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A Hoard of *Antoniniani* from Qula*

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A hoard of silver billon was discovered in 1996 during a salvage excavation at the site of the former Arab village of Quleh (قولة), situated along the boundary between the coastal plain and the Judean foothills, about 5 km northeast of the city of Lod (map ref. 19658–61/66030–60).[1] The hoard dates to the second half of the third century CE and consists of 2109 *antoniniani* (Fig. 1), radiate-busted coins containing less than 50% silver that were issued by the Roman emperors in the third century CE (the coin catalogue is appended to the online version of the article).

The hoard was found in a room (Area E, L25139; Fig. 2) in the northern part of a structure identified as a farmhouse and dated to the Roman, Byzantine and Umayyad periods (third–eighth centuries CE). The coins lay dispersed on both sides of a wall (W2522) that bisected the room, presumably built long after the hoard was deposited. The cache came from a mixed fill containing a small quantity of Late Roman Ware and Cypriot Red Slip Ware that date to the fifth–sixth centuries CE. No remains of a receptacle were found (Miriam Avissar and Ianir Milevski, pers. comm.).

The coins were retrieved over a two-month period: The first group, comprising 51 coins, was unearthed first; the bulk of the hoard, 2014 coins, was uncovered about a month and a half later; and the final 44 coins were found the next day. One intrusive find, a fourteenth-century Mamlūk *fals*, was found with the hoard.

* In memory of Miriam Avissar.

Fig. 1. Coins from the hoard.

Fig. 2. Room 25139, where the hoard was discovered (marked by an arrow).

DATE OF DEPOSIT

The exact reasons for the concealment of the hoard remain a matter for conjecture. However, two aspects of the hoard's archaeological context suggest that the coins were forgotten by the time that Room 25139 was altered, sometime after the sixth century CE (Miriam Avissar and Ianir Milevski, pers. comm,). The first aspect is that the mixed fill in which the coins were found contained fifth–sixth century CE ceramics and seems to have been formed when the inner wall was added. The second aspect is that although most large hoards of similar weight (7.73 kg) were found buried in receptacles,[2] no remains of a receptacle were found for this hoard. It thus seems probable that the pot or cloth containing the hoard disintegrated before or during the repair of the room in the sixth century CE. This explains why the coins were found dispersed below the level of the later wall, on both its sides.

When was the hoard deposited? The hoard's composition suggests that it was deposited in the early 290s CE, before the new currencies of Diocletian's reform (293/4–296 CE) were introduced, for it contained none of the new coin types. This seems to have taken place not long after the construction of the building. This assumption is borne out by the *in situ* coins and pottery found in the same archaeological context as that of the hoard. These coins include a silver *tetradrachm* of Philip I, dated 248/9 CE, found in an adjoining locus to the south (L25140) and three *antoniniani* found in the southern corner (L25072) of the room in which the hoard was discovered. The date of the *tetradrachm* is congruent with that of the earliest coin in the hoard, an *antoninianus* of Philip I, dated 247 CE. Although this particular *tetradrachm* did not belong to the hoard, similar heavy silver coins are often found in contemporary hoards alongside *antoniniani* (Table 1). The three *antoniniani* were found together, directly above the bedrock and a floor. The latest of these three coins dates to 293 CE, during Diocletian's reign, as does the latest coin in the hoard (295/6 CE). The pottery found in an adjoining foundation trench (L25259) of one of the walls of the structure is dated to

Table 1. *Antoniniani* Hoards from the Roman East

Hoards	Archaeological Context	*Antoniniani* and Other Coins (N)	Earliest Date (CE)	Latest Date (CE)
Dura Europos No. 1 (Bellinger 1949:165–166)	Excavation: in jar under embankment, beside gate	281 and 507 *tetradrachms*	211	256
Dura-Europos No. 10 (Bellinger 1949:175–177)	Excavation: under embankment, beside main gate	150 and 393 *tetradrachms*	238	256
Dura-Europos No. 17 (Bellinger 1949:181)	Excavation: 'Pocket money' in burial of a soldier killed in the last defense of the town	45	251	260
Dura-Europos "Corpses" (Bellinger 1949:187)	Excavation: 'Pocket money' beside burial remains of soldiers killed in the defense of the town and abandoned in a mine near defense tower	82	251	260
Kafr Nebudi, near Ḥama (ancient Epiphania (Carson 1967–1968)	Stray find: in the village of Kafr Nebudi	600	244–249	260
Susita 1951 (Unpublished)	Excavation	7	260/261	261
Tel Batnân (Cumont 1917:21–22)	Stray find	c. 3000	251	268
Capernaum (Spijkerman 1958–1959)	Excavation: in jar under a millstone, adhering together; west of an area of shops and agricultural installations, adjacent to the synagogue's western wall	1545 and 270 *tetradrachms*	215	269
Sebastia (Kadman 1967)	Stray find	50	253	270
Bet She'an (Bland 1981)	Stray find: purchased in Bet She'an, 1871	22	253	270
Jenin (CH 5:1979)	Stray find	219	253	270s
Jerusalem, Mount of Olives (Sweeney and Visona 1991)	Stray find: purchased in Jerusalem, 1886–1891	14	260	Early 270s
Ḥama (ancient Epiphania) (Seyrig 1966)	Stray find: in the vicinity of Ḥama	312	271	272
Ḥorbat Qasṭra 1996 (Ancient Castra) (H. Sokolov, pers. comm.[i])	Excavation: a funerary hoard	19	253	272
Syria 3 (Bastien and Huvelin 1969)	Stray find	370	254	283
Nahr Ibrahim, near Jebail (ancient Byblos; Pink 1963b)	Stray find: in the village of Nahr Ibrahim	5200	266/7	284
Syria A (Brenot and Pflaum 1965)	Stray find: purchased; source unknown	136	268/9	284
Syria B (Brenot and Pflaum 1965)	Stray find: in the area of Antioch. The hoard showed little sign of circulation	701(?)	263	285/6
Jafiya, Galilee (de Saulcy 1868–1870; Kadman 1967)	Stray find: small pot hoard	159	211	286–292
Orient (de Roquefeuil 1970)	Stray find	480	256	285/93
Tiberias (Hamburger 1964)	Excavation: in a room in a bath complex dated to 3rd c.	99	268	293
Syria 4 (Pflaum 1980)	Stray find	61	251	293

[i] See n. 20.

the third–fourth centuries CE. It can thus be concluded that the building, and probably the whole farmstead, was first built in the second half of the third century CE.

COMPOSITION

The Qula hoard consists exclusively of radiate *antoniniani* and *aurelianiani*,[3] almost all of them minted in the Roman East. A comparison with similar hoards from Roman Syria, including those deposited after Diocletian's reform (293/4–296 CE), indicates that the presence or absence of denominations other than *antoniniani* (i.e., *tetradrachms, denarii*, *folles*) is not related to the hoard's size, but rather to its burial date (see Table 1). Mixed hoards of *antoniniani* and silver *tetradrachms* are characteristic of earlier hoards, deposited up to the 260s CE in the East.[4] Thereafter, from Claudius Gothicus's reign (268–270 CE) onward, *tetradrachms* or other denominations are practically nonexistent in both small and large hoards of *antoniniani*, with the exception of the Jafiya pot hoard from the Galilee (de Saulcy 1868). Also noteworthy is the complete absence of Diocletian's post-reform currencies, both from the Qula hoard and from other contemporary hoards deposited in the East during the 290s.

The same phenomenon is seen in hoards from Western Europe that were deposited during the same period (Besley and Bland 1983:15). As Table 1 illustrates, during Diocletian's large-scale reform (293/4–296 CE), the *nummus*, a silver-wash bronze coin and a radiate-copper fraction, completely replaced the radiate *antoniniani*. This constituted a genuine watershed, as none of the Eastern hoards produced during the Tetrarchy contain *antoniniani* (Bastien 1967; King and Spaer 1977); these completely disappeared from circulation within the first decade after the reform.

HOARD SIZE

The Qula hoard is one of the largest excavated *antoniniani* hoards from the Roman East. Most (90%) of the 21 registered and published hoards from this region have up to 800 coins. In fact, two-thirds of these hoards contain 350 coins or less, which may indicate a proclivity for smaller hoards of *antoniniani* in the Roman East. Only two hoards that compare in size with the Qula hoard have been found in the East: the Capernaum hoard, discovered sometime between 1905 and 1921 on the northern shore of the Sea of Galilee (Spijkerman 1958–1959), which comprises 1545 *antoniniani* mixed with 393 *tetradrachms*; and the Nahr Ibrahim hoard, found in 1938 near Byblos, Lebanon, which consists of 5200 *antoniniani* (Pink 1963a:16–18). Similarly, hoards found in neighboring Asia Minor usually contain no more than 800 coins (i.e., Troy [Bellinger 1961:201–211], Smyrna [Eddy 1967], Ankara [Kienast 1962], Western Turkey A and B [Elks 1975] and Ephesus [Voetter 1913]). Two exceptions are the Antioch-in-Pisidia hoard, with 1655 *antoniniani* (Cesano 1921), and the Canakkale hoard, which contained 3029 *antoniniani* (Pflaum and Bastien 1969). Only one very large deposit has been reported from the East: a hoard of 16,000 *antoniniani*, which was allegedly found in the early 1960s in the area of el-ʿArish, on the ancient Via Maris in northern Sinai. Unfortunately, it was dispersed before it was studied (King and Spaer 1977:66).

In the Roman West, in contrast, very large hoards of *antoniniani* are more common. In Britain, the Cunetio hoard, deposited in the 270s CE, contained 54,951 coins, virtually all *antoniniani* (Besley and Bland 1983), while the large Dorchester hoard consisted of more than 22,000 coins (Mattingly 1939). An even larger (unpublished) hoard, which contained 73,3733 coins, was found in France, near Evreux (Ferray 1892; Loriot and Scheers 1985:79–80). Further to the east, the La Venera hoard, discovered near Verona in 1876, contained 47,000 *antoniniani* (Giard 1987–2000). Two large hoards are known from southern Europe: the huge Komin hoard from Yugoslavia, which may have contained as many as 300,000 coins (Mirnik 1981:64–65); and the Gibraltar hoard,

which contained 30,000 *antoniniani*, including a large parcel of coins presumably minted in the East (Gallwey 1962).

Chronological Span

The Qula hoard consists of an uninterrupted chronological sequence of coins spanning almost half a century (Table 2). As noted, the earliest coin in the cache was minted in 247 CE, during Philip I's rule, and the latest coin is an *antoninianus* of Diocletian (284–305 CE), minted in the period preceding his currency reform of 293/4–296 CE. The bulk of the hoard (almost 79%) consists of billon coins from Gallienus's long reign (253–268 CE). These coins are subdivided chronologically into two groups. One set, consisting of 643 coins, was minted during Gallienus's joint rule with Valerian I (253–260 CE). The other is a larger group: 1023 coins struck during Gallienus's sole rule (260–268 CE), after Valerian's capture by the Persians in the summer of 260 CE (Table 3).

As seen in Table 2, these two groups are chronologically followed by a relatively large number of coins (283) minted during the short reign of Claudius I (268–270 CE). The number of coins in the hoard issued after this time diminishes drastically. Only 156 coins date to the quarter century from Aurelian's reign (270–275 CE) until Diocletian's reform (294–296 CE; Table 4). Significantly, Aurelian's five-year reign, which also saw a large-scale reform of

Table 2. The Qula Hoard: Chronological Breakdown

Rulers (CE)	Coins	
	N	%
Philip I–Trebonianus Gallus (247–253)	4	0.19
Valerian I and Gallienus (joint rule; 253–260)	643	30.48
Gallienus (sole rule; 260–268)	1023	48.51
Claudius I Gothicus (268–270)	283	13.42
Aurelian–Tacitus (270–276)	24	1.14
Probus (276–282)	80	3.79
Carus–Maximian Herculius (282–290s)	52	2.47
Total	*2109*	*100.00*

Table 3. The Qula Hoard: Coins Minted during Gallienus's Rule (253–268 CE)

Rulers (CE)	Coins (N)	
	Joint rule (253–260 CE)	Sole rule (260–268 CE)
Valerian I	269	
Gallienus	254	903
Salonina (255–260)	69	118
Valerian II (253–258)	16	
Saloninus (258–259)	35	
Quietus (260–261)		1
Macrianus (260–261)		1
Total	*643*	*1023*

Table 4. The Qula Hoard: Coins Minted 270–295/6 CE

Ruler (CE)	N
Aurelian (270–275)	16
Severina (270–275)	3
Vabalathus (271–272)	2
Tacitus (275–276)	3
Probus (276–282)	80
Carus (282–283)	6
Numerian (282–284)	19
Carinus (283–285)	15
Diocletian (284–305)	11
Maximian Herculius (286–305)	1
Total	*156*

the mint system, accounts for only 21 coins, while the six years of Probus's reign (276–282 CE) account for 80 coins. Thereafter, a mere 52 coins represent the decade up to 296 CE.

A graphic distribution by year (Fig. 3) allows for the following observations. First, although the hoard spans almost half a century, most of the coins (92.6%) are from the period before Aurelian's reign, which began in 270 CE. Secondly, coins minted prior to 253 CE—the onset of the joint reign of Valerian I and Gallienus—are virtually absent. This strongly indicates that by the time the hoard was deposited, coins from the 240s and the early 250s CE (the reigns of Gordian III and Volusian) had disappeared from circulation in the East. Thirdly, the hoard contains only a small amount (7.4%) of *antoniniani* and *aurelianiani* from the reign of Aurelian until the Diocletian reform. Thus, it is presumed that the bulk of the coins in circulation at the time of the hoard's deposition was still the base billon minted during the reigns of Valerian through Claudius I (250–270 CE).

