

The Silver Mint of Damascus under Demetrius III and Antiochus XII (97/6 BC–83/2 BC)

PLATES

OLIVER D. HOOVER,* ARTHUR HOUGHTON,**
AND PETR VESELÝ***

[abstract]

INTRODUCTION

In 1939, Edward T. Newell, one of the great presidents of the American Numismatic Society and the father of systematic Seleucid numismatic study, presented his findings on the coinages of Demetrius III and Antiochus XII struck at Damascus as part of his monograph, *Late Seleucid Mints in Ake-Ptolemais and Damascus*. This important catalogue included twenty-two specimens for the reign of Demetrius III and three for that of Antiochus XII. Recent discoveries have now increased the number of known Damascene tetradrachms for these rulers more than fourfold. The existence of previously unknown silver fractions of Demetrius III has also been revealed. In light of these new developments it is useful almost seventy years after Newell to develop a full die study for these interesting late Seleucid coinages.

*hoover@numismatics.org

DIE USAGE

The evidence of die usage for Demetrius III indicates that his Damascene tetradrachms were a modest coinage for the period. A single obverse die is known for SE 216 (97/6 BC), possibly indicating that the reign of Demetrius III did not begin until late in the year. Counting all dies used in a particular year, five dies have been identified for SE 217 (96/5 BC), 3 for SE 218 (95/4 BC), 4 for SE 219 (94/3 BC), 2 for SE 221 (92/1 BC), 8 for SE 222 (91/0 BC), 3 for SE 223 (90/89 BC), 2 for SE 224 (89/8 BC), and 2 for SE 225 (88/7 BC).

When Esty's method of estimating the original number of obverse dies is applied to the die data,¹ a maximum of 2 dies are likely to have been used in SE 216, between 5 and 7 in SE 217, between 3 and 5 in SE 218, between 4 and 7 in SE 219, 2 or 3 in SE 221, between 8 and 26 in SE 222, between 8 and 40 in SE 223, between 2 and 3 in SE 224, and 3 to 17 dies in SE 225 (see Table 1). These estimates are calculated at the 95 percent confidence level and the observed number of dies is taken into consideration in cases when it is greater than the lower endpoint of the confidence interval of the estimated number of dies.

Table 1. Estimated Damascene Tetradrachm Dies for Demetrius III

Year (SE)	Observed data			Estimates		95% confidence interval for the number of dies
	coins	dies	singletons	coverage	dies	
216	7	1	0	100%	1	0.7–1.5
217	28	5	1	96.4%	5.7	4.5–7.2
218	11	3	0	100%	3	2.0–4.6
219	15	4	1	93.3%	4.8	3.2–7.2
220	0	0	0	–	–	–
221	14	2	0	100%	2	1.5–2.7
222	15	8	4	73.3%	13.6	7.4–26.4
223	4	3	2	50%	8	8–40
224	8	2	0	100%	2	1.3–3.3
225	3	2	1	66.7%	3.8	3.2–16.8

While the extremely small size of the samples for each year make all of these numbers statistically dubious,² nevertheless it seems clear that there was fairly stable

1. W. Esty, "How to Estimate Dies and the Average Size of a Sample," *Numismatic Chronicle* 166 (2006), pp. 359–364.

2. Especially the point estimates of the coverage should be taken extremely cautiously because their confidence intervals cannot be computed via Esty's formula which is not applicable for such small samples (see Esty, *ibid.*, formula (5) and discussion on p. 362). Moreover, the obverse dies A6, A8, A11 and A19 were used in more than one year (the die A11 was even used in three years: SE 219, 221 and 222), which somewhat distorts the observed numbers of coins struck from these dies in the individual years when these dies were used.

annual die usage in the period from SE 217 (96/5 BC) to SE 219 (94/3 BC).³ If Demetrius' capture by the Parthians brought his Damascene coinage to an end early in SE 225 (88/7 BC), then this would account for the apparent reduced production in this year. It is somewhat more difficult to explain the low die usage of SE 221 and what appears to be a significant increase in production in SE 222 and 223. We hypothesize (below) that the absence of coinage in SE 220 (93/2 BC) indicates that Damascus was lost to Demetrius this year; if so, the lowered rate of die usage in SE 221 (92/1 BC) suggests that he managed to reclaim the city only later in that year.

In addition to the absence of recorded coins for Demetrius in SE 220, the obverse die link (A11) between issues of SE 219 (P52–P54) and SE 221 (P55–P60) also argues against the possibility that a Damascene coinage was actually struck for Demetrius in SE 220, but has now been lost. Assuming that the large die estimates for SE 222 and SE 223 are not completely artifacts of the small sample size and the presence of singleton dies, the impressive leap in production at this time may possibly have had something to do with funding the king's conflict with the Hasmonaean priest-king Alexander Jannaeus. The battle of Shechem, which pitted the forces of these two rulers against each other, is usually dated to c. 88 BC (i.e., SE 224), but the language of Josephus does not preclude the possibility that the battle took place in late SE 223 (90/89 BC).⁴

Unfortunately, the tetradrachm sample for Antiochus XII, which amounts to a mere twelve specimens spread over five years, is far too small to make a reasonable production estimate. The extreme rarity of the coins prompted Newell (who only knew of three examples) to suggest that the king had exhausted the Damascene treasury, but the identification of two distinct dies for SE 226 (87/6 BC) and of three distinct dies for SE 227 (86/5 BC) raise the possibility that the mint could have continued to produce at roughly the same annual rate as it had under Demetrius III in the first two years of his reign. The single die known for the last two years, however, may possibly point to a lack of the resources necessary to continue the earlier higher rate of production. Single dies are also known for the tetradrachms of Aretas III, who succeeded Antiochus XII at Damascus, and Tigranes II, whose forces occupied the city and caused coins to be struck in the name of the Armenian king from SE 241 (72/1 BC) to SE 243 (70/69 BC).⁵ The

3. A more accurate picture of the total production of dies at Damascus in this period may be obtained if the die data is aggregated, either for the nine years that the mint struck coinage, or in the two year sets in which coins were issued—that is, SE 216–219, and SE 221–225, see statistical appendix.

4. Jos. *AJ* 13.377–378, 384.

5. Y. Meshorer, *Nabataean Coins* (Jerusalem, 1975), no. 5; Y. T. Nercessian, *Silver Coinage of the Artaxiad Dynasty of Armenia* (Los Angeles, 2006), pp. 80–82.

extreme rarity of all of these coins may indicate that the vast majority disappeared into the melter's pot, perhaps during the course of the reorganization of Syria as a Roman province (64 BC) and the Roman civil wars (49–30 BC).

