifiable. Since Unvala does not provide any pictures at all, it is impossible to check his attributions. Despite these uncertainties, the data is relevant for the interpretation of the Tel Aviv hoard since very similar distribution patterns emerge. According to Unvala, the

⁸⁹ Only legible mintmarks are listed.

⁹⁰ No mint mark, but of local Marw type.

⁹¹ No mint mark, but of local Marw type.

⁹² Believed by Loginov/Nikitin 1993/2, p. 274 to refer to Amul in Tabaristan, while I have preferred to equate the mint with Amul in Khurasan, Schindel 2004, I, p. 149.

⁹³ Unvala 1938, p. 23f.

earliest coin in the Susa hoard dates to regal year 2 of Khusro II, the latest one to regal year 36. Seven different mints are attested, and here the lack of photographs is especially regrettable since some of Unvala's readings, which concern problematic cases such as the distinction between AT and ST or between AY and AW, provoke a certain distrust. The fact that BBA, the most common mint among the regular Khusro II issues in the Tel Aviv hoard, is also represented by four specimens in the Susa hoard permits no qualms concerning Unvala's readings since the signature of BBA is quite distinct – even from the graphically nearest signature, BYŠ – so there is not too much danger of a misreading here. If we are to believe Unvala, the Susa hoard contains no coins at all from AY which represents the mint of Eran-khwarrah-Shapur near Susa.

The few finds from Marw would suggest that copper coinage was basically a local phenomenon since all hoards from that Central Asian city consist of coins from the same mint (Marw and, in one case, AMW). Rather to the contrary, both the Tel Aviv and Susa hoards provide a totally different picture of the circulation patterns of late Sasanian copper coinage. Whether the main reason for these differences is the provenance or the difference in chronological setting – Susa and Tel Aviv are of considerably later dates – remains unclear. In the case of the Tel Aviv hoard, the few regular coppers with legible mint signatures represent mints in no less than five different regions of the Sasanian Empire: Asuristan, Khuzistan, Media, Fars and perhaps an undetermined eastern, i.e. Khurasani, location in the case of BBA. Such patterns are quite similar to those of late Sasanian drachm hoards, which normally feature coins from mints throughout the entire Sasanian realm – e.g. the Jerusalem hoard discussed above. There are a few exceptional cases in which one mint is much more strongly represented, the most notable being the Bishapur hoard published by Szaivert consisting of 174 drachms of Khusro II, out of which all but one come from the mint BYŠ⁹⁴. Much more common, however, is the opposite phenomenon, that a plethora of different mints in different regions is attested. The same is also true of most drachms found as stray finds in archaeological excavations.⁹⁵ One cannot assume on the basis of the Tel Aviv hoard that the distribution patterns of Sasanian copper coins were always the same as those of the drachms, yet the evidence of the Susa hoard shows very similar patterns. It is rather the Marw hoards which seem to be exceptional in their composition. Thus, it seems that Sasanian copper coins enjoyed a circulation throughout the empire, and certainly were not merely local coinage which never reached beyond the vicinity of their minting place.

The mint signature BBA (𐭠𐭣𐭠) – with eight specimens the most common among the regular issues in the Tel Aviv hoard – requires some comment.⁹⁶ Nowadays, the reading can be regarded as safely established, and the older, erroneous variant “BLH” can be disregarded.⁹⁷ BBA is first attested under Wahram IV and was active without interruption until the death of Peroz in 484. BBA represents an Aramaic ideogram which means *dar*, “the court”, and certainly referred to the Sasanian court itself. Since stylistically, the early BBA coins of Wahram IV share the same peculiarities as AS, which refers to Ctesiphon, there can be no doubt that BBA was normally stationed at the Sasanian capital. However, when the King of Kings left Ctesiphon the mint travelled with him, as is proved by stylistic links between BBA issues and Khuzistan coins under Wahram IV.⁹⁸ The fact that BBA is no longer attested after Peroz can be explained by the assumption that the mint personnel and its equipment fell prey to the Hephthalites, who defeated and killed Peroz in 484.⁹⁹ Apparently due to the unfortunate experience of Peroz, the use

⁹⁴ Szaivert 1978/79, p. 35.