MINT DISTRIBUTION: QULA AND OTHER EASTERN HOARDS

The Qula hoard consists almost exclusively of coins minted in the Roman East (Table 5). More than 98% of the coins were struck in the *officinae* of three imperial mints: Antioch (75%), 'Samosata' (21.9%) and Tripolis (1.56%). In contrast, the two Western mints represented in the hoard, Rome (0.18%) and Siscia (0.04%), supplied only a miniscule fraction of the coins. The dominance of Eastern mints in the hoard is also evident when the coins are classified according to individual reigns. The one exception is Numerian's reign, as his coins include a higher than usual percentage of coins minted in Cyzicus, Asia Minor.

A look at hoards found in the Roman East, including the one from Qula (Table 6), further emphasizes the predominance of Eastern mints: the mints of Antioch, Tripolis and 'Samosata' produced c. 97% of the coins discovered in these hoards. This applies to both small and large hoards. The number of coins from the

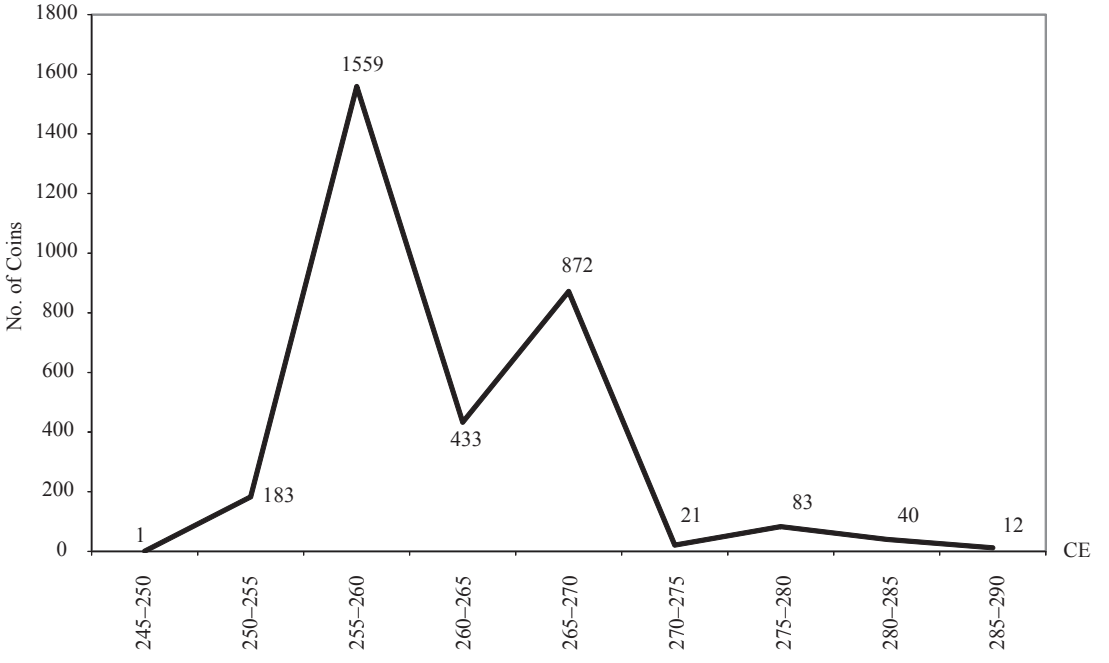

Fig. 3. The Qula hoard: coin distribution by year.

Table 5. The Qula Hoard: Mint Distribution by Ruler

Ruler	Rome	Siscia	Cyzicus	Antioch	'Samosata'	Tripolis	Total	
Philip I (244–249)				1			1	4
Volusian (251–253)				1			1	
Trebonianus Gallus (251–253)				2			2	
Valerian I (253–260)	2			96	171		269	643
Gallienus (253–260)				67	187		254	
Salonina (255–260)				4	65		69	
Valerian II (253–258)				6	10		16	
Saloninus (258–259)				8	27		35	
Gallienus (260–268)	2		14	887			903	1021
Salonina (260–268)			1	117			118	
Quietus (260–261)					1		1	2
Macrianus (260–261)					1		1	
Claudius Gothicus (268–270)			6	277			283	283
Aurelian (270–275)				11		5	16	21
Severina (270–275)				3			3	
Vabalathus (271–272)				2			2	
Tacitus (275–276)				3			3	3
Probus (276–282)				61		19	80	80
Carus (282–283)			1	5			6	40
Numerian (282–284)		1	5	10		3	19	
Carinus (283–285)			1	13		1	15	
Diocletian (284–305)			1	5		5	11	12
Maximian Herculius (286–305)						1	1	
Total No.	*4*	*1*	*29*	*1579*	*462*	*34*	*2109*	
Total %	*0.18*	*0.04*	*1.32*	*75.00*	*21.90*	*1.56*	*100.00*	

Antioch mint is particularly large: over 60% of the coins in ten of the seventeen hoards are Antiochean *antoniniani*. The virtual absence of coins originating in Western mints is striking, and indicates that coins minted in Eastern mints remained in the East, circulating in eastern Asia Minor, in Syria and in Mesopotamia (King 1984:221–223).

Since the earlier currency of the Principate had similar local circulation patterns during the second century CE (Duncan-Jones 1994:172–179), the local patterns of the later circulation may have merely continued long-term monetary trends. However, they could have resulted directly from political developments, such as the loss of control over the Eastern provinces under Gallienus. By the fourth century CE, however, the patterns had changed: late Imperial bronzes, minted in sixteen mints spanning from London in the northwest to Alexandria in the east, could often travel long distances within brief periods of time, though even these tended to cluster sometimes within the regions where they were minted.[5]

Table 6. Eastern Hoards: The Mint Distribution of *Antoniniani*[i]

Mint / Hoard	Tripolis		Antioch		'Samosata'		Cyzicus		Siscia		Rome		Milan		Total No.
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Qula	34	1.56	1580	75.00	461	21.90	29	1.32	1	0.04	4	0.18			2109
Jerusalem					1	11.20					7	77.60	1	11.20	9
Qaṣṭra			19	100.00											19
Bet She'an			15	68.00			7	32.00							22
Tiberias	17	17.30	68	69.40			12	12.20	1	1.01					98
Capernaum			843	66.10	430	33.70					1	0.20			1274 (+ 270 *tetradrachms*)
Susita					7	100.00									7
Jafiya	4	3.91	61	59.80	25	24.60	11	10.70	1	0.99					102 (+ 55 *tetradrachms*)
Nahr Ibrahim	1300	25.00	3766	72.40			133	2.60							5200
Ḥama			312	100.00											312
Kafr Nebudi (near Ḥama)			354	59.80	234	39.60					3	0.60			591 (+ 6 *tetradrachms*)
Dura Europos No. 1			146	52.30	32	11.50					101	36.20			279 (+ 509 *tetradrachms*)
Dura Europos No. 10			106	70.60	30	20.00					14	9.40			150 (+ 393 *tetradrachms*)
Dura Europos No. 17			14	31.10	27	60.00					4	8.90			45
Dura Europos Corp.			31	37.80	43	52.40					8	9.80			82
Syria A	34	25.00	98	72.00			4	2.90							136
Syria B	133	19.00	548	78.20	20	2.80									701
Syria 3	47	12.70	310	83.80	12	3.20	1	0.30							370
Syria 4			29	47.50	26	42.60	2	3.30			3	4.90	1	1.60	61
Orient	1	0.20	471	98.10	1	0.20	6	1.30					1	0.20	480
Total	*15.70*	*13.00*	*8771*	*73.00*	*1349*	*11.00*	*205*	*1.73*	*3*	*0.02*	*145*	*1.23*	*3*	*0.02*	*12,046*

[i] The data is organized according to the geographical distance of the sites from Qula. The list ends with hoards that have only a general regional provenance.

Classification and Chronology

This section presents a detailed study of the main groups of coins in the Qula hoard; it is organized according to rulers' reigns in chronological order (coin numbers refer to the numbers in the accompanying catalogue). The study discusses the major historiographical issues pertaining to coins of the second half of the third century in the Roman East. Thus, before embarking on this study, a brief historiographical overview is called for.

The classification of *antoniniani* minted in the Roman East during the second half of the third century CE is a matter of considerable complexity. For over 70 years now, the standard reference work in English has been, despite its numerous errors, Webb's two-volume work on Roman imperial coinage (*RIC* V/I; V/II). The discovery of several important hoards from the Roman East underscored since the late 1930s the need to revise much of Webb's catalogue. Alföldi (1937; 1938) and Pink (1949) were the first to publish extensive studies of Eastern series of *antoniniani*, based on the findings of several large hoards in Syria and Lebanon.[6] The publication of the numismatic finds from the excavation at Dura-Europos (Bellinger 1949:57–60) provided the first opportunity to compare the Eastern hoard material with findings from a large, controlled excavation. The need to further revise Webb's corpus was raised in studies of several important hoards and in various articles published in the 1950s and 1960s.[7]

While Robertson's (*RIC Hunter* IV) tables summarized some of the major disagreements over Eastern mint attributions up to the late 1970s, she did not address problems regarding issues and chronology. King and Spaer (1977) and King (1984; 1993), on the other hand, highlighted the importance of provenanced finds and hoards in establishing chronologies, and evinced a firm grasp of historical sources for tackling the classification of coins from Eastern mints. Eventually, the publication of Göbl's work (*MIR* 36, 43, 44; *MIR* 47), an exhaustive listing of Eastern mint emissions, legends and types from the reigns of Valerian I and Gallienus (253–268 CE) and Aurelian (270–275 CE), provided a new standard work that has largely replaced Webb's catalogue for these periods.[8]

Joint Reign of Valerian I and Gallienus (253–260 CE)

The 643 *antoniniani* dating to the joint reign of Valerian and Gallienus (see Table 5; Cat. Nos. 5–647) account for approximately 30% of the hoard coins. All but two coins, which were from the mint in Rome, were minted in Antioch (n = 181, c. 28%; cf. *MIR* 36, 43, 44:127–132) and 'Samosata' (n = 460, c. 71.5%; cf. *MIR* 36, 43, 44:132–134). The identification of the Eastern mints is intrinsically linked to the difficult dating of the joint rule of Valerian I and Gallienus, a challenging complexity for numismatists studying this period (King 1993; *MIR* 36, 43, 44:53–69). The classification below follows the work of Göbl (*MIR* 36, 43, 44), who developed a detailed chronology of issues and mints for the East. Göbl's framework builds on the seminal studies by Alföldi (1937; 1938) and King (1993), while it deviates in no small measure from the mint attribution and chronology suggested by Webb (*RIC* V/I:27–128) and Robertson (*RIC Hunter* IV:xxxi–liii). The main groups of coins from this period are discussed below.

The 'Viminacium' Group

Webb (*RIC* V/I:54–55) attributed a group of coins from Valerian I and Gallienus's joint reign to the Balkan mint of Viminacium, in Moesia Superior. All the coins in this group carry the large legend IMP CP LIC VALERIANVS (PF) AVG or IMP CP LIC GALLIENVS AVG on the obverse. The attribution of *antoniniani* to this mint was first suggested by Mattingly (*RIC* V/I:16, n. 22). He noted that during the first years of the joint reign of Valerian I and Gallienus (253–254 CE), a minor mint was active in the Moesia region;[9] Alföldi (1937:41–45), who studied the Kafr Nebudi

Table 7. Large Eastern Hoards: Joint Reign (253–260 CE) 'Viminacium' Types

Hoard	Eastern Mints		Western Mints		'Viminacium' Group	
	N	%	N	%	N	%
Kafr Nebudi	341	66.30	1	0.19	172	33.40
Capernaum	314	93.40	1	0.29	21	6.25
Qula	444	84.40	2	0.38	80	15.20

Table 8. The Qula Hoard: Joint-Reign *Antoniniani* from the 'Samosata' and Antioch Mints, by Ruler

Mint / Ruler	'Samosata'		Antioch		Total
	N	%	N	%	
Valerian I (253–260)	171	63	96	37	267
Gallienus (253–268)	187	73	67	27	254
Salonina (255–260)	65	94	4	6	69
Valerian II (253–258)	10	63	6	37	16
Saloninus (258–259)	27	76	8	24	35
Total	*460*	*72*	*181*	*28*	*641*

(Ḥama) hoard of 600 *antoniniani* and based his argument on typological grounds, suggested that these coins were minted in Antioch during the early years of the joint reign. Successive scholars (Carson 1967–1968; Elks 1975) further supported this attribution. Robertson (*RIC Hunter* VI:xi) described this group of coins in somewhat vague terms, as belonging to an "Eastern Mint". Göbl (*MIR* 36, 43, 44) firmly established that these coins belong to the first three issues of the Antioch mint. These types occur in significant numbers among joint-reign coins in the Qula hoard (Cat. Nos. 7–71, 274–289), as well as in other large hoards from the East (Table 7).

The 'Second Eastern' Mint

Webb (*RIC* V/I:60, 103–104, 114–115) grouped joint-reign coins—a large number of which were found in the Qula hoard (Cat. Nos. 103–273, 341–527, 532–596, 603–612, 621–647)—under the Antioch mint. However, successive scholars have classified these as originating from 255 CE onward in a "second Eastern" mint. The debate among historians and archaeologists over the scale and chronology of the Sassanian invasions into the Eastern provinces of the Roman Empire has led to several theories regarding the identification of this second mint. Alföldi (1937:45ff) located this mint at Samosata, combining numismatic data with a fragment of the work by a sixth-century CE historian, Petrus Patricius, who mentioned the presence of Valerian's paymaster of the troops at Samosata (*FHG* IV:193). The discovery in the late 1930s of the *Res Gestae Divi Saporis* inscription,[10] which mentioned Samosata among the cities captured by the Sassanian ruler Shapur I during his third campaign (260 CE), put Alföldi's theory in question. Consequently, Bellinger (1943:65–67), Rostovtzeff (1943:17–60), Carson (1967–1968:134) and Elks (1975) suggested to identify the 'second Eastern' mint with the mints of either Emesa or Cyzicus, which were not affected by the Sassanian invasion. A third group of scholars (*RIC Hunter* IV:xxxii; King 1993:218) refrained from taking any position, and placed this group of coins under a more amorphous heading of "Eastern" mint, "Uncertain" or "Mint 2". More recently, Millar (1993:160–173) suggested that the Persian invasions were limited incursions rather than a long-term occupation of Roman territory, and thus had only a marginal impact on the Roman Near East. This makes Göbl's re-embracing of the traditional identification of the 'second Eastern' mint with Samosata (*MIR* 36, 43, 44:128, 133) more plausible.