METAL QUALITY

Many of the tetradrachms and drachms of Demetrius III are remarkable for exhibiting tears in the surface silver that reveal an inner core of darker and often brownish metal. This feature has been recognized for nos. 11, 30, 32, 35, 40, 49, 53, 55, and 62–65 in the tetradrachm catalogue and for no. 2 of the drachm catalogue. At first it was thought that the coins exhibiting this characteristic were examples of officially plated coins,⁶ but an examination of several specimens under the microscope failed to reveal the tell-tale copper cores that characterize most ancient counterfeits of Seleucid coins.⁷ Moreover, specific gravity analysis of a tetradrachm of Demetrius III of SE 219 (94/3 BC) and two tetradrachms of Antiochus XII of SE 226 (87/6 BC) and SE 229 (84/3 BC) yielded results of 10.08, and 9.99 and 9.85, respectively. Since the specific gravity of pure silver is 10.46, it is clear that the darker core metal is of a different, probably more debased, composition from that of the surface.⁸

This evidence, which should be confirmed by the testing of additional specimens and full metallurgical analysis,⁹ may suggest that the Damascene coins had their appearances improved through a process of surface enrichment that drew the good silver onto the surface while relegating impurities to the core. Some degree of surface enrichment can occur from the heating of the blanks and the force of the hammer blow at the time of striking. However, the tendency of the surface silver to delaminate from the baser core may indicate that a more aggressive process was employed at Damascus to draw the pure silver to the surface. The tetradrachm coinage of Philip I at Antioch, which appears to have been made of silver debased to the same level as that of Damascus,¹⁰ rarely features the kind of delamination that appears on the Damascene coins of Demetrius III. It is tempting to think that a method of pickling, like that later used by the Romans to produce attractive silver surfaces on heavily debased antoniniani and nummi,¹¹ might have been employed to improve the appearance of late Seleucid coinage at Damascus. If this interpreta-

6. For the possibility of official plated Seleucid coins, see *CSE* 2, 873, which has die links to the regular series at Antioch and *SC* 2, Appendix 7: Silver Plated Seleucid-type Coins.

7. For examples, see *CSE* 2, 854–906.

8. The coins tested were *CSE* 2, 799, 816–817.

9. The equipment for proper metallurgical analysis was unavailable to the authors.

10. The average specific gravity in a sample of 38 Philip tetradrachms of Antioch was 9.75.

11. L. H. Cope, "Surface-silvered ancient coins," in E.T. Hall and D.M. Metcalf, eds., *Methods of Chemical and Metallurgical Investigation of Ancient Coinage* (London, 1972), pp. 266–271.

tion is correct, then the Damascus coinage of Demetrius III may represent one of the earliest clear examples of deliberate surface enrichment.

Obverse Types

The obverse portraits on the coins of both Demetrius III and Antiochus XII are relatively unexceptional for Seleucid monarchs of the late second and early first centuries BC. The kings always appear in profile facing to the right, wear diadems with ends that fall limply at the nape of the neck, and sport similar hairstyles featuring a hornlike-lock over the ear. This last feature is somewhat more pronounced on the issues of Demetrius III than on those of Antiochus XII.

The only remarkable element of the portraits is the beards worn by the kings. On the issues of Demetrius III, a thin beard along the jaw-line is usual from SE 216 (96/6 BC) to the first part of SE 219 (94/3 BC). However, during the course of the latter year, the beard becomes fuller and bushier, a form that it retains until the final emissions of SE 225 (88/7 BC). Antiochus XII, on the other hand, appears clean-shaven from SE 226 (87/6 BC) to SE 227 (86/5 BC), but grows a beard for the coinages of SE 228–230 (85/4–83/2 BC).

Since the standard Hellenistic royal portrait was clean-shaven in emulation of Alexander the Great,¹² it seems probable that the beards of Demetrius III and Antiochus XII were grown for some special purpose. Earlier bearded portraits of Seleucus II and Demetrius II (first reign) seem to be related to their respective Parthian campaigns.¹³ The beards sported by Philip I Philadelphus and Antiochus XI Philadelphus on their Cilician coinage before the destruction of Mopsuestia are probably indicators of mourning and a desire for revenge upon the city for the role that it played in the murder of their brother Seleucus VI Epiphanes.¹⁴ As a later parallel, the Roman triumvirs Octavian and Mark Antony grew beards as outward signs of mourning and their vows to avenge the murder of Julius Caesar.¹⁵ The beards worn by Seleucus VI and Antiochus X Eusebes on their Antiochene coinages may also be related to vows of revenge or campaigning.¹⁶

12. R.R.R. Smith, *Hellenistic Sculpture* (New York, 1991), p. 21.

13. SC 1.1, p. 233 with nos. 685–686, 711–712, 749–750, 759, 788, 795–798, 822–824; W. Moore, “The Divine Couple of Demetrius II, Nicator, and his Coinage at Nisibis,” *ANSMN* 31 (1986), pp. 137–139.

14. SC 2436–2437, 2439; A. Houghton, “The double portrait coins of Antiochus XI and Philip I,” *SNR* 66 (1987), pp. 79–84.

15. Dio 48.34.3; M. Crawford, *Roman Republican Coinage* (Cambridge, 1974), nos. 488/1–2, 492/1–2, 496/1–2, 534/3, 538/1, 540; J. Pollini, *The Portraiture of Gaius and Lucius Caesar* (New York, 1987), 63 n. 108, 71–73, 91; J. Pollini, Review of D. Boschung, *Die Bildnisse des Augustus* Pt. 1, vol. 2 (Berlin, 1993), *The Art Bulletin* (December 1999), p. 5.

16. A detailed study of bearded Seleucid portraits is currently being prepared by C. Lorber and P. Iossif.

If the beard of Demetrius III is related to campaigning, it almost certainly has something to do with the drawn-out war against his cousin Antiochus X. This conflict probably ended only in c. 88 BC, when the latter was killed in battle and Antioch fell vacant.¹⁷ In this case, the beard should be taken as the visual token of a vow of vengeance that ceased to have meaning after the death of Antiochus X. Demetrius' portrait starts out bearded on his brief coinage at Antioch but quickly becomes beardless. At Uncertain Mint 127 in Cilicia he is always clean-shaven.¹⁸ All of these coins probably date to c. 88/7 BC.

Assuming that the beard of Antiochus XII had some similar meaning, two possible explanations present themselves on the basis of the poor sources for his reign. It might very well have been grown in the context of his final grand campaign against Aretas III and the Nabataean Arabs, who had been a major threat to Damascus since the outset of Antiochus' reign.¹⁹ Despite scant chronological evidence, this war is generally believed to have taken place in 84 BC, the very year in which the beard first appears on the coinage.²⁰ As second, but much less attractive possibility is that Antiochus XII grew his beard to announce his desire for revenge against his brother Philip I, who had previously attempted to seize Damascus in his absence.²¹

Reverse Types

The identity of the female cult statue depicted on the Damascene tetradrachms of Demetrius III has been a matter of scholarly dispute. Early commentators identified the statue variously as that of Demeter, Lydian Kore, or Ephesian Artemis.²² Newell first identified the statue as that of native Atargatis, the *Dea Syria*, based on its decidedly eastern character and the belief that any important fertility goddess would be known by that name in Syria.²³ Lucian of Samosata, writing in the second century AD, offers a description of Atargatis' cult statue at Hierapolis (Bambyce) that is consistent with the iconography:

καὶ τὰ μὲν ζῦμπαντα ατρεκεῖ λόγῳ Ἥρη εστίν, ἔχει δὲ τι καὶ Ἀθηναίης καὶ Ἀφροδίτης καὶ Σεληναίς καὶ Ρέης καὶ Ἀρτέμιδος καὶ Νεμέσιος καὶ Μοιρέων. χειρὶ δὲ τῇ μὲν ἐτέρῃ σκηπτρον ἔχει, τῇ κεφαλῇ ακτινάς τεφορέει καὶ κεστὸν τῷ μούνην τὴν Ονρανίην κοσμέουσιν.