⁹⁵ For a short overview Schindel 2004, I, p. 193.

⁹⁶ E.g. Tyler-Smith 1986; Gurnet 1991.

⁹⁷ Schindel 2004, I, p. 132.

⁹⁸ Schindel 2004, I, p. 154f.

⁹⁹ On this in detail Schindel 2004, I, p. 154f.

of an itinerant mint was discontinued thereafter. BBA resumed operation only in regal year 11 of Khusro II (cf. **127**, **128** from regal year 12 and 33 respectively). Under this king, style analysis does not work the same way as it did in the late fourth/early fifth centuries, because the dies now were made centrally for the entire empire, obviating the possibility of local differences. The main clues for localising BBA in its second period of use are provided by the Arab-Sasanian issues. Apart from ‘Ubayd Allah b. Ziyad,¹⁰⁰ the three main governors known to have struck coins at BBA – Salm b. Ziyad (no. **171**), ‘Abd Allah b. Khazim and Umaiya b. ‘Abd Allah¹⁰¹ – were appointed as governors of Khurasan, which clearly means that by this time, BBA must have been located in that region.¹⁰² It is uncertain, however, whether it was already located in the East under Khusro II.¹⁰³ It is equally possible that BBA was once again an itinerant mint which came to the East when the last Sasanian king, Yazdgerd III, fled there.¹⁰⁴ Tyler-Smith rightly remarks that it is very strange that, if BBA really was the court mint, it is attested only in regal year 19 and 20 of Yazdgerd III; she proposes that BBA coins of Yazdgerd III might actually have been struck under Arab domination.¹⁰⁵ If this theory is right, we face three different periods of use of the mint signature BBA, but we will focus on this mint signature under Khusro II in studying the Tel Aviv hoard. The unusual style of the BBA coins of that king¹⁰⁶ might suggest a localisation in the East as early as this period, since deviant style is typical of Khurasan throughout the fifth century,¹⁰⁷ and of the eastern province Sakastan as well, in the late Sasanian period.¹⁰⁸ However, it is impossible to say for sure, in the case of the BBA issues of the 20’s of Khusro II, whether the mint was then located in Khurasan, or was active as an itinerant mint. This means that the most commonly attested mint signature fails to give us the slightest idea where the Tel Aviv hoard might have been formed.

Having made these observations concerning the regular coins, let us consider the much more numerous unofficial copper coins in the Tel Aviv hoard. I have tried on various occasions to do a die analysis, but the results were frustrating. At first, I assumed that only a very small number of dies – less than a dozen or so – were used for striking all the imitations. I discovered, however, that the number is higher, even if I cannot provide even an estimation how many there were, let alone an accurate number. Because of the problems mentioned above, there was not even the slightest chance for a reliable die analysis for the majority of the coins, i.e. more than 90%, primarily due to bad strike and corrosion. But even with the well-preserved and well-struck coins, missing parts of the die impression, as well as the close similarity of some dies to others, made a clear die analysis impossible. For these reasons, I have eschewed such a study and list here only a very small sample of those coins for which a safe attribution by die is possible – an exceedingly tiny fraction of the entire material, as is shown in *tab. 7*. The numbering is random.

¹⁰⁰ For whom Album/Goodwin 2002, p. 54 suggest the possibility that his BBA issues were struck “in or near southern Iraq”.

¹⁰¹ Gaube 1973, “Prägetabelle”; Album/Goodwin 2002, p. 53f.

¹⁰² Walker 1941, p. CXIIIf (erroneously reading the signature as BLH for Balkh); Gaube 1973, p. 88f; Album/Goodwin 2002, p. 53.