Regardless of the uncertainty surrounding the exact location of the second mint (listed here as 'Samosta' for convenience), the data from our hoard firmly demonstrates that this mint accounted for most of the circulating coins in Syria during the joint reign: c. 72% of all joint-reign coins in the hoard came from 'Samosata', as opposed to only c. 28% from Antioch (Table 8). Indeed, a comparison of the coins in our

Table 9. Syrian Hoards: Joint-Reign *Antoniniani* from the 'Samosata' and Antioch Mints

Hoard (Terminus Post Quem of Deposition)	'Samosata'		Antioch	
	N	%	N	%
Qula	460	72	181	28
Kafr Nebudi (260 CE)	278	54	234	46
Capernaum (269 CE)	335	87	51	13
Gibraltar (261 CE)	1188	68	555	32
Cunetio (270s CE)	382	64	215	36

hoard produced for each ruler during this period shows that the 'Samosata' mint produced three to four times more coins than the Antioch mint. During Salonina's reign, the 'Samosata' mint produced as many as 15 times more coins than Antioch.

A comparison with the similarly large Eastern hoards from Kafr Nebudi and Capernaum, which were deposited closer in time to the joint-reign period, likewise indicates that the 'Samosata' coins circulated in greater quantities than those produced at the Antioch mint (Table 9). The joint-reign coins from the large Gibraltar hoard, which Gallwey (1962:336) suggested was associated with a defeated military unit of Macrian and Quietus that was transferred to the West after 261 CE, shows a similar pattern (68% versus 32%). Interestingly, this pattern was also noticed in the assemblage of Eastern joint-reign coins found in as typical a Western hoard as Cunetio (64% versus 36%; Besley and Bland 1983:40).[11]

An Unknown Variant: RESTITVTI GENER HVMANI

Göbl's corpus (*MIR* 36, 43, 44) lists a total of 51 coin types minted during the joint reign and issued by the Antioch mint. Almost two-thirds of these types are present in the Qula hoard (Appendix 1). Interestingly, among these Antioch joint-reign coins in the Qula hoard is a Valerian I type (Cat. No. 42) not included in Göbl's typology tables. Its legend reads RESTITVTI GENER HVMANI ("Restorer of the Human Race") and it portrays the emperor walking right, hand raised left, holding a globe. It is clearly a variant of Valerian's RESTITVT GENER HVMANI, issued in Antioch in 254 and 255 CE (Göbl's Type No. 1564; *MIR* 36, 43, 44), of which there are six examples in the Qula hoard (Cat. Nos. 36–41). The reverse iconography is identical, but instead of RESTITVT, the acronym for RESTITVT(OR) ("Restorer"), the legend clearly reads RESTITVTI ("restored" in the *participium passivum*). Webb (*RIC* V/I:55) mentioned both readings, but failed to provide actual proof for the existence of such a variant inscription. Alföldi (1937:47) did not mention the RESTITVTI inscription, thus possibly misleading Robertson (*RIC Hunter* IV:xxxviii) to conclude that Webb referred only to a probable reading of the inscription as RESTITVT(I) and not to an existing variant, for which the Qula hoard provides now the needed proof.

VALERIAN II (253–259 CE)

The joint-reign coins include 16 billon struck in the name of Valerian II as Caesar during the joint-reign of his grandfather, Valerian I, with his father, Gallienus (Cat. Nos. 597–612). Publius Cornelius Valerianus was the oldest son of Gallienus and Salonina, and the brother of Saloninus. His coinage spans the period from 255 CE until his death in 259 (*RIC Hunter* IV:xxxi; *MIR* 36, 43, 44:59). The hoard contains six coins, all of the VICTORIA PART(HICA) type, minted in Antioch in celebration of Valerian I's restoration of Roman rule in the East after the Persian incursions of 252 CE (Millar 1993:150ff). Another ten coins are from the 'Samosata' mint. They depict Valerian II as a martial-like crown prince, PRINC(EPS) IVVENTVTIS, holding a spear and a shield while crowning a trophy. Coins of Valerian II are rarely found as single finds in excavations, but are regularly found, albeit in small numbers (Table 10), in Eastern hoards. They always belong to the joint-reign series minted in Antioch and 'Samosata'.[12]

Table 10. The Qula and Representative Hoards: Valerian II *Antoniniani*

Hoard	Valerian II Coins		Joint-Reign Coins	
	N	%	N	%
Qula	16	2.4	643	30.0
Capernaum	14	3.5	401	31.0
Kafr Nebudi	5	5.0	513	85.6
Syria 3			15	4.0
Syria 4	3	9.0	33	54.0
Gibraltar	252	4.0	6229	21.0

Table 11. Representative Hoards: *SPQR Antoniniani* and Gallienus's Sole-Rule coins (260–268 CE)

Hoard	SPQR *Antoniniani* (N)	Gallienus's Sole-Rule Coins
Quleh	15	903
Capernaum	2	917
Nahr Ibrahim	3	54
Orient	5	245
Gibraltar	1	1159
Devret	–	87

SALONINUS (258–260 CE)

The joint-reign series contain 35 billon struck for the youthful Caesar Saloninus, Gallienus's second son (Cat. Nos. 613–647). Robertson (*RIC Hunter* IV:xxxi–xxxii) set the end of his reign in 258/9 CE, but Göbl (*MIR* 36, 43, 44:61) extended it to 260 CE, placing Saloninus's murder in the summer of that year. All the coins are minted with the title P COR SAL VALERIANVS CAES (Antioch) or SALON VALERIANVS NOB CAES ('Samosata'). Following Göbl's classification, the hoard contains 8 coins minted in Antioch and 27 coins from the 'Samosata' mint. Saloninus's coins are rarely unearthed in excavations; however, in Eastern hoards they regularly constitute 4–6% of the joint-reign series.

SOLE REIGN OF GALLIENUS (260–268 CE)

The *antoniniani* from the sole reign of Gallienus constitute the single largest group of coins in the Qula hoard, numbering 1021 and comprising 48% of the total number of coins. In contrast to the coins issued jointly with Valerian II, virtually all these coins were minted in Antioch (98%). The remaining 2% were mostly from Cyzicus; only two came from the main mint at Rome. Most of the coins (903) were issued for Gallienus, but a substantial number (118) was issued in the name of Empress Salonina. The main groups of coins from this period are discussed below.

The SPQR *Group*

The hoard contains a group of 15 coins bearing the senatorial SPQR formula in the exergue (Cat. Nos. 650–663, 1551). Scholars have attributed these coins to a variety of mints. Webb (*RIC* V/I:186–190) classified this group as coming from a "mint in Asia," while Alföldi (1937:59–61) suggested a mint in Asia Minor, possibly Ephesus. Robertson (*RIC Hunter* IV:lvi) tentatively added Smyrna. Elks (1975:108) and Göbl (*MIR* 36, 43, 44:122–127) convincingly argued that they were minted at the Cyzicus mint. They linked this group of coins to coins from Cyzicus that were minted during the two-year rule of Gallienus's successor, Claudius II Gothicus (268–270 CE), and bear a similar mark in the exergue. The scarcity of these coins in Eastern hoards compared with the total number of coins minted during Gallienus's sole rule seems to strengthen this attribution (Table 11). Additional statistical evidence for this provenance is provided by two hoards that contained a large group of Eastern *antoniniani*: the large Gibraltar hoard, with c. 3500 Eastern coins out of a total of 29,850 coins, contained only one coin belonging to the SPQR group among 1159 coins from the sole rule of Gallienus; the Devret hoard, discovered east of Ankara, contained not one SPQR specimen,

although 521 of its 523 coins were *antoniniani* minted in Antioch.[13]

The Antioch Mint

The hoard included 1004 *antoniniani* minted in Antioch between 263 and 268 CE (Cat. Nos. 664–1550, 1552–1668). The coins are cataloged following Göbl (*MIR* 36, 43, 44:127–132), who identified 11 separate issues (Nos. 7–15; Table 12) from Gallienus's sole reign.[14] Several of these issues were subdivided by Göbl into groups according to the symbols (star, crescent, letters, unsigned) appearing on the reverse field. Within this group there is a dramatic increase in the number of coins issued after 266 CE (Fig. 4), a pattern found in the Capernaum hoard as well (Spijkerman 1958–1959:318–322, 324). However, a detailed study of additional hoards

Table 12. The Qula Hoard: Gallienus's Sole-Reign *Antoniniani* (263–268 CE) by Issue and Date (following *MIR* 36, 43, 44:127–132)

Sole Reign Issues (CE)	No. of Coins		
	Gallienus	Salonina	Total
Issue 7 (263)	46	14	60
Issue 8 (263)	62		62
Issue 9a (263)	95	24	119
Issue 9b (263)	58	3	61
Issue 10 (263)	3	1	4
Issue 11 (264–265)	43	14	57
Issue 12 (264–265)	49	3	52
Issue 13a (266–268)	154	7	161
Issue 13b (266–268)		7	7
Issue 14 (266–268)	138	14	152
Issue 15 (266–268)	239	30	269
Total	*887*	*117*	*1004*

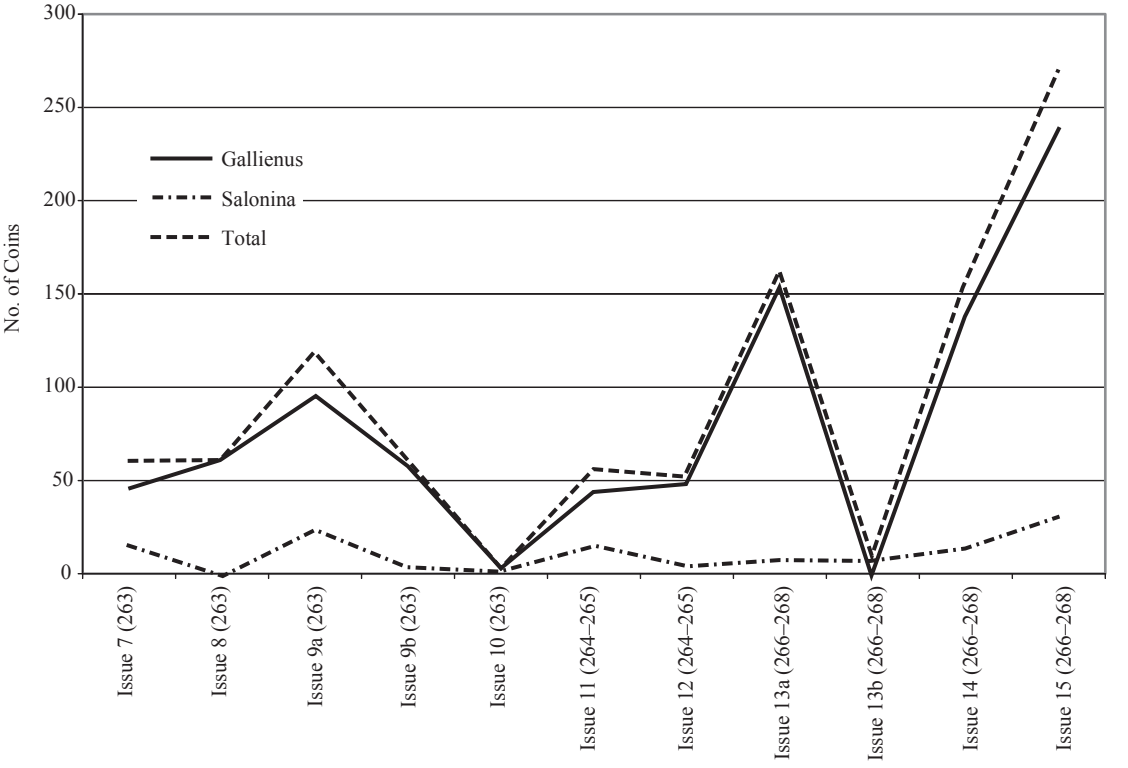

Fig. 4. The Qula hoard: quantity of *antoniniani* from Gallienus's sole reign (263–268 CE) by issues.

is required in order to verify the existence of such a pattern and to understand its significance.

An Unknown Variant of SOL AVGVSTI

The billon from the sole reign of Gallienus in the Qula hoard contains one unpublished variant of the SOL AVGVSTI type minted in Cyzicus (Cat. No. 654). The obverse is a rare radiate bust turning left instead of right, as usually is the case, with two dots under the bust. It is accompanied by the standard inscription GALLIENVS AVG. The reverse is the SOL AVGVSTI type with Sol standing left, but holding a globe instead of a whip (*MIR* 36, 43, 44: No. 1536c).

QUIETUS AND MACRIANUS (260–261 CE)

The hoard contains only two *antoniniani* struck by the usurpers Macrianus I and his younger brother, Quietus (Cat. Nos. 1669, 1670); this is a remarkably low number for such a large Eastern hoard. The coins of these sibling usurpers from the summer of 260 CE until they were defeated and executed in 261 CE, have traditionally been attributed to the Antioch mint (Alföldi 1937:52, 60–66). However, Göbl (*MIR* 36, 43, 44:143–44) refined Alföldi's chronology and linked the three issues of these two rulers to the 'Samosata' mint.