17. O. Hoover, "A Revised Chronology for the Late Seleucids at Antioch," *Historia* 56.3 (2007), p. 291–295.

18. SC 2444–2449; CSE 390–392, 414; CSE 2, 796; SMA 345a–b.

19. Jos. *AJ* 13.390–391; *BJ* 1.101–102.

20. E. Bickerman, *Chronology of the Ancient World* (Ithaca, 1980), p. 131; P. Green, *Alexander to Actium* (Berkeley, 1993), p. 721.

21. Jos. *AJ* 13.387–389.

22. R. Fleischer, *Artemis von Ephesos und verwandte Kultstatuen aus Anatolien und Syrien* (Leiden, 1973), p. 265–266.

23. *LSM*, p. 84 and n. 35.

when you look upon Hera [Atargatis], she presents great diversity of details; for although the whole could truly be considered Hera [Atargatis], nonetheless it contains something of Athena, Aphrodite, Selene, Rhea, Artemis, Nemesis and the Moirai. In one hand she holds a scepter, and in the other a distaff; and on her head she bears rays, and a tower, and that *kestos* (girdle) with which men array Aphrodite Ourania alone.²⁴

The statue on the Damascene coins includes many of the features that Lucian attributes to the later Heliopolitan statue. Although lacking the mural crown, scepter, and distaff, on several tetradrachm specimens, rays clearly shine forth from its veiled head and the ends of a long fillet hang down on each side, probably representing the *kestos*. The prominent grain ears at the shoulders and the heavily ornamented body associate the image with Rhea and Ephesian Artemis, respectively.²⁵ The flower in the statue's hand alludes to Aphrodite and the large face (frequently worn) displayed on its chest probably represents the gorgoneion of an aegis, the attribute of Athena.²⁶ However, unlike its counterpart at Hierapolis, the Damascene cult statue as depicted on the Seleucid coins has no obvious attributes to suggest syncretism with Selene, Nemesis, or the Moirai.

The Nike reverse type employed on the drachms of Demetrius III is unremarkable for the most part, as it is ultimately drawn from the standard repertoire of Hellenistic victorial motifs. However, it is the use of the same type for the early Damascene bronzes of Demetrius III that permits the attribution of the drachms to the same city.²⁷ This attribution is further supported by the use of dates and letter-forms similar to those found on the tetradrachms, and a control link to the hemidrachms, all of which have provenances in Coele Syria.²⁸

The hemidrachms of Demetrius III feature the unique reverse type of a diadem knotted at the bottom. As the single control A associates them with the drachms of SE 217 (96/5 BC) it is difficult to escape the conclusion that both denominations were struck to commemorate Demetrius' coronation late in the previous year. The diadem reverse type is notable not only because it is entirely unprecedented on Seleucid coinage, but also because it appears to be the iconographic source for one

24. Lucian, *Dea Syr.* 31.

25. For the interpretation of the body of Atargatis and Ephesian Artemis as covered in ornaments, rather than breasts, see Fleischer, p. 265. Newell thought that the ornaments were leaves, but this seems unlikely.

26. For the identification of the object as a flower, rather than three ears of grain (*per* Newell), see Fleischer, p. 264. Fleischer only illustrates relatively worn specimens and therefore describes the face as "die große, ovale Scheibe auf der Brust."

27. A. Houghton and A. Spaer, "New Silver Coins of Demetrius III and Antiochus XII at Damascus," *SM* 157 (February 1990), p. 2.

28. Houghton and Spaer, *SM* 157 (February 1990), pp. 2–3.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

Figure 6

of the ubiquitous bronze series of his Jewish nemesis, Alexander Jannaeus (Fig. 1).²⁹

Damascus is only known to have produced tetradrachms and bronzes for Antiochus XII. The reverse type of the former continues the local iconographic program begun under Demetrius III by depicting the cult statue of Hadad, the consort of Atargatis. There can be no doubt that the deity represented is Hadad because the statue depicted on the coins also conforms to the description of his image at Heirapolis. According to Lucian, the Hierapolitan image

καὶ δῆτα το ἡεν του Διος ἀγαλμα ἐς Δία πάντα ὀρη καὶ εἰματα καὶ ἐδρηγ, καὶ μιν οὐδε ἐθελων ἀλλως εἰκάσεις.

is Zeus although they call him by another name [Hadad]...and the god sits on bulls. Certainly, the statue of Zeus resembles Zeus in every respect, such as head and garments and throne; and you would not liken him unto anything else, even if you wanted to.³⁰

The foreparts of two bulls are clear on the coins as is the bearded face inviting comparison with Zeus, the Greek counterpart to Hadad the storm god. The statue also holds a prominent grain ear on the coins, indicating his quality as a fertility god, which the god of Damascus also shared with other syncretistic avatars of Hadad (i.e., Zeus Heliopolitanus and Zeus Dolichenus, etc.) (Fig. 2). The high pointed cap is not a usual attribute of Hellenic Zeus and may be derived from the Egyptian *hedjet* crown worn by Hadad in his early sculptural depictions at Ras Shamra (Ugarit) and elsewhere (Fig. 3).

While the silver fractions of Demetrius III are somewhat generic in their iconography of victory and Hellenistic kingship, the tetradrachm reverse types of Demetrius III and Antiochus XII are notable as the final manifestation of an earlier trend towards civic iconography. Under Demetrius I Soter and Alexander I Balas, local religious types first began to appear on the silver issues struck in his name at Mallus and Tarsus in Cilicia.³¹ On these coins, the indigenous deities Athena Magarsia and Sandan (Figs. 4–5), respectively, replaced the usual dynastic or personal types of the king. Also under Alexander I, a new local silver coinage was introduced in Phoenicia and Coele Syria featuring an eagle reverse type drawn from the Ptolemaic coinage that had been the recognized currency in the region for a century before the Seleucid conquest (Fig. 6).³² Such local types continued

29. Houghton and Spaer, *SM* 157 (February 1990), 3; Y. Meshorer, *A Treasury of Jewish Coinage* (Jerusalem, 2001), pp. 37–38, Group K.

30. Lucian, *Dea Syr.* 31.

31. *LSM*, p. 84; *CSE* 475; *CSE* 2, 443–445.