¹⁰³ Tyler-Smith 2000, p. 147

¹⁰⁴ Tyler-Smith 2000, p. 147.

¹⁰⁵ Tyler-Smith 2000, p. 147.

¹⁰⁶ Tyler-Smith 2000, p. 147.

¹⁰⁷ Schindel 2004, I, p. 399.

¹⁰⁸ Above 1.5.

Tab. 7. Die links in the Tel Aviv Hoard

Die A	Die B	Die C	Die D
H781, H1269	H251, H278, H366, H508, H696, H924, H968, H1008	H569, H810, H1094	H189, H618, H799

The largest number of coins from a single die was eight (die B). Apart from the dies attested by more than one specimen, listed in *tab. 7*, there are about a dozen identifiably different dies for which I observed only a single specimen each. Considering that these remarks apply to only about two dozen coins, approximately 1.5% of all the irregular issues, the impossibility of gaining in this manner any deeper understanding of the unofficial coins in the hoard becomes clear.

Die analysis having failed, the next way of grouping the imitative coins would be to distinguish different groups by their varying degree of stylistic degeneration. This too did not work. On one hand, the high number of coins not safely attributable comes in; on the other, while there are certainly coins of markedly superior and inferior style, with the vast majority, the attribution by quality of the die is a highly subjective matter. This is especially true since various elements can be of different quality: There are coins with fairly well-engraved attendants while the fire altar is strongly degenerated (for example, **H857**); there are also specimens with a detailed fire altar while the attendants are shown merely as two strokes (**H152**). Apart from this, obverses of fairly good quality can be found coupled with totally barbarized reverses (**H168**, **H783**) and vice versa (**H65** and **H667** featuring the best quality on the reverse within the irregular issues), even if in the majority, both coin sides show approximately the same quality of craftsmanship. Since I believe that any grouping by these criteria would add an element of uncertainty, rather than help, to the understanding of the underlying patterns of minting, I decided to arrange the material only by their falling weights. This is certainly a rather unsophisticated method, but at least it involves a criterion which can be established beyond doubt.

This might be the appropriate place to look at some of the coins in more detail, and cover shortly the several variants of style and accuracy of the rendering. The following remarks are not intended to cover all the coins on which major traces of the die impression are visible, nor, for the reasons just stated, to establish anything like a system of the irregular issues. The main aim is to verbalise some of my observations on the unofficial part of the Tel Aviv hoard, thus giving the reader some basic ideas without trying to offer an exhaustive treatment. In terms of quality of die-cutting, the best obverse is attested on no. **H168**. It could even pass as regular, were it not for the clearly debased reverse. This then shows that not necessarily do good obverses have to be linked with well-done reverses. Now, what is meant by “good”? First and foremost, the legends demonstrate unusual care; the lettering is very accurate, and by simply looking at the forms of the respective letters, no marked difference with regular issues can be made out, even if only the royal name in front of the bust, but not the acclamation behind it is visible. Then there are the dimensions and details of the face which are also well in accord with official issues. The same applies to the treatment of the wings surmounting the crown, which are rendered in a very detailed way, untypical of the remainder of obverse dies in the Tel Aviv hoard. Of equally high quality is the obverse die of **H783**. The next obverse die – attested by two die-linked specimens, **H781** and **H1269** – is also of higher quality than the other irregular coins, but in this case, there is no question whether it could be regular or not as can be seen from the outlines of the face and the lack of the legend to the left of the head. The vast majority of obverses, however, feature grossly debased depictions of the royal busts. The legends mostly disappear; the individual elements of the depiction are much reduced. A good example is the treatment of the wings: In contrast to the high quality dies discussed above, on the majority of coins they consist of a pair of broad, more or less semicircular strokes. Nothing of the original rendering