A relatively large number of Macriani coins was found in the large Capernaum hoard (1274 *antoniniani* and 270 *tetradrachms*), which contained 45 *antoniniani* of Macrianus and another 45 of Quietus (Spijkerman 1958–1959:325–326). However, only few such coins have been found over the years in excavations: two from Iqrit (Bijovsky 2010b: Nos. 23, 24), one from a burial at Kabri (Syon 2006: No. 9) and a single coin at each of the following sites—Bar'am, Ḥorbat Arbel and Mishmar David.

Another small hoard of nine *antoniniani* was found on the Mount of Olives in Jerusalem, and contained a single coin of Quietus (Sweeney and Visona 1991:264). Interestingly, the largest find of *antoniniani* of the sibling usurpers was not discovered in the Roman East, but rather in the Gibraltar hoard, which was concealed after 266 or 267 CE. It included 1143 coins from the brothers' short reign: 543 of Quietus and 600 of Macrianus. These coins have been associated with a military unit of the usurpers that was transferred westward to Roman Spain after their defeat (Gallwey 1962:336–337).

CLAUDIUS II (268–270 CE)

The hoard contains 283 *antoniniani* minted during the brief reign of Claudius II Gothicus. These coins were struck in two mints only: six are from Cyzicus, Asia Minor, and the rest (277) are from Antioch.

The Cyzicus Mint

Five of the six coins minted at Cyzicus carry the SPQR legend in the exergue, which allows their secure identification (Cat. Nos. 1671–1675; Alföldi 1938:66–68; *MIR* 36, 43, 44:122–27). The sixth coin bears the inscription VENVS AVG and depicts Venus standing, holding a helmet and a spear while leaning on a shield (Cat. No. 1676). Although it lacks the SPQR legend on the reverse, researchers attribute this coin to the Cyzicus mint as well, because the type also appears with the SPQR legend, and its obverse carries the longer legend IMP C M AVR CLAVDIVS AVG, which was also used in the Cyzicus mint (*RIC* V/I; Alföldi 1938:65; *RIC Hunter* IV:lxxxiii).

The Antioch Mint

The 277 coins attributed to the Antioch mint (Cat. Nos. 1677–1953) represent examples from all the registered *officinae* and 18 of the 22 known types minted during the brief reign of Claudius II. No study presents a definitive chronology of the issues. Alföldi (1938:56–58) divided the types into two issues according to their portraiture and legend, although he did not differentiate between *officinae*.[16] Brenot and Pflaum (1965:157–158) raised the number of issues to five.[17] In his analysis of *officinae* types found in an "Oriental hoard", de Roquefeuil

(1970:123–125) suggested that there were only three issues.[18] The chronology and dating for the Antioch mint in the hoard follows the research of Bastien and Huvelin (1969:238–239, 256–257).

CONS ECR AVG: *A Rare 'Consecration' Type*

The hoard contains three rare coins of Claudius II, portraying Jupiter standing by Juno, who is holding a patera, with the legend CONS ECR AVG (Cat. Nos. 1951–1953). One of these coins depicts an obverse bust left (Cat. No. 1953), and the other two—an obverse bust right. Webb (*RIC* V/I:233) classified it with the first issue of the commemorative consecration types minted in Antioch. This coin did not appear in any of the other Eastern hoards. Waage (1952:108), however, registered one such specimen among the coins from the Antioch excavations. She noted that Alföldi had misread its legend as CONSER AVG, and thus mistakenly attributed the coin to the second issue.

VABALATHUS AND AURELIAN (270–275 CE)[19]

Vabalathus (271–272 CE)

The hoard contains two coins of the Palmyrenian usurper, Vabalathus (Cat. Nos. 1973, 1974). Webb (*RIC* V/I:260–261; *RIC* V/II: 585) and Robertson (*RIC Hunter* IV:cxix) ascribed Vabalathus's coins to the mints of Antioch and Tripolis. Seyrig (1966) attributed a series of coins with the Semitized obverse "Vhabalathus" instead of the regular Latin "Vabalathus" to a Syrian mint, possibly Emesa. This mint, he suggested, struck coins after Antioch was re-conquered by Aurelian in the spring of 272 CE (Seyrig 1966:661). Göbl (*MIR* 47:66) rejected Seyrig's argument and suggested that the coins belonged to the second Antiochene issue, minted sometime toward the end of 271 CE or at the beginning of 272 CE.

Remarkably, although the Palmyrenian dynasty effectively usurped Roman rule in the East in 267 CE, culminating in its claim of imperial rank and the striking of Palmyrene imperial coinage at Antioch (270–272 CE; Millar 1993:167–173), none of the large hoards in the East contain Vabalathus's coins. Excavations in Israel, however, have yielded his coins, although they are rare. Four were found in a hoard of 19 *antoniniani* unearthed in a tomb at the Roman–Byzantine coastal settlement of Ḥorbat Qasṭra (Castra), near Haifa. The hoard, possibly a funerary deposit, was buried around the time of Aurelian's re-conquest of the East, in early 272 CE. The latest coins in the hoard were issued during Vabalathus's short reign. They carry the busts of both Aurelian and Vabalathus, titled Vir Clarissimus Imperator Dux Romanorum (two coins), and of Vabalathus, titled Augustus (two coins).[20]

Twelve additional coins of Vabalathus were retrieved from nine different sites. Thus, his coins constitute just under half of the coins from Aurelian's reign known in Israel. This relatively large share of Aurelian's coinage indicates that Vabalathus's coins—minted during the short Palmyrenian interregnum in 272—must have circulated on a relatively sizeable scale even after Aurelian's final re-conquest of the East in 273.[21] Significantly, more than half of these coins are of the earlier VCRIMDR type.[22]

Aurelian (270–275 CE)

The Qula hoard contains 19 coins from this period, 16 struck for Aurelian (Cat. Nos. 1954–1969) and three for Severina (Cat. Nos. 1970–1972). Except for five coins minted in Tripolis, all the coins were produced in Antioch, according to the chronology established by Göbl (*MIR* 47:65–68). Thirteen of the coins (Cat. Nos. 1960–1972; 76%) are radiate *aurelianiani* (*MIR* 47:79–84; Harl 1996:145).[23] These coins carry in the exergue a Latin value mark (XXI) for the Antioch mint and a Greek one (KA) for Tripolis. Both represent an exchange value of one *aurelianianus* to 20 *sestertii* (*MIR* 47:83; Harl 1996:146).

Data compiled from other Eastern hoards containing coins from Aurelian's reign show likewise that this group of coins consists mostly of post-reform *aurelianiani* (56–78%; Table 13).

Table 13. Eastern Hoards: Aurelian's Coinage (270–275 CE) and *Aurelianiani* (274–275 CE) within Aurelian's Coinage

Hoard	Date (CE)	Aurelian's Coins		*Aurelianiani*	
		N	%	N	%
Qula	247–296	19	0.9	13	76
Tiberias	268–293	16	16.0	12	75
Nahr Ibrahim	266–284	507	9.8	Unknown	Unknown
Syria A	268–284	23	17.0	13	56
Syria B	263–286	45	6.4	35	77
Syria 3	254–283	290	78.0	233	78

This pattern is also evident in single finds from excavations, such as from Antioch, where 58% of the coins from Aurelian's reign are post-reform *aurelianiani* (Waage 1952:108–109). The number of coins unearthed in 23 excavations and sites in Israel registered in the computerized IAA numismatic database is smaller, but still impressive: of the 62 coins found at these sites, almost half are post-reform *aurelianiani*.

The combined data from excavations and hoards indicate that with the start of Aurelian's reign, much of the billon circulating in the East was of the Palmyrenian joint Vabalthus/Aurelian types. Between 272 CE, when Aurelian reconquered the East, and 274 CE, when he carried out his mint reform, few of his coins circulated in the East.[24] Only with the reorganization of the mint in 274 CE, did larger numbers of the heavier *aurelianiani* become available in the East.

TACITUS (September 275–April 276 CE)

The Qula hoard contains three coins (Cat. Nos. 1975–1977) from the seven-month reign of Marcus Claudius Tacitus, who was murdered while campaigning in Cappadocia. Each of the three belongs to a type minted in Antioch. Two of the coin types appear among the 13 specimens recorded for this ruler in the Syria B hoard (Brenot and Pflaum 1965:161–162).[25] The third coin (Cat. No. 1975) reads IMP C TACITVS AVG on the obverse and RESTITVTOR BIS on the reverse, with XXI/H in the exergue. This type was not listed by Estiot, who noted only the mint symbols P-VI over the mint mark XXI (Estiot 1995:80).[26]

The presence of these three coins in the Qula hoard indicates that despite the relative paucity of Tacitus's *antoniniani*, they did circulate in southern Syria. This is attested to not only by the Syria B hoard, reportedly found near Antioch itself, but also by the Tiberias hoard (Hamburger 1964), which contained three coins of this ruler, two from Antioch and one from Cyzicus. This circulation pattern is also confirmed by the geographical distribution of the few registered single coins from excavations in Israel.[27]

PROBUS (276–282 CE)

The hoard contains 80 coins (Cat. Nos. 1978–2057) of Probus, who was nominated emperor while serving as military commander of the Roman East in 276 CE. Probus's coins constitute a mere 3.8% of the Qula hoard. Eastern caches that were hoarded from the early 250s CE onward likewise exhibit a small proportion of his coins. In contrast, Eastern hoards that were collected beginning in the late 260s or the 270s CE contain a disproportionally large number of Probus's coins, as seen in Table 14. This sudden upsurge of coinage during Probus's reign was noticed by Callu (1969:334–36), who found that it was most pronounced for the later issues (280–282 CE), as evident in several

Table 14. Eastern Hoards (270s–290s CE): The Coinage of Probus (276–282 CE) and of Carus and His Sons (282–285 CE)

Hoard	Date (CE)	Probus's Coins		Carus and Sons' Coins	
		N	%	N	%
Tiberias	268–293	37	38	15	15
Syria A	268–284	68	50	33	24
Syria B	263–286	449	64	165	23
Nahr Ibrahim	266–284	2600	50	1600	31

large Western hoards, like the La Venera hoard (13,206 coins out of a total of 47,000 *antoniniani*; Giard 1987–2000).[28] Significantly, these later issues constitute more than 60% of the Probus coinage in the Qula hoard. Pink (1949), who also noticed this increase in the production of Probus's coins at Eastern mints, associated it with his preparation for a military expedition to the East. However, other studies tie this increase to yet another cycle of inflation caused by the failure of Aurelian's reform to provide a stable currency (Callu 1969:336; Harl 1996:148).

Finds from both large and small excavations in the East similarly indicate this sudden expansion of coinage during Probus' reign. For example, among the 378 single *antoniniani* found in the extensive Antioch excavations, 64 (16%) were from Probus' reign (Waage 1952:110). Furthermore, as in the Qula hoard, Probus' coins derived from excavations constitute the single largest group of coins minted between Aurelian's reign, beginning in 270 CE, and Diocletian's reform (293/4–296 CE). This pattern is evident for the assemblages from both Antioch and Naḥal Ḥagit, a small agricultural settlement in the southern Carmel, which was possibly founded by Roman veterans (Fig. 5; Bijovsky 2010a). The IAA computerized coin inventory shows that Probus' coins appear with relatively high frequency in excavations in Israel: 78 coins from 38 different sites.

Of the Probus coins in the Qula hoard, 61 were minted in Antioch and 19 in Tripolis. These Eastern mints produced only two reverses despite the proliferation of types during Probus' reign: CLEMENTIA TEMP ("the Clemency of times"), depicting the emperor receiving a globe from Jupiter, the personification of imperial clemency; and RESTITVTOR BIS ("Restorer of the world"), showing a female presenting a wreath to the emperor.

The chronology for Probus' Eastern issues was inadequately outlined in Pink's (1949) work, a corpus based primarily on Western material from the Wiener Münzkabinett collection and several large hoards discovered in Western Europe.[29] Regrettably, Pink's corpus did not include the 2600 Probus coins found in the unpublished Nahr Ibrahim hoard from Djebail (ancient Byblos).[30] Pink's chronology was further developed by Brenot and Pflaum (1965:195–198), who used two small hoards found in Syria (Syria A and B; see Appendix 1), and Robertson (*RIC Hunter* IV:cxxxi–cliv) and Weder (1984) refined this chronology. Our catalogue follows the identifications of King (1984) and Weder (1984) for the Antioch mint, and Robertson's (*RIC Hunter* IV) conspectus for Tripolis. Nevertheless, given the breakdown of systematic minting in the East under Probus, one must be cautious when attributing mints to his coins (King 1984:224–225). Two previously unnoticed variants of the CLEMENTIA T-EMP type, found in the Qula hoard and described in detail below, indicate that the chronology of emissions in the East was far more irregular and complex than previously thought.