32. O. Hoover, “*Ceci n’est pas autonomie*: The Coinage of Seleucid Phoenicia as Royal and Civic Power Discourse,” *Topoi Suppl.* 6 (2004), pp. 492–496. An abortive attempt to introduce a local silver coinage in Phoenicia may already have taken place under Antiochus V,



Figure 7

to appear on the Seleucid silver of these cities until the kings ceased to exercise their authority over them. In the cases of Phoenician Tyre and Sidon, the local eagle reverse continued on the silver of the autonomous period, while Sandan and Athena Magarsia were relegated to the civic bronze coinages of Tarsus and Malus in Cilicia.³³ The new civic quality given to the royal tetradrachms struck at Damascus for Demetrius III and Antiochus XII also survived the end of Seleucid rule. The Damascene tetradrachms of Aretas III and Tigranes II (Fig. 7, ANS 1944.100.76964) prominently display the city's Tyche on their reverses rather than some distinctly royal emblem.

INSCRIPTIONS

The numismatic epithets of Demetrius III, *Theos Philopator Soter* ("Father-loving God and Savior") are all calculated to advertise his descent from the Demetrian branch of the Seleucid dynasty. The title *Theos* had been borne by his grandfather, Demetrius II, during his first reign, while Soter had been the epiklesis of his great-grandfather Demetrius I. *Philopator* indicates the king's filial piety towards his deceased father, Antiochus VIII Grypus.

The epithets *Epiphanes Philopator Kallinikos* ("Illustrious, Father-loving, and Nobly-victorious") employed by Antiochus XII serve a similar function. *Epiphanes* had been a regular title of his father, Antiochus VIII Grypus. *Kallinikos* may have been intended as an amplification of his grandfather's title *Nikator* although it was probably also intended to present Antiochus XII as a great war leader who could protect his subjects from the menace posed by the Nabataean Arabs and Hasmonaean Jews.

The cult-name *Dionysos*, which only appears on a unique tetradrachm of SE 230 (83/2 BC), casts Antiochos as the embodiment of the Greek wine-god. Pre-

assuming that the three eagle tetradrachms inscribed *BASILEWS ANTIOCOUPATOROS* are not posthumous issues produced to reinforce Alexander's claim to be an heir of Antiochus IV and therefore the brother of Antiochus V. For discussion of the issue, see O. Mørkholm, *INC, Jerusalem* 1963, pp. 78–79 and A. Houghton and G. Le Rider, "Le deuxième fils d'Antiochos IV à Ptolémaïs," *SNR* 64 (1985), p. 76.

33. *SNG Levante* 927–970, 996, 1009, 1015–1016, 1265, 1268–1269, 1272, 1276, 1278, 1280.

sumably Dionysus is invoked here in his role as the mythological conqueror of the east, rather than as a vegetation god. The adoption of *Dionysos* just before the final conflict with the Nabataean Arabs may be no coincidence. Dushara (Dousares), the primary Nabataean deity, was not infrequently identified with Greek Dionysus because of his powers as a vegetation deity.³⁴

The epigraphy of the coin legends exhibits several notable characteristics. As at Antioch in this period, the *alphas* tend not to be fully formed, but are written as *lambdas* with a dot in the middle and the *upsilons* look like the Latin letter V. The *omicron*, however, retains its traditional small size at Damascus, while at Antioch it had become a much larger letter.

The four-bar *sigmas* generally have very weak apexes, which often give them the appearance of square *sigmas* on worn examples. This tendency is also apparent on the associated bronze coinages and seems to be peculiar to Damascus. The form continued to be in vogue for the city's probable bronze issues under Cleopatra Selene and Antiochus XIII, as well as for Aretas III and Tigranes II.³⁵ In contrast, the contemporary Seleucid mints at Antioch and in Cilicia retained strongly formed four-bar *sigmas*.

Also interesting is a special form of sigma, composed of two weak arcs that is used to represent the numeral 200 in the dates at Damascus. This peculiar letter-form had already appeared on Damascene issues of Antiochus IX Philopator.³⁶

HISTORICAL CONCLUSIONS

The Damascene silver coins of Demetrius III are a valuable source because they are sequentially dated, thereby allowing us to reconstruct the chronology of his reign at the city. Nevertheless, the coins present problems of interpretation. The first issue, dated to SE 216 (97/6 BC), seems to conflict with Josephus' report that Ptolemy Lathyrus installed Demetrius in Damascus upon the death of Antiochus XI (c. 93 BC).³⁷ This ambiguous testimony can only lead to the conclusion that Josephus or his source is mistaken and that the reign of Demetrius III actually began in 97/6, as the coins indicate. While as a rule the documentary sources are preferable to literary ones, the present die study raises the possibility that Josephus has conflated two separate arrivals for Demetrius at Damascus.

None of Demetrius' coins carries a legible date that can be read as SE 220 (93/2 BC) and die links between the issues of SE 219 (94/3 BC) and SE 221 (92/1 BC) indicate that there was probably no Damascene coinage for Demetrius in that year.

34. Arrian 7.20; Hesych. S.v. Dio?nusos.

35. O. Hoover, "Dethroning Seleucus VII Philometor (Cybiosactes): Epigraphical Arguments against a Late Seleucid Monarch," *ZPE* 151 (2005), 98.

36. Cf. *SNG Spaer* 2755–2758.

37. Jos. *AJ* 13.370.

This hiatus of a single year suggests that Demetrius might have briefly lost the city during the war against Antiochus X, who probably ruled in Antioch until 89/8 BC.³⁸ If Demetrius had marched north to support his brother Antiochus XI in the disastrous battle with Antiochus X in 93 BC, Damascus could have been briefly occupied by his southern enemies, Alexander Jannaeus and the Nabataean Arabs.

If the coinage hiatus of SE 220 represents a period when Damascus was lost to Demetrius III, then perhaps when Josephus claims that the king was installed in the city shortly after the death of Antiochus XI (c. 93 BC), he refers only to a second reign beginning in SE 221 (92/1 BC). This interpretation is based on the premise of a much later Syrian intervention by Ptolemy Lathyrus than is usually accepted. Therefore, perhaps Josephus has conflated an initial installation of Demetrius III by Ptolemy in late 97/6 BC and a restoration (probably without Cypriot assistance) in later 92/1 BC.³⁹

The sequential dates on the Damascene tetradrachms of Antiochus XII are very important for establishing the period of his reign because chronological markers are entirely lacking for him in the ancient authors. Antiochus failed to impose his authority much beyond Damascus. He was later excluded from the Seleucid stemma by authors drawing on sources written from the perspective of the dynasty at Antioch. Antiochus XII is only named in the account of Josephus as the immediate successor to Demetrius III.⁴⁰ but unfortunately, no synchronism is provided that might allow for the precise dating of the end of his reign. The only dating evidence for his death in battle against the Nabataean king Aretas III comes from the coinage, which ends with the issue of SE 230 (83/2 BC).

Josephus reports that on a previous occasion when Antiochus XII was campaigning against the Nabataean Arabs, Damascus had been betrayed to his brother Philip I. However, failing to properly reward the guard who had opened the gates to him, Philip soon found himself locked out again.⁴¹ As there is no coinage attributable to Philip at Damascus and the sequence of dates on the coins of Antiochus XII is unbroken, it seems likely that this episode was very brief indeed.⁴² This may also be inferred from Josephus' statement that once Philip had been shut out, the guard kept Damascus safe for Antiochus XII (th;n Damasko;n Antiovcw/ diefulaxen). The entire episode took place after the campaign season had begun, but before it had concluded.