has remained; no details at all can be distinguished. The facial outlines often are reduced to a vertical stroke and an oblique one representing the nose. On the three coins featuring die D (**H189**, **H618**, **H799**), the bust seems to face left rather than right, even if an absolutely certain decision whether the crooked depiction to the left is intended to portray the ear or the nose is difficult. This single die is the only one for which the reversing the direction of the image, common for dies produced by unskilled craftsmen, can be observed. The astral symbols on both sides are only rarely visible (**H706**, **H711**). It is noteworthy that on some specimens – very clearly on **H1166** – the star in the crown is actually rendered as a cross but, given the basically degenerate form of the astral symbols, certainly without a deeper, hidden Christian message. A crescent at 9h on the obverse is visible on **H706**. Once again, this shows that the presence or absence of individual typological elements is no indication of the overall quality of a die, since this coin otherwise bears a heavily barbarized image; the wings, for example, are rendered merely as a thick semicircle. The most bizarre obverse can be found on **H1205**: Only a large crescent with an “X” inscribed in it can be seen inside the rims.

As for the reverses, once again there are some examples of quite fine craftsmanship. On these, the attendants are carefully engraved, with all the major details being recognisable (**H65**, **406**). The major differences compared with regular issues are the slim figures of the attendants and the unusual rendering of the altar ribbons. Of lower, but still remarkable quality are coins such as **H202**, **H667** and **H870** which still show realistic outlines, as well as very clearly the crescent above the attendants’ foreheads. On the vast majority of issues, however, the fire altar is much stylised. Mostly, it is shown as a long vertical stroke with horizontal line at the bottom and a triangle representing the flames on the top. Alternatively, it consists of two horizontal lines with an upturned semicircle in the middle, reminiscent of the altar ribbons, and the triangular flames above. On the crude end, we have reverses on which only three parallel strokes inside the rims are visible (**H696**). On three reverses – **H935**, **H1243**, and **H1372** – only a single rim is depicted on the reverse; still, all these coins are clearly irregular issues modelled after Khusro II and were not struck prior to the introduction of multiple reverse rims in 590, a canonical feature thereafter. An especially well-preserved specimen is **H201**, which shows very stylized attendants but, strangely enough, something like a base line below the fire altar. The specimens stylistically most remote from the originals cannot be labelled other than bizarre. On **H864** and **H1233**, which might share the same die, what appears to be the reverse has only a very faint resemblance to the original design of the fire altar. There are some specimens, such as **H1262**, which feature very large altar ribbons depicted by straight strokes which lead the way to this stage of degeneration. On **H1181** and **H1253**, only very crude traces of the rims can be made out, the images inside these out-of-round circles being totally missing. Finally, there are few coins such as **H1360** which exhibit merely some meaningless strokes on one side, the other being totally obscured by blind spots. Altogether, this group of greatest typological degeneration is not very numerous compared with those coins which still bear recognizable renderings of the original type. Seven coins without doubt represent hybrid combinations of two reverse dies (**H121**, **H614**, **H705**, **H785**, **H835**, **H837**, **H1469**). No combinations of two obverses are attested. **H705** is especially noteworthy since the two reverse dies are of markedly different quality, the depiction of the fire altar being much more refined on one side.

Let us return now to the overall interpretation of the Tel Aviv hoard. The examples dealt with above show that the observation of the various “stages” of stylistic quality do not enable us to distinguish distinct production units. Furthermore, the consistent peculiarities of both flan production as well as striking technique show remarkable continuity throughout the entire imitative issue. This implies that the production was not separated into single periods. The occurrence of single coins struck from dies of different quality could be used as an argument that the entire material was produced more or less at the same time. Still, it seems plausible that the well-en-

graved dies are earlier than the worse ones, and that the grotesque specimens of the worst quality are the latest in the series, even if there is no reliable evidence to prove this. Considering the lack of specimens of these imitations outside the Tel Aviv hoard, one could guess that the dies did not last very long, and that – even taking into consideration the meagre material basis of Sasanian copper coins in general – the issue was not of an overwhelmingly large size. The numerous die cracks show that the flans were cold-struck. Their unusual thinness also most probably added to the short life span of the dies, since it meant that with hardly any cushioning metal in between them, most of the energy of the strike was absorbed by the dies themselves. One could guess that the die cutters, seeing their product break down after a short while, no longer considered the effort of cutting a faithful rendering of the images worthwhile.