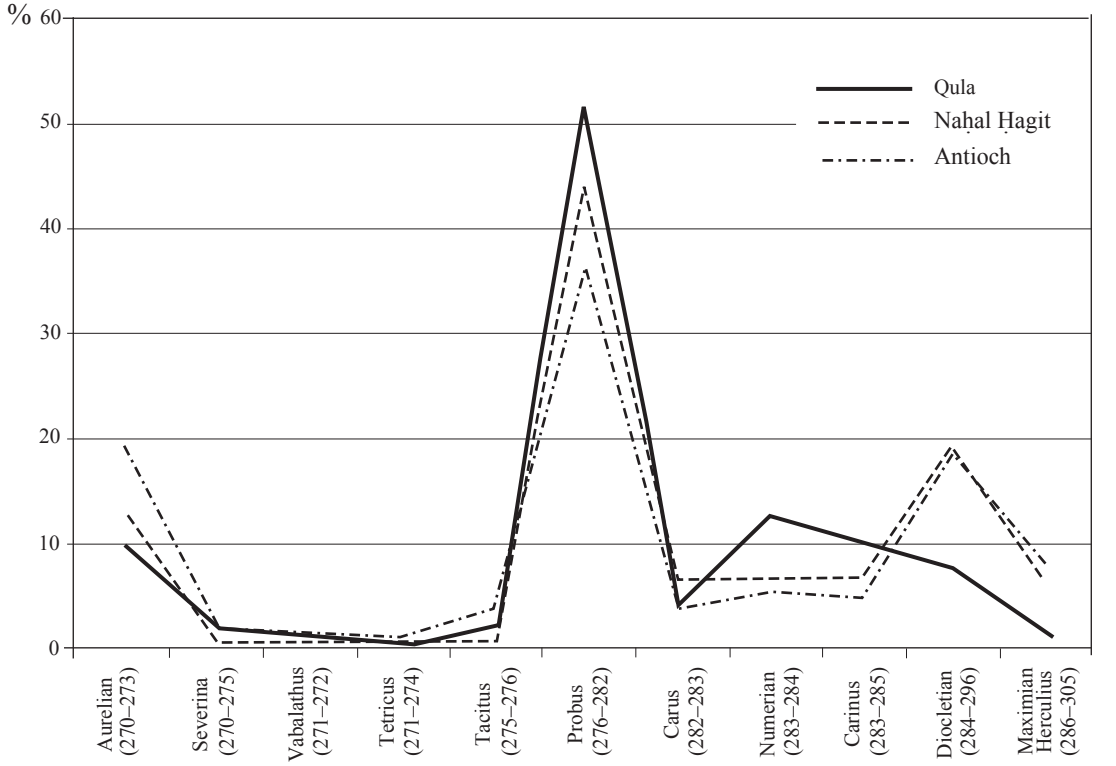

Fig. 5. Qula hoard coins and single finds from Antioch and Naḥal Ḥagit: percentages of Probus's coinage (276–282 CE) among *antoniniani* minted 270–296 CE.

Є/X.XI

The first variant, which comes from the Antioch mint, bears the obverse legend IMP C MAVR PROBVS PF AVG and the reverse CLEMENTIA T-EMP with an extraordinary mint mark: an epsilon followed by X.XI (Cat. No. 2038). Estiot (1987:35) was the first to notice a similar type and mint mark on a single coin among the 13,206 Probus coins in the large La Venera hoard (47,000 pieces). This reverse was minted during the short reign of Probus's predecessor, Tacitus, and was classified by Estiot as belonging to his fifth and final issue at Antioch (Estiot 1987:30). Apparently, this small series of coins continued to be issued under Probus, although this does not fit the chronology suggested by either Pink or Weder.

KA *Without a Symbol*

Two additional CLEMENTIA T-EMP-type coins, which were minted in Tripolis, carry an unknown mintmark: KA, unaccompanied by any symbol. The specimens are not identical, however. One (Cat. No. 2041) carried the obverse legend, IMP C MAVR PROBVS PF AVG and CLEMENTIA T-EMP, without a dot at the end, whereas the other (Cat. No. 2048) carried a slightly shorter legend—IMP C MAVR PROBVS AVG and CLEMENTIA T-EMP—with a dot at the end. Scholars disagree over the attribution of the KA mintmark during Probus's reign. One series of coins bearing the KA mintmarks and Greek *officina* numerals (A–Σ) was assigned first to the mint of Antioch and later to Cyzicus (Pink 1949:40; Weder 1984:210–211). Three mintmarks of the KA series with symbols (a star, a crescent and a T) represent three different issues minted in Tripolis in 276 CE (Pink 1949:41; Brenot and Pflaum 1965:146–147; *RIC Hunter* IV). The KA mintmark without a symbol may nevertheless belong to the 'symbol' series. This possibly

indicates a fourth, hitherto-unknown, emission from the 276 CE Tripolis series; alternatively, the symbol may have been omitted by mistake.

Carus and His Sons, Numerian and Carinus (282–285 CE)

The Qula hoard contains 40 coins of Carus and his sons: 6 of Carus, 19 of Numerian and 15 of Carinus (Cat. Nos. 2058–2097). The Eastern sequence of the coinage issued by these three rulers was firmly established by Pink (1963a:54–57). He based much of his conclusions on the Nahr Ibrahim hoard, which contained an unprecedented large quantity of their Eastern issues (1610 coins; 31%; Pink 1963a:15–18).[31] These Eastern issues served, most probably, to finance the expeditionary force that campaigned in Mesopotamia under Carus and Numerian in the summer of 283 CE and Numerian's stay in Syria during the winter of 283–284 CE.

The number of coins minted by Carus and his sons in the East was considerably smaller than those minted by their predecessor, Probus: in Eastern *antoniniani* hoards deposited around the time of Diocletian's Reform in the mid-290s CE, they make up 15–30% of the coins, as opposed to 38–64% of Probus's coins (Table 14). The single-find pattern from excavations shows an even smaller output. For example, only 13% of the coins from Antioch were issued by Carus and his sons (Waage 1952), as were 10% of those from the small agricultural settlement of Naḥal Ḥagit (Bijovsky 2010a: Nos. 101–103). An examination of the computerized IAA numismatic database detected 41 coins from 17 sites—less than half the number of sites where Probus's coins were collected.

Nevertheless, The Qula hoard exhibits four types of coins minted by Carus and his sons—a relatively large variety considering their small numbers: CLEMENTIA TEMP, VIRTVS AVGG, VIRTVS AVGGG and a consecration type struck by Numerian at Antioch in 284 CE to commemorate his father, who died in the summer of 283 CE. The latter's obverse reads DIVO CARO, and the reverse depicts the legend CONSECRATIO with a standing eagle facing left, symbolizing the apotheosis of the deceased emperor (Cat. No. 2063).

Diocletian and Maximian Herculius (284–305 CE)

Carinus's murder by his own officers in the summer of 284 CE brought to power his opponent, Diocletian, who appointed Maximian, a fellow Illyrian officer, as ruler of the Western part of the empire. Maximian, who initially bore the title of Caesar and the title of Augustus from April 1, 286 CE, was directly subordinate to Diocletian. Sometime between 293/4 and 296 CE, Diocletian undertook a sweeping monetary reform which included the introduction of new silver and billon denominations (argenteus, *nummus*). As a modern study of pre-reform Diocletianic coins in the East is yet to be written, Webb's work (*RIC* V/I; *RIC* V/II) continues to provide the standard classification of these coins. Although Robertson (*RIC Hunter* IV:clxxxii) attempted to further refine Webb's chronology, she used "a large eastern hoard" of unknown provenance.

The Qula hoard contains only pre-reform *antoniniani* (284–293 CE) issued by the two rulers: 11 by Diocletian (Cat. Nos. 2098–2108) and one by Maximian (Cat. No. 2109). These constitute the latest datable coins of the hoard. Except for one coin minted in Cyzicus, the coins were all issued in Antioch and Tripolis. Pre-reform *antoniniani* of the Caesars Galerius and Constantius, who were co-opted as junior rulers by Diocletian and Maximian in 293 CE, are absent in the hoard. The 12 specimens in the hoard represent two of the four types used in the Antioch and Tripolis mints: CONCORDIA MILITVM and IOVI CONSERVATORI AVG (IOVI CONSERVATOR IAVGG for Maximian in Tripolis). These coins show the same double-figure scene of the emperor standing right, holding a scepter and receiving Victory from Jupiter. The combination of this type with the legends mentioned above was used on a large

scale in the Eastern mints under Diocletian and his co-rulers.[32]

Data from most Eastern hoards, including from the Qula hoard, indicate that the circulation of *antoniniani* minted by Diocletian and his co-ruler Maximian in the East before the reform was extremely limited (4% or less).[33] A similar pattern has been noticed for hoards deposited during the same period in the Western Empire.[34]

METROLOGY: ALLOY CONTENT AND WEIGHT

No analysis was carried out on the alloy content of the Qula hoard coins. This is unfortunate, since an analysis of an Eastern, well-provenanced hoard such as the one from Qula could provide important information about the process of monetary debasement in the East during the second half of the third century CE. To date, almost all the alloy research of this period is based on material from the Roman West, as radiates from the East are only mentioned in passing.

The studies of *antoniniani* in the West chronicle a process of rapid debasement between the reign of Valerian and that of Diocletian (253–296 CE). Although the figures offered by scholars vary substantially (Table 15), depending on methods of analysis,[35] all agree that within half a century the *antoninianus* was drastically debased from a billon alloy containing 37–50% silver to a bronze coin with a coating of 1% silver or less. The radical reduction in silver content took place in several stages. From the reign of Gordian III (238–244 CE) to the first years of Gallienus's sole rule (260–261 CE), the silver gradually declined from 42–50% to 17–18%. Then, during the remaining seven years of Gallienus's rule, the silver content was dramatically decreased, so that by 267/8 CE the alloy was reduced to white copper coins containing a mere 2–6% silver. Under his successor, Claudius II, the coins reached a nadir of 2–3% silver. With the monetary reform of Aurelian in 274 CE, the silver content of the coin slightly increased to 5%,

Table 15. Silver Content (%) in *Antoniniani* by Ruler (238–305 CE) according to Date of Alloy Study

Ruler (CE)	1900s–1950s (Bolin 1958)	1960s (Callu 1969)	1970s–1990s (Harl 1996)
Gordian III (238–244)	c. 50	37–47	49–42
Philip I (244–249)	c. 50	31–43	47–43
Trajan Decius (249–251)	c. 50	37–41	41
Trebonianus Gallus (251–253)	c. 50	34–42	36
Valerian (253)	30–40	34–36	22
Valerian (255–260)	30–40	14–34	17–19
Macrianus/Quietus (260–261)	Unknown	Samosata: 14	Unknown
Gallienus (260–61)	17–18	10–17	17–18
Gallienus (262–266)	9–15	3–15	9–15
Gallienus (267–268)	5–6	2–6	6
Claudius (268–270)	2–3	2–3	2–3
Aurelian (270–273)	4–5	2–4	3
Aurelian (274–275)	4–5	2–5	5
Tacitus (275–76)	Unknown	5	5
Probus (276–282)	Unknown	4	5
Carus and sons (282–285)	6	5	5
Diocletian (284–294/6)	1.0–4.5	4.5	5
Diocletian (294/6–305)	0–0.2	Copper	4.5

and remained at that level until the reign of Diocletian. During the ten years prior to Diocletian's reform, the silver content of the coin fluctuated between 5% and 1%. With the reform, the new *antoninianus*—struck between 294 or 296 and 305 CE—was reduced to a bronze coin.

However, studies that mention alloy content for Eastern *antoniniani* note a clear discrepancy with these figures (*RIC* V/I:252; Hedges and Robins 1963:237; Callu 1969:342–343; Walker 1978; King 1986; Harl 1996:130). For example, from 240 CE into the years of Gallienus's sole reign (262–266 CE), the silver content of *antoniniani* from the Antioch mint was considerably lower than in the rest of the empire (Fig. 6). By the end of Gordian III's reign, in the early 240s CE, the silver alloy of Antioch and the rest of the empire were almost en par (43–45% versus 42–47%). Then, a radical fall occurred in the silver alloy of Antioch, and by the reign of Valerian, the alloy of the Antioch mint had been debased to a level of 16–18% compared to 22–36% in the rest of the empire. The fineness of the Antioch coins continued to decline during Gallienus's sole reign (from 16% to 13%), but remained relatively constant compared to the radical drop in the rest of the empire (from 18 to 2%). By Claudius's reign, the alloy used in the Antioch mint may have been finer (7–8%) than in many other parts in the Roman Empire (1.7–3.0%). By the time of Aurelian's mint reforms in 274 CE, these differences had all but disappeared, and coins were universally struck with an alloy averaging 4–5% of silver. Nevertheless, some Western

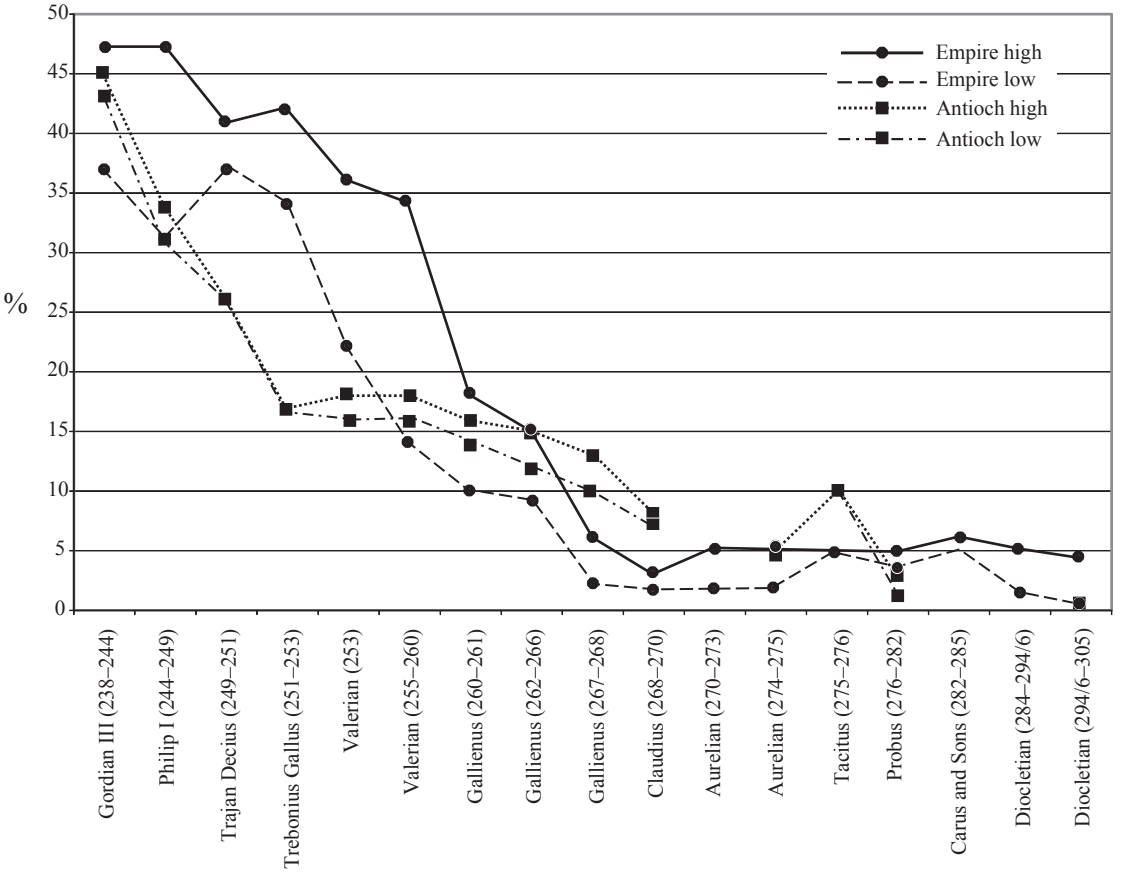

Fig. 6. Coins from the Roman Empire and Antioch: high and low estimates of *antoniniani* silver content (238–305 CE).

mints still struck coins with silver content of as little as 2%. An attempt by Tacitus in 275–276 CE to introduce heavy *aurelianiani* with a 10% silver alloy in Antioch was not repeated in the West, where the coin remained debased at 4–5%. During Probus's reign, the fineness of the Antioch coins apparently fell more drastically (from 2.8% to 1.0%) than in the rest of the empire (from 5% to 4%). As noted, by the time of Diocletian's reform, the *antoniniani* of the Antioch mint had become mere silver-coated bronze coins.