38. Hoover, *Historia* 56.3 (2007), p. 289.

39. For the initial installation, see O. Hoover, "A Late Hellenistic Lead Coinage from Gaza," *INR* 1 (2006), p. 28.

40. *Jos. AJ* 13.387.

41. *Jos. AJ* 13.389.

42. *LSM*, 91.

APPENDIX: STATISTICAL ANALYSES

Petr Veselý⁴³

Weight analysis. For the purpose of the weight analysis of tetradrachms of Demetrius III, the tetradrachm No. 70 (*LSM* 126d) was excluded because the coin is heavily corroded and delaminated and its weight of 12.96 g is more than one gram below the second lightest coin in the corpus (No. 94, 13.99 g). Weights of other Demetrius III's tetradrachms vary between 13.99 g and 16.20 g. Although the weight of 13.99 g is low for a tetradrachm, we decided not to exclude another coins because there are no obvious outliers neither in the sense of a low weight⁴⁴ nor in the sense of the state of preservation.

Six tetradrachms in the corpus of Demetrius III are holed and weights of four of them are known: Nos. 25 (14.65 g), 35 (15.14 g), 37 (16.12 g) and 100 (15.65 g). These four coins were left in the sample in order not to decrease its size because a possible distortion of their weights is negligible.⁴⁵

As for tetradrachms of Antiochus XII, tetradrachms Nos. 9 and 12 were removed because both coins were heavily cleaned. The weight loss caused by the

43. The following abbreviations are used. Conover 1999 = W. J. Conover, *Practical Non-parametric Statistics* (3rd ed.; New York, 1999). Esty 1986 = W. W. Esty, "Estimating the size of a coinage: A survey and comparison of methods," *Numismatic Chronicle* 146 (1986) pp. 185–215. Esty 2006 = W. W. Esty, "How to estimate the original number of dies and the coverage of a sample," *Numismatic Chronicle* 166 (2006) pp. 359–364. Esty and Banfield 2003 = W. W. Esty and J. D. Banfield, "The box-percentile plot," *Journal of Statistical Software*, Volume 8, Number 17 (2003), pp. 1–14. Esty and Carter 1991–2 = W. W. Esty, and G. F. Carter, "The distribution of the numbers of coins struck by dies," *American Journal of Numismatics*, Second Series 3–4 (1991–2), pp. 165–86. Hoover 2007 = O. D. Hoover, "A Revised Chronology for the Late Seleucids at Antioch (121/0–64 BC)," *Historia*, Vol. 56, Number 3 (2007), pp. 280–301. Silverman 1993 = B. W. Silverman, *Density Estimation for Statistics and Data Analysis* (Chapman and Hall, London, 1993; repr. of 1st ed. publ. 1986).

44. The 10 lightest analyzed coins have the following weights (in grams): 13.99, 14.20, 14.48, 14.49, 14.57, 14.59, 14.65 (holed coin), 14.72, 14.88 and 14.91.

45. The negligibility of a possible distortion follows from the following consideration. Firstly, it seems that these coins were pierced, not drilled. The metal was mainly displaced around the holes and a possible lost of some part of the metal, if any, can be neglected. Secondly, provided that a hole on a coin was created by drilling and all drilled metal was lost, the relative loss of its weight is approximately equal to d^2/D^2 , where d is the diameter of the hole and D is the diameter of the coin (this approximation supposes that coins can be taken as homogeneous cylinders). Denote by w the observed weight of a holed coin and by W its supposed weight without the hole. We have $w = W - d^2/D^2 \times W$, so that $W = w/(1 - d^2/D^2)$. The ratio d/D is about 0.1 for the four coins, so that the ratio $1/(1 - d^2/D^2)$ is approximately equal to 1.010. So, even in the unlikely case that all metal from the hole was lost, a weight without the hole would be only about 1.0% above the observed weight. Such increase would have negligible impact on statistics presented in the next paragraphs.

heavy cleaning might not be negligible and an inclusion of such coins into the weight analysis might distort its results. Moreover, the weight of 13.10 g of the tetradrachm No. 9 is more than two grams below the second lightest coin in the corpus (No. 1, 15.19 g). Note that no coin in both corpora has an atypically high weight.

The coinage of Philip I from the mint of Antioch was roughly contemporary to the examined coinages of his brothers Demetrius III and Antiochus XII from the mint of Damascus. As the first two authors of this paper accumulated a corpus of Philip I's Antiochene tetradrachms, these coins were included into our analysis to put Damascus's data into broader context and to determine whether, from the metrological point of view, Damascus mint held to the same standard. A list of coins in this corpus is not presented here for the sake of brevity. The corpus presently contains 183 coins in total; weights of 71 of them are unknown. One coin (No. 40) was excluded from the remaining 112 coins because of its atypically high weight of 16.52 g. No other coins were excluded for the same reasons as in the case of Demetrius III.

Table 1 shows an overview of excluded and holed coins and statistical characteristics of the analyzed coins.⁴⁶ In addition, two subgroups of coins of Demetrius III are examined separately: coins dated before SE 220 which probably correspond to his 1st reign in Damascus and coins dated after SE 220 which probably correspond to his 2nd reign in this city. Table 1 is complemented by Table 2 showing weight frequencies in individual years, by Figures 1 and 3 showing kernel estimates of weight distributions,⁴⁷ by Figures 2 and 4 showing box-percentile plots⁴⁸ and by Figure 5 showing cumulative weight distributions.

According to Table 1 and Figures 1–2, there is no significant difference between weight distributions of Demetrius III's tetradrachms from the examined two time periods. The slightly heavier left tail (more probable low weights) of the weight distribution in the second period can be explained by sampling error. This is confirmed by the two-sided Kolmogorov-Smirnov test, which has a p-value of 0.732 (the Kolmogorov-Smirnov statistic is 0.143). It seems that the quality of Demetrius III's tetradrachms remained unchanged during both his reigns.

46. The unbiased estimate of the standard deviation was used (i.e. the number of observations minus one was used as a divisor). The skewness and kurtosis were computed with correction for bias.

47. Gaussian kernels were used with the bandwidths given by equation (3.31) of Silverman 1993, p. 48.

48. The box-percentile plot is a modified version of the well-known boxplot. At any height the width of the irregular 'box' is proportional to the percentile of that height, up to the 50th percentile, and above the fiftieth percentile the width is proportional to 100 minus the percentile. Thus, the width at any given height is proportional to the percentage of observations that are more extreme in that direction. As in boxplots, the median, twenty-fifth, and seventy-fifth percentiles are marked with line segments across the box (solid and dotted lines, respectively). See Esty and Banfield 2003.