Maybe the most interesting fact is the mere existence of these imitative coins. Even if it is impossible to deduce, even approximately, the die population represented by the hoard, and even if we have no idea of total number of coins represented, these imitations represent a quite substantial issue. It is nowadays a well-established fact that the Sasanian monetary system was not monometallic, based on the drachm and nothing else, but in everyday usage bimetallic.¹⁰⁹ Here, we have a unique insight into the importance of copper coinage in the Sasanian Empire: It was so much needed that, despite the production costs and the low value of the individual irregular coins, the producers of these coins spent the effort to strike them at all. Thus, there must have been a strong need for such small coins.

Even if at first glance it might seem hopeless, let us attempt to figure out which coins served as models for the irregular issues. Considering the overall typology and the name *hwslwb*, legible on the best obverse dies, it was doubtless the coins of Khusro II. One can get even nearer to the source of inspiration: The best reverse dies display a pseudo-mintmark which consists of two Pehlevi letters which resemble two “B”s (very clearly visible on **H1040**, among others), and thus seem to aim at BBA. Since the undoubtedly official BBA coins – certainly not BYŠ! – are most common among the regular Khusro II coppers, this does not seem to be the result of mere chance. It appears most likely that BBA coins, such as those in the hoard, served as models for the imitations. The same is true of the dates: On the best specimens they clearly resemble the numeral *wyst* (20) (**H553**); on some others, this date can be made out faintly (e.g. **H495**, **870**). Also, these dies clearly show the crown form of reverse type SN 3 of Khusro II, struck from regal year 11 to 39, featuring a crescent above the head (e.g. **H279**).¹¹⁰ Thus, judging from the best barbarous reverse dies, it seems quite probable that BBA coppers from the 20’s of Khusro’s reign served as the model.

It goes without saying that dating these irregular issues is very difficult. In theory, they might have been struck decades after their prototypes. For several reasons, this does not appear to be the case. First, there is the external evidence of the regular coins. Even if post-Khusro II copper coins are fairly rare, in such a substantial hoard one would expect them to turn up. The same applies to Khusro II coppers from the 30’s of his reign, since apart from the legible dates, what can be ascertained from the style makes it almost certain that no coins from the last decade of Khusro’s rule are included. Moreover, as has been shown above, the unofficial coins are modelled after the most common regular specimens, namely BBA coins from regal year 20. There is no reason to believe that these do not represent the most recent prototypes available to the unofficial mint responsible for striking the imitations. The combination of obverse dies of reasonably good style with totally degenerated reverses (and vice versa) proves that the stylistic differences between individual dies do not mean that the irregular coins were struck over a long period of time. To the contrary, it would appear they were issued during a fairly short time span. Given these

¹⁰⁹ Schindel 2004, I, p. 191–193.

¹¹⁰ Göbl 1971, Prägetabelle 12.