Metrological studies that record the debasement of the *antoninianus* during this period usually link the reduction of the silver alloy to a decrease in the weight of the coin. For example, Harl (1996:130) noted an almost linear relationship between the sharp decline of the *antoninianus*'s alloy in the West, from 43.12% to 5%, and the reduction in weight, from 4.12 g to 3.15 g.

The weight differentiation of the Qula coins seems to indicate a similar process in the East. The mean weight of the coins in the hoard is 3.15 g (Fig. 7), which interestingly is identical to the minimum Western *antoninianus* weight found by Harl (1996:130). The mean weight, however, is a weak indicator for a process of debasement. A closer scrutiny of the Qula coin weights shows (Table 16) that coin weights fluctuated within a rather wide range: between 2.3 g and 5.67 g. As Table 16 shows, the distribution weights for the Qula coins by mint reveals a picture of greater complexity. Both the coins with the maximum weights and those with the minimum weights were minted in Antioch between 266 and 269 CE. This is not unusual, as coin weights tended to shift radically not only among rulers, but also under individual reigns and even among different issues struck at the same mint. Rulers of different periods with statistically sound coin

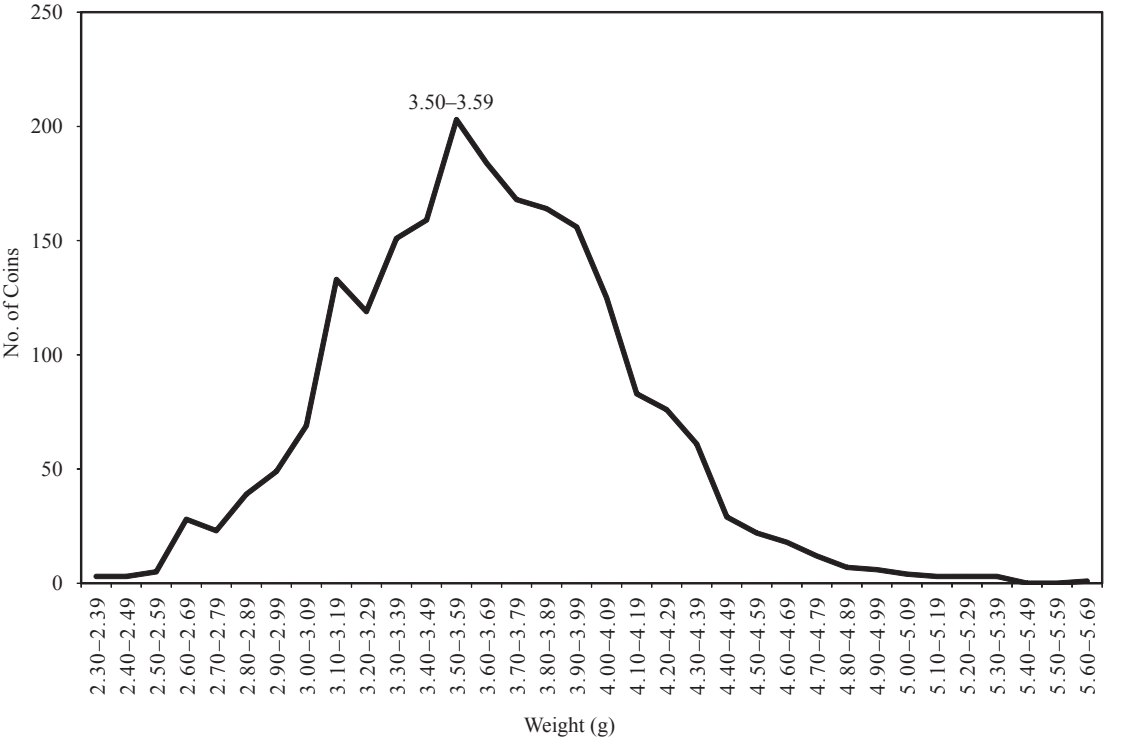

Fig. 7. The Qula hoard: weight distribution of *antoniniani*.

Table 16. The Qula Hoard: Weights (g) of Eastern *Antoniniani* by Ruler (247–296 CE) and Mint

Ruler (CE) \ Mint	Antioch				'Samosata'				Tripolis				Total
	Min.	Max.	Average	No.	Min.	Max.	Average	No.	Min.	Max.	Average	No.	
Philip I (244–249)	2.91	2.91	2.91	1									1
Volusian (251–253)	2.65	2.65	2.65	1									1
Trebonianus Gallus (251–253)	3.86	4.87	4.36	2									2
Valerian I (253–254)	2.76	4.95	3.70	67	2.55	5.20	3.69	171					238
Valerian I (255–260)	2.66	4.52	3.54	30									30
Gallienus (253–260)	2.83	5.12	3.61	67	2.53	4.71	3.66	187					254
Salonina (255–260)	3.66	4.84	4.20	4	2.74	5.37	3.71	65					69
Valerian II (253–258)	2.63	3.77	3.19	6	3.16	4.82	3.93	10					16
Saloninus (258–259)	3.02	4.40	3.53	8	2.92	4.39	3.73	26					34
Gallienus (260–268)	2.33	5.67	3.65	887									887
Salonina (260–268)	2.64	5.05	3.59	117									117
Quietus (260–261)	3.97	3.97	3.97	1									1
Macrianus (260–261)					4.57	4.57	4.57	1					1
Claudius Gothicus (268–270)	2.30	5.31	3.52	277					3.28	3.67	3.93	5	283
Aurelian (270–275)	3.13	5.05	3.90	11	3.28	3.67	3.93	5					16
Severina (270–275)	3.64	4.74	4.10	3									3
Vabalathus (271–272)	2.99	3.37	3.18	2									2
Tacitus (275–276)	3.43	4.05	3.73	3									3
Probus (276–282)	2.57	5.25	3.88	61					2.91	4.98	3.89	19	80
Carus (282–283)	2.97	4.33	3.83	5									5
Numerian (282–284)	3.14	4.58	3.66	10					3.57	4.13	3.78	3	13
Carinus (283–285)	3.30	4.41	3.83	13					3.90	3.90	3.90	1	14
Diocletian (284–294/6)	2.84	4.34	3.77	5					3.35	4.54	3.82	5	10
Maximian Herculius (286–296)									3.67	3.67	3.67	1	1

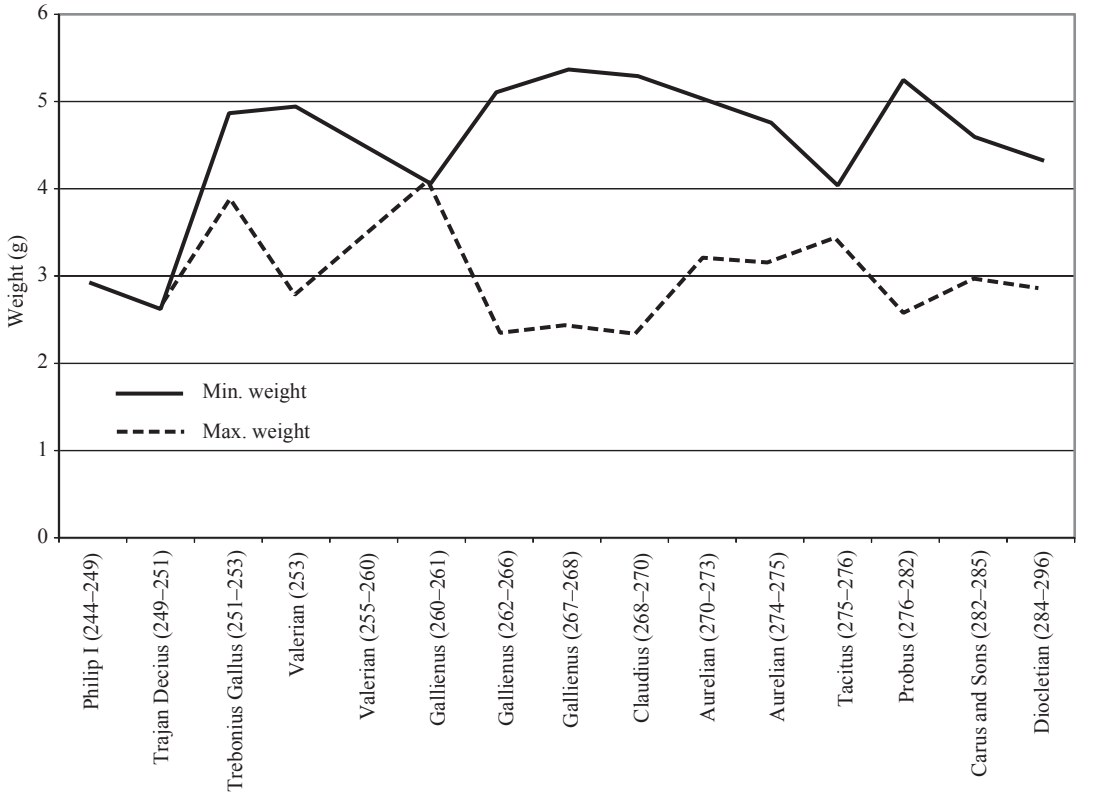

Fig. 8. The Qula hoard: minimum and maximum weight distribution.

samples, like Valerian, Gallienus, Claudius and Probus—all produced a similar range of coin weights: from 2.5 g to 5.0–5.5 g (Fig. 8). A more detailed weight analysis of the Qula coins minted in Antioch during Valerian's and Gallienus's reigns, arranged according to the 15 issues identified between 254 and 268 CE (*MIR* 36, 43, 44), indicate similar inconsistencies in the weight pattern (Fig. 9).

To further investigate weight distribution patterns for the years 254–268 CE, which saw a gradual debasement of *antoninianii* from 16–18% silver to only 10–13%, the 15 issues were divided into three groups (1–6; 7–12; 13–15). These groups largely correspond to the phases identified between major shifts in the fineness of the coin that occurred during this period: Issues 1–6 were struck during Valerian and Gallienus's joint rule (253–259 CE) until the first years of Gallienus's sole rule (260–261 CE); Issues 7–12 were minted during the latter's sole rule (262–266 CE); and Issues 13–15 were struck during the last years of his rule (267–268 CE). As Fig. 9 shows, the weight distribution patterns for the three groups of issues are remarkably similar. Most of the coins in all three periods fall within 3.10–3.99 g, with a decline in the number of coins with higher or lower weights. Thus, no downward shift in weight can be noted to parallel the documented decline in silver content over this period of time. In other words, although silver content declined, weight did not.

The minimum and maximum weights for each of the individual issues also demonstrate that weight did not decline over time (Fig. 10). In fact, in the last two groups of issues—Nos. 7–12 (262–265 CE) and 13–15 (266–268 CE)—both maximum and minimum weights increased and decreased. Interestingly, some of the widest weight fluctuations in the hoard occurred in issues that contained the largest

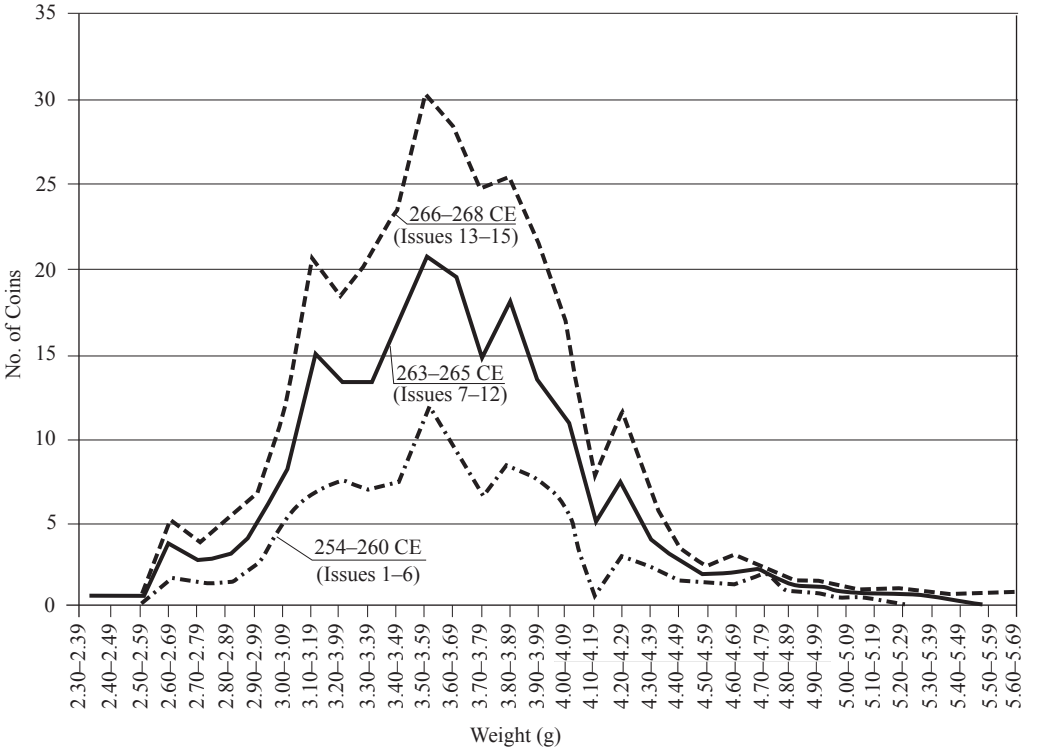

Fig. 9. The Qula hoard: weight analysis of billon from Valerian and Gallienus's rule (254–268 CE) minted in Antioch.