Table 1. Resume of data samples and their statistical characteristics

	Total	Demetrius XII		Ant. XII	Ph. I
		Before SE 220	After SE 220		
Total number of coins	105	61	44	12	183
Weight unknown	15	9	6	0	71
Excluded	1	0	1	2	1
No. of analysed coins (of them holed)	89 (4)	52 (3)	37 (1)	10 (0)	111 (0)
Mean	15.51	15.54	15.47	15.74	15.60
Standard deviation	0.48	0.44	0.54	0.34	0.35
Interquartile range	0.66	0.59	0.76	0.55	0.34
Skewness	-0.87	-0.79	-0.87	-0.74	-2.07
Kurtosis	3.58	3.77	3.27	2.11	8.77
Minimum	13.99	14.20	13.99	15.19	14.13
25th percentile	15.22	15.27	15.12	15.47	15.49
Median	15.60	15.59	15.60	15.86	15.66
75th percentile	15.88	15.86	15.88	16.02	15.83
Maximum	16.20	16.20	16.19	16.11	16.08

Table 2. Weight frequencies

Weight (g)	Demetrius III											Antiochus XII					Philip I		
	Total	Seleukid year										Total	Undat.	Seleukid year					
	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230				
above 16.40																1			
16.20-16.39	1		1																
16.00-16.19	13	1	3	1	2	2	1	1	2	3	1	1	1	1		3			
15.80-15.99	13	2	4	1	2	1	1	1	1	3	1	1	1	1		27			
15.60-15.79	18	1	5	4	2	3	3	2		2	1			1		41			
15.40-15.59	14	6	3	1	2	2				1	1					20			
15.20-15.39	8	1	3	2		2				1	1					8			
15.00-15.19	9	3	1	1	2	2				1	1					6			
14.80-14.99	5	1	2	1	1	1										2			
14.60-14.79	2	1				1										1			
14.40-14.59	4	1						1	2										
below 14.40	3			1	1	1				1			1			3			
Unknown	15	2	5	1	1	2	2			2						71			
Total	105	7	28	11	15	0	14	15	4	8	3	12	1	3	4	1	2	1	183