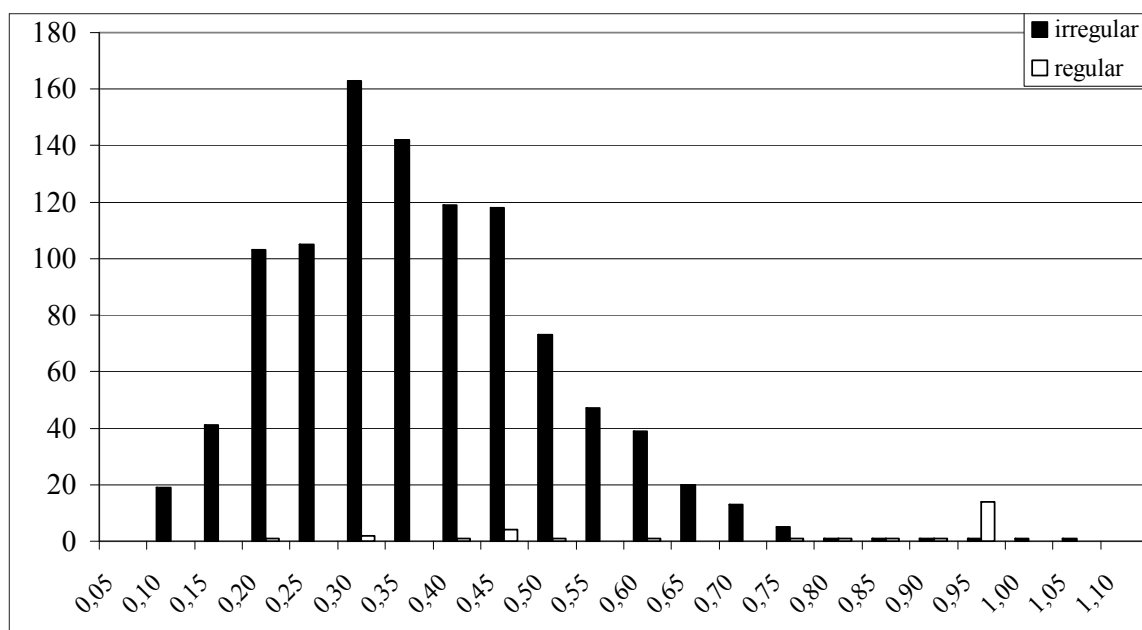
hypotheses, one would arrive at beginning date in the mid-20's of Khusro II's reign, with production lasting only a short while, without the possibility of defining "short" more precisely. Given the evidence of the regular coins, one thus concludes that the irregular coins were struck almost contemporaneously with the latest official coins, that is to say, in the 20's of the second reign of Khusro II. Since the hoard was formed directly at the source, the irregular mint itself, there is no indication that the coins circulated for any appreciable length of time, even if the possibility cannot be ruled out that they were in a sealed money bag, in use for some period of time without any new coins being added. As far as the date of composition – but not necessarily the date of the burial – is concerned, I think it highly probable that it falls in the 20's of Khusro II, thus around 615 CE.

What I have catalogued as "un-struck flans" in *tab. 4* are thin, roundish pieces of metal which bear no traces of striking at all. As one can see e.g. on **H1519**, the surface is even, and in its main parts not affected by corrosion. Given the broad outlines of the rims, one would expect to see at least some remains of the dotted borders on either side of the coin. Certainly, there are some specimens on which only minor traces of the die impression remain (e.g. no. **H124**), but the greater number of coins with clear surfaces not affected by corrosion and without any traces of striking cannot be the result of mere chance. There are about 40 such specimens with plain surfaces which show no traces of die impression at all. In this number, I have included only well-identifiable specimens, showing at worst only minor corrosion, for which it was possible to gain absolute certainty. What is clear both from the form of the edges, which is the same as that of struck coins, as well as the appearance of the surface (e.g. **H1519**) is that all these flans were first hammered to a very thin form before the actual striking with dies took place.

For the interpretation of the Tel Aviv hoard, these un-struck flans are important. The high number of irregular copper coins compared with regular specimens, and the frequent occurrence of die links among the quite small fraction of coins suitable for die analysis, already hint at the possibility of the Tel Aviv hoard being formed directly at the unofficial mint. This idea is strongly corroborated by the numerous un-struck flans. If the hoard consisted of coins from the local monetary circulation, one has to ask how these blank objects found their way into circulation at all, and how they could have managed to last. If most coins were assembled directly in the "mint", then it is easy to imagine – considering the low quality of striking in every other respect – that some flans were not struck at all, but still found their way into the money bags with the struck coins. Compared with the clearly identifiable struck coins, the proportion of safely identified unstruck flans is about 3%. Even considering the uncertainty which the many corroded coins bring with them, the ratio between real coins and the semi-products which slipped into the bags is not totally out of proportion.