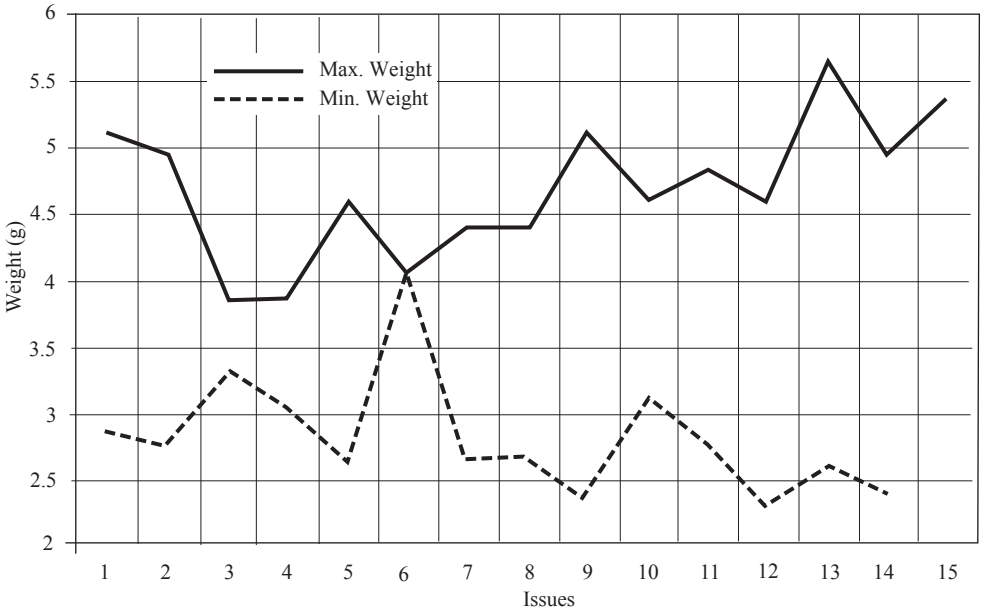

Fig. 10. The Qula hoard: minimum and maximum weight distribution of coin issues during Valerian's and Gallienus's rule (253–260 CE) from the Antioch mint.

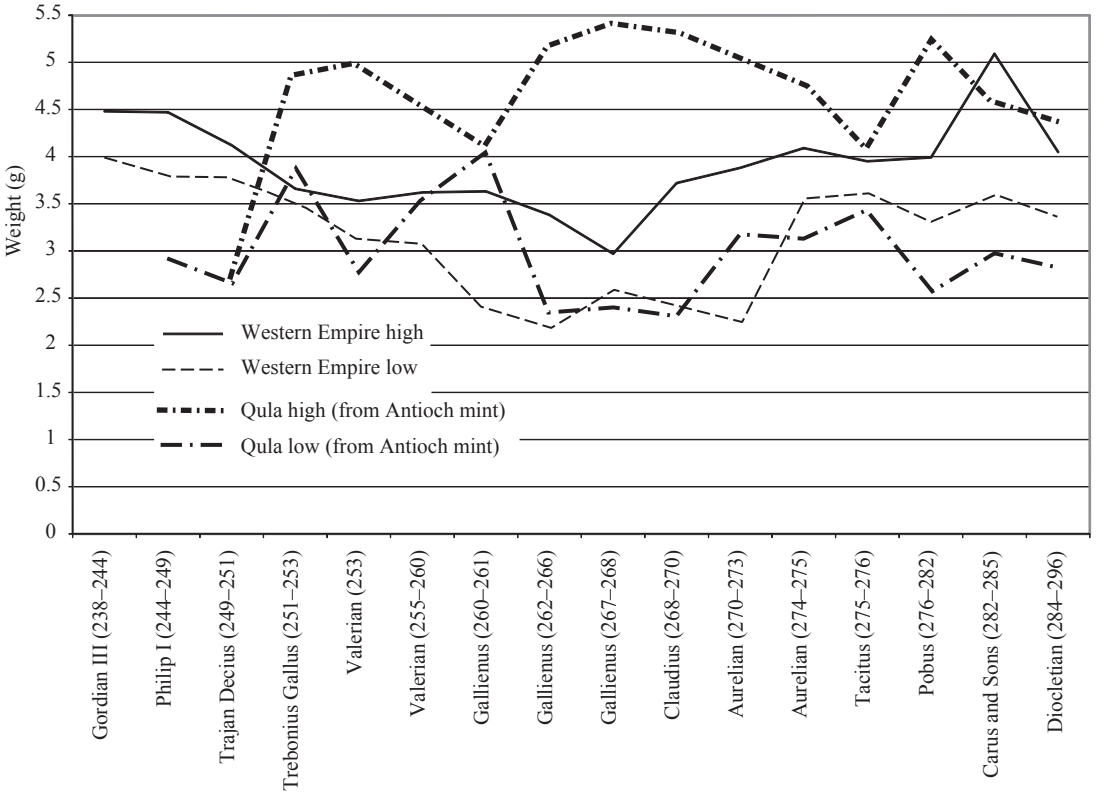

Fig. 11. Western mints (Callu 1969) and Qula hoard coins minted in Antioch: maximum and minimum weight distribution by reign (244–296 CE).

number of coins, e.g., Nos. 9, 13–15. However, the data shows that the average weight of the coins remained quite stable during the 250s CE.

A comparison of the Qula hoard coins minted in Antioch with coins minted in the West (Callu 1969; Fig. 11) suggests that until the Aurelian reform, Eastern coins were minted on a heavier weight-scale than coins from Western mints. This seems to imply that the minting pattern at Antioch deviated from the general downward trend in weight noted by Harl (1996).

SUMMARY AND DISCUSSION

The Qula hoard (Figs. 12–23; see online catalogue) was deposited not long after 296 CE, within the premises of a farm that was erected during the second half of the third century CE. The hoard is medium in size (n = 2019), and is composed exclusively of billon radiates: mostly *antoniniani* and a rather small number of the heavier *aurelianiani*. Chronologically, it consists of an uninterrupted series of coins spanning from 247 until 295/6 CE, with the bulk of the coins (1679) comprising radiates minted between 253 and 270 CE. The coins were issued almost exclusively in Eastern mints (Antioch, 'Samosata' and Tripolis), indicating that the coins from these mints circulated locally. None of the coins are barbarous or imitation radiates, unlike western hoards where such coins are amply present (Robertson 1974:21–22; Zeepvat et al. 1994). The coins vary greatly in weight. They also show different grades of wear, irrespective of their date. This is a strong indication that the coins were not selected before burial, but rather taken from money circulating at the time of the hoarding.

Neither the archaeological nor the numismatic evidence indicate that the coins were hidden in the room and abandoned during an emergency, such as a war or conquest. No signs of a destruction layer or sudden discontinuity in the site's habitation were detected by the excavators (Miriam Avissar and Ianir Milevski, pers. comm.). Similarly, the coins found in the hoard bear no evidence of a radical break. On the contrary: the hoard represents a long, continuous period of almost 50 years, during which the *antoniniani* circulated abundantly.

The conjunction of the interment date of the hoard and the date of the building's erection could support the argument that the hoard served as a ritual foundation deposit of the type often inserted when a building was constructed (Aitchison 1988:277–279). However, the location of the hoard, on a floor in a nondescript room within the structure, seems to suggest otherwise. The large number of coins seems to indicate that this was a savings hoard, accumulated over the lifetime of one or two people. In this case, it would be expected that such a hoard contain a variety of different denominations and types, representing a long period of time (Kent 1974:202). This is not the case with the Qula hoard, which contains a single type of coin with a limited chronological range (less than 50 years).

Under what circumstances, then, was the hoard concealed? Two important features—the rural provenance of the hoard and its deposition date—strongly indicate that its accumulation was related to a local agricultural enterprise, and that its deposition was due to the economic and monetary changes that took place during Diocletian's reign. The farmhouse where the hoard was found may have been one of the numerous estates that developed after the first century CE in the rich hinterland of Diospolis (Roman Lydda), famous for its vines, grains and vegetables (Safrai 1994:90–132). Thus, the owner of the estate or his foreman may have amassed the hoard as rent, taxes or proceeds from the sale of merchandise.[36] To find large sums of billon in rural areas during this period is less surprising than it seems. Considerable sums of billon coinage presumably circulated in many parts of the Syrian countryside from the 260s CE onward, as shown by other large hoards found in rural settings (e.g., Kafr Nebudi, Capernaum, Nahr Ibrahim; see Appendix 1). Despite the severe monetary crisis at the end of the third century CE, substantial sums of money in the form of billon radiates apparently continued to circulate in the countryside in the East (Harl 1996:268–269).

The deposition date of the Qula hoard in the late 290s CE parallels at least eight other Syrian hoards with similar composition and deposit dates. This phenomenon seems to suggest that the hoarding of *antoniniani* and *aurelianiani* was the consequence of the monetary reforms of Diocletian and the subsequent hyperinflation that occurred between 293 and 301 CE. Diocletian's reform introduced the billon *nummus* and its radiate fractions. These new currency units replaced the older *antoninianus* and *aurelianianus* in daily transactions, although the old *aurelianianus* apparently still circulated, either en par or slightly undervalued to the new *nummus* (Harl 1996:150).

The rapid collapse of Diocletian's monetary reform shortly after 296 , which led to repeated rises in prices and salaries within a short period, up to the Edict of Maximum Prices in 301 CE, presumably put the Qula possessor of this large quantity of old *antoniniani* in a quandary:[37] whether to spend the by-now undervalued coins or to save them in hope of receiving a larger return if deposited as bullion. In such an economic climate it made sense to hoard coins, which, although demonitized, were of increased worth as bullion. By the first decade of the fourth century CE, the hoard may have been worth several times its pre-reform value in bullion.[38] However, for some unknown reason the hoard was never retrieved by its owner(s) and was already forgotten by the time the building was renovated, two centuries later.

Fig. 12.

Fig. 13.

Fig. 14.

Fig. 15.

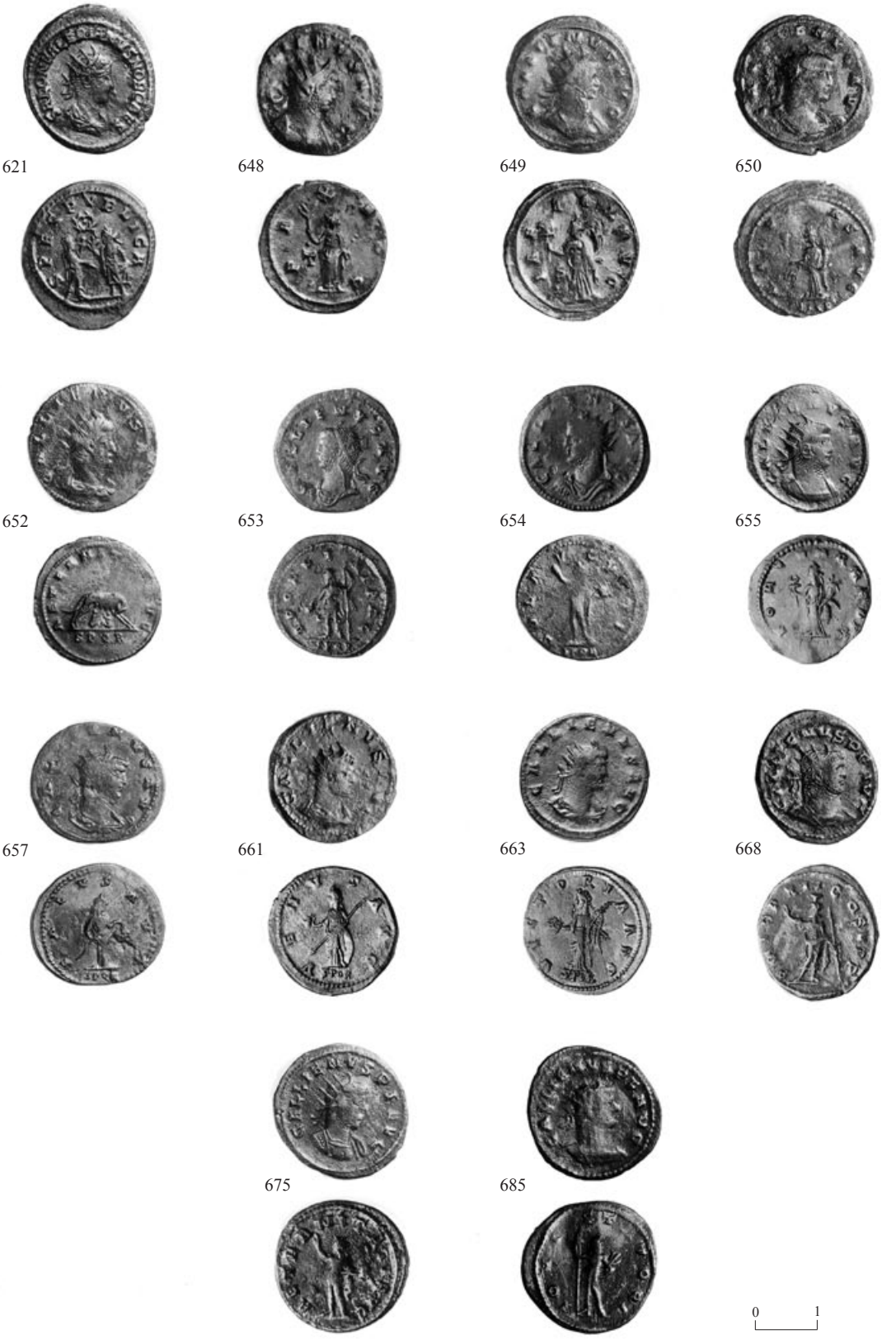

Fig. 16.