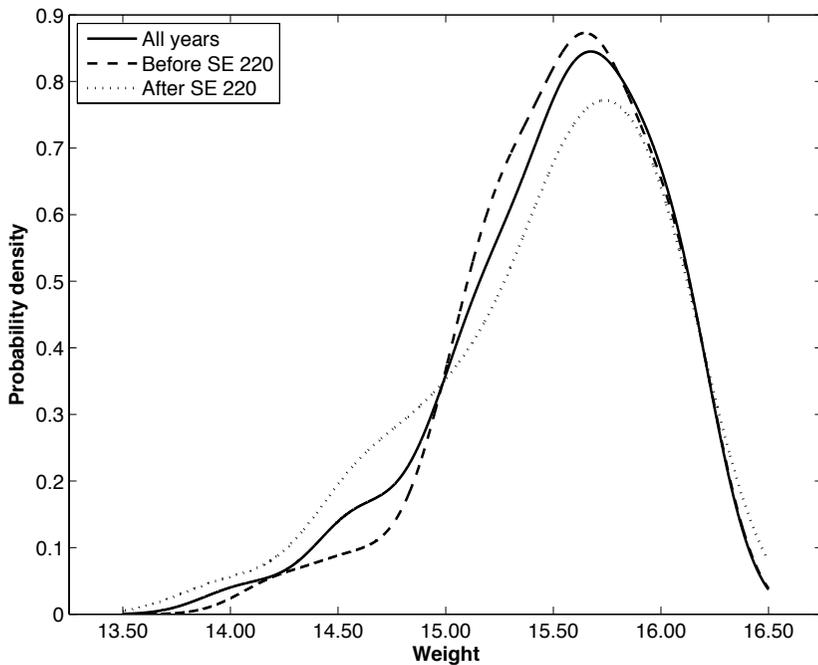


Figure 1. Demetrius III, weight distributions

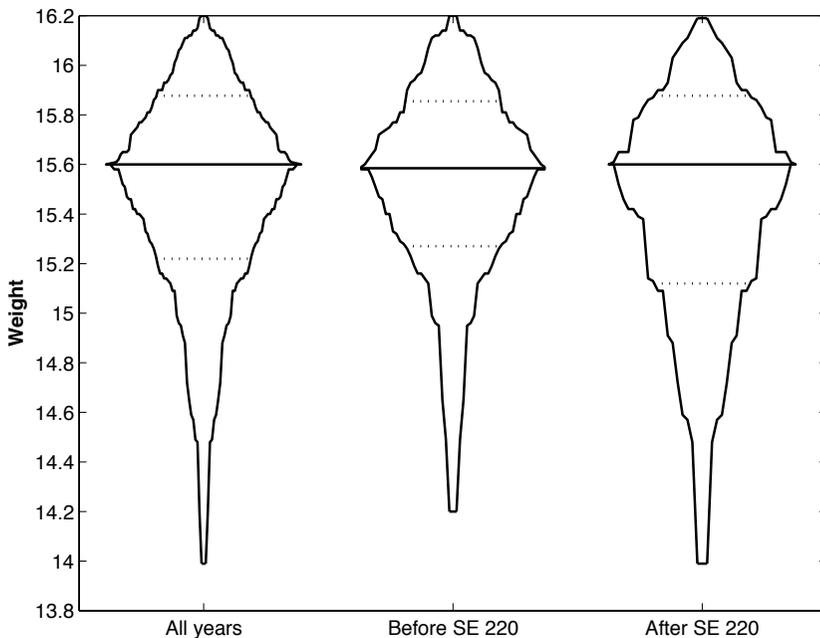


Figure 2. Demetrius III, box-percentile plots

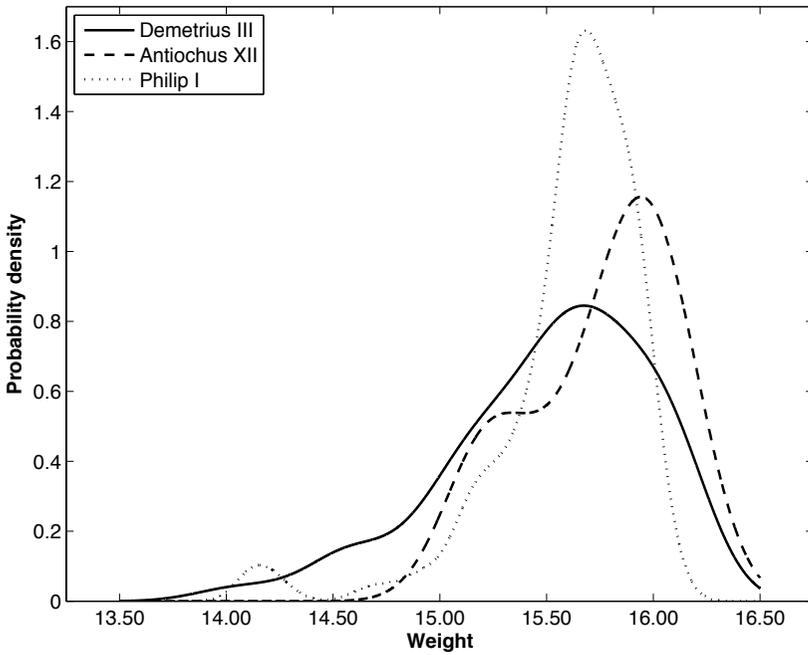


Figure 3. Demetrius III, Antiochus XII and Philip I, weight distributions

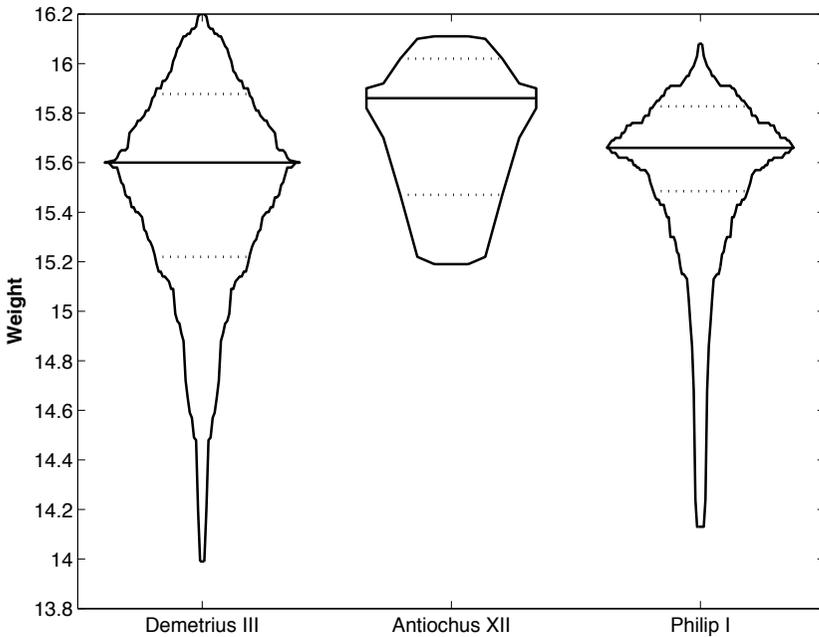


Figure 4. Demetrius III, Antiochus XII and Philip I, box-percentile plots

A mutual comparison of the examined corpuses of Demetrius III, Antiochus XII and Philip I based on Tables 1–2 and Figures 3–4 shows several differences. First, the weight distributions of coins of Demetrius III and Philip I are characterized by longer left tails than the weight distribution of coins of Antiochus XII. Besides, Demetrius III's distribution has heavier left tail than Philip I's distribution. The shorter left tail of Antiochus XII's distribution is probably mainly caused by the low number of his known coins (this is also the most likely reason of the slight bimodality of the estimated density function on Figure 3). The heavier left tail of Demetrius III's distribution can be connected with a lower observable metal quality of Demetrius III's preserved coins which indicates a greater proneness to metal losses caused by corrosion and cleaning (depending on the environment in which coins were deposited).

Second, the weight distribution of Philip I's coins is characterized by a lower variability. The interquartile range is noticeably lower the interquartile ranges of weight distributions both of Demetrius III and of Antiochus XII. The standard deviation is lower than the standard deviation of Demetrius III but it is comparable with the standard deviation of Antiochus XII. Conover's multisample nonparametric test for equal variances⁴⁹ rejects the null hypothesis of identical variances at the 95% confidence level (the p-value is less than 0.001). As the hypothesis was rejected, Conover's multiple comparisons procedure was done to test which pairs of weight distributions differ. The hypothesis of equal variances is rejected for the pair of Demetrius III and Philip I (the p-value is less than 0.001), whereas the differences between the other two pairs are not significant at the 95% confidence level (the p-values for the test of Demetrius III and Antiochus XII, and for the test of Antiochus XII and Philip I, are 0.259 and 0.244, respectively). Thus, the weight distribution of Philip I's tetradrachms is characterized by significantly lower variability than the weight distribution of Demetrius III's tetradrachms. It might suggest a more careful process of flan production in Antioch mint.

Table 1 further shows that the mean and median of coins of Antiochus XII are larger than the means and medians both of Demetrius III (the differences are 0.23 g and 0.26 g, respectively) and of Philip I (the differences are 0.14 g and 0.20 g, respectively). See also Figure 5 which shows that the cumulative weight distribution of Antiochus XII is mostly smaller than the cumulative weight distributions of Demetrius III and Philip I.⁵⁰ The one-sided Mann-Whitney U test was used to test possible differences between Antiochus XII and Demetrius III, and between

49. Conover 1999, pp. 303–4. Note that we use this nonparametric test because of non-normality of data (the Lilliefors test rejects the hypothesis of normality at 0.05 significance level for both Demetrius III and Philip I).

50. For each curve, the vertical axis shows the proportion of coins with weights equal or smaller than the value shown at the corresponding point on the horizontal axis.

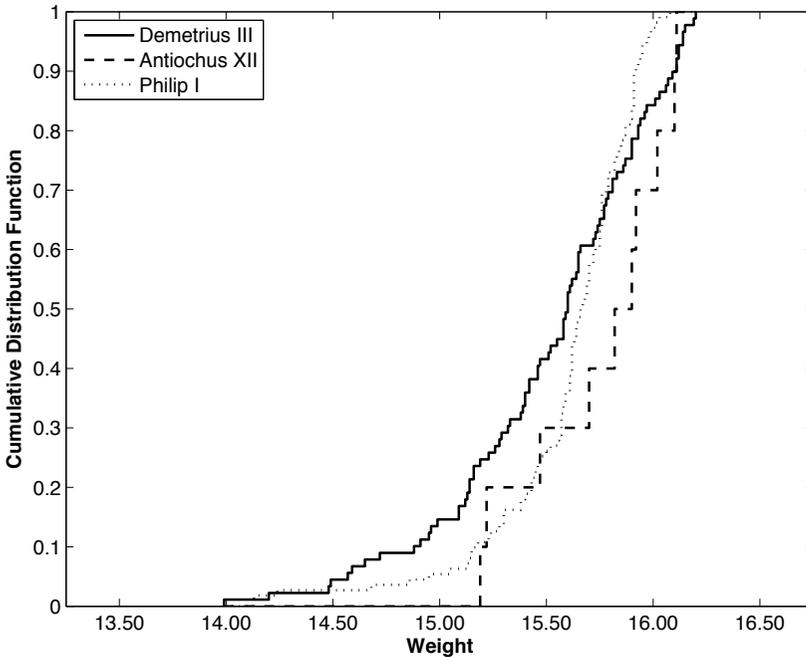


Figure 5. Cumulative weight distributions

Antiochus XII and Philip I.⁵¹ The p-values of 0.069 and 0.062, respectively, are low but they still do not allow to reject the hypotheses at the 95% confidence level.⁵² A potential future enlargement of Antiochus XII's corpus may and may not prove a significant difference. In any case, in our opinion, there is no reason to suppose that a higher weight standard was used by Damascus mint under Antiochus XII.