Listed under "Unidentifiable" in *tab. 4* are coins with only minor remains of the die image, not permitting any reasonably reliable attribution to the other categories. Due to the shape of the flans, it seems likely that many of these too are irregular issues of the Khusro II type, but since some of the regular issues, due to wear and fragmentation, show equally irregular edges, no attribution by technical criteria is possible.

Let us turn now to the weights of the coins in the Tel Aviv hoard. For statistical analysis, only the regular Khusro II coins and the unofficial strikes can be used. I have not included in *tab. 8* those specimens which are fragmented, have broken edges or show heavy corrosion. The total number of regular coins which could be used is thus only 14, clearly too few for a sound analysis, yet I have included them, if only to give the reader an idea about the basic trends.

Tab. 8. *Weight statistic of the copper coins of Khusro II*

The small number of official Khusro II coppers makes the reconstruction of a clear intended weight next to impossible. What is certain, however, is the fact that the peak of the irregular coins is much lower than that of the regular ones. This peak is in the 0.30–0.35g range, while the most common weight of the regular issues is more than double that amount. Therefore, it seems safe to assume that the unofficial coins were struck at an intended weight apparently only half that of the regular coins. How to interpret this? There are three possible explanations. The first would be to assume that these coins were struck with a fraudulent intention, thus to make a profit by the use of light weights. However, taking into account the totally deviant style, it seems impossible to imagine how these coins might have tricked even the most casual user in monetary transactions. Even so, parallels exist, as in third century Rome where very light locally cast copper coins circulated alongside official ones. In this case, the evidence clearly shows that this cannot to be seen as a case of forgery, but rather as the production of additional small change in times when the demands of local circulation outstripped the availability of official coin.¹¹¹

The second explanation is to assume that these unofficial coppers served as token currency, and that they had the same value as the official coins, despite the fact that they weighed only half of the regular specimens. This too fails to convince. On the one hand, with the single exception of the small copper coinage of Zeno, and under Anastasius until 512,¹¹² base metal coinage in antiquity was a bullion coinage, which means that the value of the coin in circulation was determined by its metal weight, and the exchange rate between the metal – in this case, copper – and precious metals – in Iran, silver. Furthermore, according to Gresham's Law, the unofficial coppers would drive the heavier official coins out of circulation, since the regular coins had the same nominal value, but double the weight of the irregular issues. The Tel Aviv hoard proves that they circulated alongside each other, even if, due to the special nature of the hoard and the way it was collected, the unofficial coins are much more numerous.

¹¹¹ Pfisterer 2007.

¹¹² Hahn/Metlich 2000, p. 13–15.

There remains a third possibility: The coins were struck at a lower weight for whatever reason, but in monetary circulation were valued according to weight when larger numbers of coins were involved. Thus, the individual coin weights were of no interest since, as long as one was sure that the weight of the bag was constituted by coin and not by un-struck bullion, only the total weight mattered. Whether 1000 or 2000 coins were required to form this weight cannot have been of any importance as long as all coins were regarded as legal tender. The presence of older official coins shows that no policy of total withdrawal of older coins (practically impossible) was in effect, and the mere fact of the imitations' existence shows that they too were intended to serve as money. For small payments, the exchange rate might have been something like one to two between regular and irregular coins. In this latter case, the individual coins certainly were not weighed. Rather, one could imagine that due to their low weight, and perhaps their overall appearance as well, a seller would have demanded more of these irregular coins until he was convinced that he got his full price reckoned in official coins. Needless to say, no "numismatic" analysis of the coins in circulation was going on then, but it was rather a question of how the users felt about these ugly, light-weight coins. I believe that this reckoning, which in both cases leads to an approximately 2:1 weight ratio between unofficial and official coins, is the most plausible explanation.