Fig. 17.


1038
1067
1093
1115
1134
1143
1168
1169
1173
1179
1191
1227
1236
1250
0
1

Fig. 18.


1261
1272
1274
1280
1310
1489
1521
1551
1560
1599
1614
1631
1645
1669
0
1

Fig. 19.


1670
1671
1672
1674
1675
1680
1704
1733
1754
1788
1792
1797
1830
1839
0
1

Fig. 20.


1855
1856
1859
1926
1937
1944
1949
1950
1951
1954
1959
1960
1962
1967
0
1

Fig. 21.


1969
1970
1973
1974
1975
1976
1986
1998
2025
2038
2040
2050
2058
2059
0
1

Fig. 22.


2060
2063
2064
2067
2071
2079
2080
2083
2084
2097
2098
2103
2108
2109
0
1

Fig. 23.

APPENDIX 1. The Qula Hoard: Frequency of Joint-Reign Coin Types from the Antioch Mint

Göbl Type No.	Legend	Valerian I	Gallienus	Salonina	Valerian II	Saloninus
1557	PM TR P II COS PP	+	-			
1558	AEQVITAS AVGG	+	+			
1559	AETERNITATI AVGG	+	-			
1560	DIANA LVCIFERA	+	+			
1561	FORTVNA REDVX	+	+			
1562	PACATOR I ORBIS	+	+			
1563	PIETATI AVGG	+	-			
1564	RESTITVT GENER HVMANI	+				
1565	VICTORIA AVGG	+	+			
1566	VICTORIAE AVGG	+	+			
1567	CONCORDIA AVGG			+		
1569	FELICITAS SAECVLI	+	+			
1570	LAETITIA AVGG	+	-			
1571	ROMAE AETERNAE	+	+			
1573	VENVS VICTRIX	+	-			
1574	VICTORIA AVGG	+	+			
1575	VIRTVS AVGG	+	-			
1576				-		
1577	AETERNITATI AVGG	+				
1584	VIRTVS AVGG	+				
1589	LIBERALITAS AVGG	-	+	-		
1590	VICTORIA AVGG	+	-			
1595	PVDICITIA AVG	-		+		
1598	PMTR PV COS IIII PP	+	+			
1599	FELICITAS AVGG	+	+			
1600	LAETITIA AVGG	-	+			
1601	LIBERALITAS AVGG	-	+			
1602	VICTORIA AVGG	+	+			
1603	VICTORIA GERMAN	+	-			-
1604	VICTORIA P ART	-	-		+	
1605		-	-	-		
1606	D II NVTRITVTORES	-	-			+
1607	VICTORIA GERMAN	-	+			

NOTES

[1] Two seasons of excavation, led by Miriam Avissar and Ianir Milevski on behalf of the Israel Antiquities Authority, were undertaken at the site in March 1995–February 1996 and in March–April 1997, as part of the Cross-Israel Highway (Road 6) Project (Permit Nos. A-2280, A-2628; Avissar and Shabo 2000). The hoard was discovered in January–February 1996. This large group of coins was expertly cleaned by Ella Altmark (metals preservation laboratory) and photographed by Clara Amit. I would like to extend special thanks to my colleague Miriam Avissar, who graciously allowed me to publish this hoard ahead of the final report, understanding the singular significance of this large coin treasure. The manuscript of this article was submitted for publication in 2004.

[2] The large Capernaum hoard, which contained 1545 *antoniniani* and 270 *tetradrachms*, was also found near an agricultural installation. However, it was preserved in a jar under a millstone adjacent to the synagogue (Spijkerman 1958–1959:294). Data on hoards from Roman Britain larger than 1600 coins, the majority of which contain *antoniniani* and fourth-century CE coppers, show that coins were most commonly stored in money bags, wooden boxes or coarse-ware pots (Robertson 1974:23–27).

[3] The *aurelianianus* was an improved *antoninianus*, introduced by Aurelian in 274 CE. It was heavier (c. 3.88 g) and contained slightly more silver (4.5–5.0%) than the debased *antoninianus* of his predecessor, Claudius I (268–270 CE), which contained 2–3% silver and weighed 2.6–3.0 g (Harl 1996:131–146; Cope 1997). The question as to the degree to which the *aurelianiani* constituted 'improved' coins remains open. Callu (1969:324), for instance, does not perceive any "veritable mutation" in these coins.

[4] In the western part of the Roman Empire, hoards were made up of a mixture of denarii and *antoniniani*. A striking example is the huge Reka-Devnia hoard found in Thrace, consisting of more than 81,000 denarii and *antoniniani* (Mouchmov 1934).

[5] My thanks go to Cathy King of the Ashmolean Museum, Oxford, for her comments on this subject. King (pers. comm.) noticed a similar continuation of local circulation patterns in the western part of the Roman Empire, although the large number of copies there somewhat complicates the picture.

[6] These studies were incorporated into the Aufbau der Romischen Munzpragung series, edited by scholars of the Viennese school headed by Karl Pink, with the aim of creating a systematic framework for research of *antoniniani* minted throughout the Roman Empire. The series were published between 1933 and 1963 in the Numismatische Zeitung. For a detailed listing, see *MIR* 47:112.

[7] Particularly noteworthy are the publications of the Capernaum hoard (Spijkerman 1958–1959); the large Gibraltar hoard, which contained a sizable number of *antoniniani* minted in the East (Gallwey 1962); Carson's (1967–1968) chronological revision of the Kafr Nebudi (Hama) hoard; Elks' (1975) study of the Eastern mints of Valerian and Gallienus, based on two hoards from Asia Minor; and the French scholars Brenot and Pflaum (1965), Bastien and Huvelin (1969), de Roquefeuil (1970) and Pflaum (1980).

[8] According to Estiot (1995), the main flaw in Göbl's work is the little use made of hoard evidence and non-numismatic, namely epigraphic and papyrological, sources.

[9] Subsequently, it moved to Milan (255–256 CE) and thence to Ticinum (270–275 CE).

[10] This trilingual inscription, in Middle Persian, Parthian and Greek, was discovered by E. Schmidt of the Oriental Institute of the University of Chicago in 1936–1939. It was engraved on three walls of a tower-like stone building, in front of the rock-cut graves of the Achaemenian kings of Persia at Naqsh-I-Rustam, near Persepolis (Maricq 1958).

[11] Carson (1967–1968:134) mistakenly identified this second mint with Cyzicus. As a result, his conclusions about the circulation of coins during this period radically deviate from mine.

[12] Virtually no Valerian II types were found at large excavations such as Dura-Europos (Bellinger 1949) or Antioch (Waage 1952). The computerized IAA numismatic database contains only a few exemplars: one found during excavations at Ḥorbat Qasṭra (Castra), near Haifa (IAA 77434), an unprovenanced find from northern Israel (IAA 58261) and a third specimen of unknown provenance (IAA 56420). My thanks to H. Sokolov and G. Finkielsztjen for allowing me to mention the Ḥorbat Qasṭra find.

[13] According to Cathy King (pers. comm.), the SPQR coins during Gallienus's reign *could not* have been minted in Cyzicus, as the degree of disruption in Asia Minor that followed the Gothic invasions in the later 260s made it unlikely that Cyzicus was operating at that time as an imperial mint.

[14] Bland (1986–1987) noted that these post-263 CE issues were struck in eight *officinae* marked with the Greek numeral A–H.

[15] These coins are mentioned courtesy of the excavators: Bar'am (IAA 84584; Syon, forthcoming)—Fanny Vitto and Danny Syon of the

IAA; Ḥorbat Arbel (IAA 96328, unpublished)—Mordechai Avi'am of Kinneret College; Mishmar David (IAA 122610, unpublished)—Eli Yannai of the IAA.

[16] Alföldi, however, did suggest a general chronology of the officina marks: first the unsigned coins; then the globule type; and finally, the eight Greek *officinae* (A–H).

[17] These authors suggested the following officina chronology: first issue—the unsigned and globule type; second issue—the eight Greek *officinae* (A–H).

[18] These are the eight so-called Greek types; the unsigned group with a left-facing bust; and finally, the group with the globule in the exergue.

[19] For an important study of these coins, see Bland 2011.

[20] I wish to thank Helena Sokolov and Gerald Finkielsztejn of the IAA for their permission to cite this material, excavated at Ḥorbat Qasṭra in 1996.

[21] Single specimens registered in the computerized IAA numismatic database come from excavations undertaken between 1971 and 1996 in Jerusalem, Lod, Caesarea, Shuni, Ḥaẓeva, Tel Dover, Ha-Gosherim, Tiberias and Qaẓrin.

[22] IAA Nos. 52193, 44194, 29782, 67690, 64304, 77433, 83139, 77975, 79528, 82818 (Syon 2000:5), 81235 (bronze *tetradrachm*), 45832, 46527. All but IAA 82818 are unpublished.

[23] See n. 3.

[24] A drastic decline in settlement density and material culture in the the Negev was noticed for the period of the Palmyrenian usurpation until the reconquest of the East by Aurelian. This seems to have been paralleled by a virtual disappearance of coins in this region in the 270s CE. My thanks to Yigal Israel of the IAA for pointing this out to me.

[25] The catalogue below follows Estiot's (1987:34–35) chronology, noting five emissions for the Antioch mint. This chronology is based to a large degree on Brenot and Pflaum's (1965:189–190) publication of the Syrian B hoard. Weder (1984:207–208) suggested to further refine the classification/dating of the five issues by dividing issues 2, 3 and 5 into two parts each.

[26] The coin may have been a mule or have appeared in both issues (Cathy King, pers. comm.).

[27] The coins listed in the computerized IAA numismatic database are: IAA 26773 (Khirbat Namra; Ariel 2005), IAA 40201 (Jerusalem, Southern Wall Excavations; unpublished), IAA 65801 (Caesarea; Bijovsky 2015), IAA 87351 (Ashdod-Yam; Kool, forthcoming). In addition, the database contains two unpublished specimens of unknown provenance (IAA 52199, 78551).

[28] Callu (1969:345) noted the absence of Eastern hoards that can provide data on the circulation of Probus's currency in this region.

[29] Pink (1949:38–39) mentioned three Western hoards containing large numbers of Probus's coins: La Venera (Italy), with 13,206 out of 47,000 coins (26%); Nieder-Rentgen (Luxemburg), with 1834 out of 15,222 coins (12%); and Semlin (Yugoslavia), with 777 out of 2264 coins (34%).

[30] Pink was well aware of this shortcoming. He tersely pointed out that "Eigentliche Ostfunde fehlen" (Pink 1949:38). Several years later, Pink (1963b) explained the importance of the Nahr Ibrahim hoard for the chronology of the Eastern mints: whereas the La Venera hoard contained barely 50 coins of Probus minted in Antioch, the Nahr Ibrahim contained more than 2000 coins of this mint.

[31] Prior to the publication of Pink's (1963a; 1963b) study, large Western hoards, namely La Venera and Nieder-Rentgen, had served as the basis for establishing the Eastern sequence of these rulers. These large hoards, however, contained only a few coins belonging to these rulers—somewhere between 1:15 and 1:20—and even fewer Eastern issues.

[32] The type was introduced for the first time in an Eastern mint on the D II NVTRITVTORES *antoninianus* of Saloninus, which is dated to 258–259 CE (*MIR* 36, 43, 44: No. 1606; Cat. Nos. 613–620), but was used on a substantial scale in the Eastern mints only from the reign of Carus and his family onward.

[33] The one exception is the Tiberias hoard (Hamburger 1964), in which 24 of its 99 coins (24%) belong to the pre-reform period of Diocletian's rule.

[34] Most of the hoards from Britain and France contain very few pre-reform coins of Diocletian (Cathy King, pers. comm.).

[35] See especially Tyler (1972), Cope (1972) Ponting (1998). The main methodologies for alloy analysis of *antoniniani* are chemical analysis, X-ray fluorescence analysis, instrumental neutron-activation analysis and mass–spectography. For an overview of the research, see Bolin (1958:248–333), Callu (1969:244–248, 342–343) and Harl (1996:126–157, especially 130, 146–148, nn. 44–50).

[36] The relatively late date of the farm's establishment—the second half of the third century CE—could imply pagan ownership. In the third century CE, especially in the coastal plain, large estates owned by non-Jews supplanted small Jewish landowners (Safrai 1994:100, 337–338). It is not unlikely that a substantial number of Roman veterans of the Legio X Fretensis stationed in this area bought land and

settled down after being discharged. However, no specific mention of this is made in written sources of the third century CE. I thank Edward Dabrowa of Jagiellonian University, Krakow for his comments on this subject.

[37] Diocletian referred in the proem to his price edict for a four- to eight-fold price increase (Giacchero 1974:134–137), which is the figure quoted by Harl (1996:282). Relying on the data collected by Callu (1969:395–407), Hendy (1985:459) considered this an exaggerated figure.

[38] The promulgation of the Edict of Maximum Prices by Diocletian in 301 CE did nothing to stop the inflationary process. As a result, within less than 25 years Diocletian's *nummus* had devaluated by 20 times its original intended value (Harl 1996:283).

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