Still, the mere existence of these irregular coins shows that they were intended for circulation as single coins. Had only the overall metal value mattered, a single piece of copper weighing 780g could have served equally as means of payment, saving the issuers of the irregular coins the expense of producing flans and dies.

As long as no sound material basis is available, our understanding of the metrological basis of Sasanian copper coinage remains obscure. As previously mentioned, older coins are also part of the Tel Aviv hoard – the Kawad I coins in this hoard was at least 80 years old when the hoard was compiled. One can see that there were significant differences in the weight standards: The Marw Kawad I coppers are considerably heavier than those of his successor Khusro I.¹¹³ In daily practice, the Tel Aviv hoard shows that – even if in their worn and often fragmentary condition, the different weight standards cannot have been all too easy to understand for the users – various coins from various reigns circulated alongside each other.

Finally, let us attempt to reckon the value of the Tel Aviv hoard in precious metal. Göbl has put forward the idea that the copper-to-silver ratio in Sasanian Iran was about 15:1 to 18:1.¹¹⁴ Were one to accept this, he would arrive at a total value for the Tel Aviv hoard of approximately 10–13 drachms. This reconstruction by Göbl results in a copper-to-silver ratio which is higher than the average ratios known from antiquity by a factor of ten. Therefore, it seems safe to rule it out as incorrect.¹¹⁵ When looking for an alternative solution, due to the lack of reliable sources from Sasanian Iran itself, we are forced to turn to contemporary Byzantium. Under the emperor Heraclius (610–641), the relationship between gold and copper was in the range between 25 and 30 Roman pounds copper at about 325g for one solidus of 4.50g pure gold.¹¹⁶ To make use of this, we have to establish an exchange rate between solidus and drachm, the main denomination in Sasanian Iran. Something in the range from 1:12 to 1:15 seems to be well in accord with the basic value of gold and silver throughout antiquity.¹¹⁷ The Tel Aviv hoard weighs altogether about 780g, that is, roughly 2.5 Roman pounds of copper. Assuming, as discussed above, that the value of copper coins is represented by their weight – that they are bullion, and not token

¹¹³ Schindel 2004, I, p. 117f.

¹¹⁴ Göbl 1959, p. 390.

¹¹⁵ Album/Goodwin 2002, p. 49; Schindel 2004, I, p. 116.

¹¹⁶ Hahn 1981, p. 16.

¹¹⁷ Hahn 1989, p. 17f.

currency – this would correspond roughly $\frac{1}{10}$ of a solidus, or, to express it in drachms, which is much more appropriate in an Iranian context, about $1\frac{1}{2}$ drachm. Another approach would be to reckon the metal weight of the copper directly in silver; this way, it would equal about 6g silver, once again one drachm and a half. Let us also consider what value an equal amount of copper had in Byzantium when represented by folles rather than Sasanian small copper: In the period in which the Tel Aviv hoard most likely was buried, i.e. around 615, the follis was struck at a weight standard of $\frac{1}{24}$ of the Roman pound, or about 13.60g.¹¹⁸ Without taking into account that the individual folles are usually underweight, the metal weight of the Tel Aviv hoard would represent only 60 Byzantine folles of the first period of Heraclius (610–616). Since 600 such folles equal one solidus, once again we arrive at a value for the Tel Aviv hoard of a tenth of a solidus. Thus the Tel Aviv hoard represents a rather low value expressed in precious-metal coinage, despite the vast number of coins it contains. Notwithstanding the fact that this way of reckoning is affected by many uncertainties, I believe that as long as the basic assumption that these late Sasanian copper coins are bullion coinage is accepted, an approximate estimation of the value of the Tel Aviv hoard which is more than mere guesswork is possible.

¹¹⁸ Hahn 1981, p. 16.