Basic statistical characteristics of drachms and hemidrachms of Demetrius III are presented in Table 3.⁵³

51. As was showed above, the hypothesis of equal variances was not rejected for these pairs. For this reason, we probably do not commit a substantial error if we use the Mann-Whitney U test to test the null hypothesis of equal means/medians. However, as it is not completely sure if the distributions have the same shape, we can conservatively interpret this procedure as a test of the hypothesis of identical distributions against the alternative that Antiochus XII's distribution tends to yield larger observations (see, e.g., Conover 1999).

52. As we simultaneously test two pairs of samples, a lower significance level than 0.05 should be used for the two individual tests to guarantee that the overall type 1 error does not exceed 5%. We use a Bonferroni-adjusted level of significance of $0.05/2 = 0.025$ to keep the overall confidence level of 95%.

53. The holed hemidrachm (No. 2, 1.73 g) was not excluded and its weight was not modified from the same reason as in the case of the holed tetradrachms. According to the meth-

Table 3. Statistical characteristics of drachms and hemidrachms

	Drachms	Hemidrachms
No. of analysed coins (of them holed)	5 (0)	3 (1)
Mean	3.76	1.65
Standard deviation	0.08	0.21
Minimum	3.64	1.41
Median	3.78	1.73
Maximum	3.84	1.81

Analysis of obverse dies of tetradrachms. All obverse die links are identified in our corpuses. Annual die statistics are presented in Table 4 (with the exception of Philip I whose coins are not dated).

Table 4. Demetrius III, Antiochus XII and Philip I, weight frequencies

	Demetrius III Seleukid year											Total	Undat.	Antiochos XII Seleukid year					Philip I
	Total	216	217	218	219	220	221	222	223	224	225			226	227	228	229	230	
Coins	105	7	28	11	15	0	14	15	4	8	3	12	1	3	4	1	2	1	183
Recorded dies	25	1	5	3	4	0	2	8	3	2	2	8	1	2	3	1	1	1	120

Demetrius III's obverse die A11 was used both before and after SE 220: 5 coins are dated SE 219, 6 coins are dated SE 221 and 2 coins are dated SE 222.⁵⁴ For the reason of correct estimation of die productions in both periods of Demetrius III's reign, the die A11 was assigned to the year of its first occurrence, i.e. to the year SE 219, and coins struck from this die in the next years were added to coins struck in SE 219. No coin struck from this die was included into calculations of the die production in the period after SE 220.

Table 5 shows basic coin and die statistics. Notice the higher number of Demetrius III's coins known from the period before SE 220 in comparison with the period after SE 220, even if more dies are known from the later period.

Die frequencies are presented in Table 6. The die frequencies are the numbers of dies represented in the corpora exactly once, twice, three times etc. For example, 5 of Antiochus XII's dies are represented by exactly one coin (dies A1, A2, A5, A6

odology described in footnote 2, the maximum possible error is about 3.3% = 0.06 g (the ratio d/D is about 0.18).

54. Four Demetrius III's dies in the corpus are recorded in more than one year: A6 (SE 217–218), A8 (SE 218–219), A11 (SE 219 and SE 221–222) and A19 (SE 222–223). Similarly, Antiochus XII's die A8 is recorded in two years (SE 229–230).

and A7), 2 dies are represented by exactly two coins (dies A3 and A4) and the remaining die is represented by exactly three coins (die A8).

Table 5. Die statistics and estimates

	Total	Demetrius III		Ant. XII	Ph. I.
		Before SE 220	After SE 220		
Coins in total	105	61	44	12	183
Coins assigned to dies	105	69	36	12	183
Number of dies	25	11	14	8	120
Number of singletons	8	2	6	5	81
Mean number of coins per die	4.20	6.27	2.57	1.50	1.52

Table 6. Die frequencies (numbers of dies represented exactly N times)

N	Total	Demetrius III		Antiochus XII	Philip I
		Before SE 220	After SE 220		
1	8	2	6	5	81
2	5	2	3	2	25
3	3	1	2	1	7
4	2	1	1		5
5					1
6	1		1		1
7	1	1			
8	2	1	1		
9	1	1			
13	1	1			
19	1	1			
Total	25	11	14	8	120

The coverages of the examined groups of coins were estimated via Good's coverage estimator and 95% confidence intervals were computed via Esty's formula,⁵⁵ see Table 7. The coverage of a sample of coins of a given type is the fraction of all produced coins of the given type that are from dies represented in the sample.⁵⁶ In other words, the coverage of a sample of coins is the probability that a new coin of that type will be from a die already observed in the sample. It means that 1 minus the coverage is the probability that a new coin would yield a new die. Note that the coverage is a property of the sample, not of the coinage issue.

55. Esty 2006, pp. 359–360, formulae (1) and (5). See also Esty 1986, p. 208.

56. That is, the coverage is the fraction M/N where M is the number of all coins originally struck by the dies that are observed in the sample and N is the number of all produced coins struck by all dies.

Table 7. Estimates of the coverages and of the original numbers of dies

	Demetrius III			Ant. XII	Ph. I
	Total	Before SE 220	After SE 220		
Number of dies	25	11	14	8	120
Estimated coverage	92.4%	97.1%	83.3%	58.3%	55.7%
95% confidence interval	84.4–100%	90.0–100%	64.9–100%	14.5–100%	45.1–66.4%
Estimated no. of all dies	31	12	20	18	288
95% confidence interval	27–36	11–14	14–29	9–45	222–373

The coverages of the whole corpus of Demetrius III's tetradrachms and of its part represented the period before SE 220 are very high which is caused by the low number of singletons with respect to the number of coins. Moreover, the high numbers of high die frequencies in the period before SE 220 may indicate that the data are not random in the sense that each coin entered the sample independently with equal likelihood. It is possible that coins from the same die were grouped together as they were originally made and these groups were parts of some hoards from which come some coins in the corpus. Therefore it is not sure if Good's estimator gives reliable results and the estimated coverages should thus be taken cautiously, even if this estimator is considered to be reasonably robust (Esty 2006, p. 362; Esty 1986, p. 197). It is not possible to exclude that real coverages of the whole corpus of Demetrius III's tetradrachms and of its part represented the period before SE 220 are in fact much lower. The estimated coverages of the period after SE 220 and especially of the corpus of Antiochus XII should be also taken cautiously because the samples are small (see the 95% confidence intervals).⁵⁷

The last two rows of Table 7 show estimates of original numbers of all dies. The methodology described in Esty 2006 was used.⁵⁸ It is based on the assumption that the number of coins produced by a random die has a negative binomial distribution. The negative binomial family is a two-parameter family, but only one of these two parameters, the so-called shape parameter, is necessary for the Esty estimate.

57. According to Esty 2006, p. 362, formula (5) for the confidence interval works well as long as the sample size is at least 30 coins. Note that Esty 1986, p. 208, recommends a slightly more accurate coverage estimate for small random samples (formula J2). This formula gives nearly identical results (the differences are at most 0.5%) with the exception of Antiochus XII's sample for which it gives a higher coverage estimate of 61.4% with the 95% confidence interval of 17.5% to 100%.

58. Esty 2006, pp. 359–360, formulae (2) and (4). The formula (2) is equivalent to Esty 1986, formula H5 (p. 205) where the equal-output estimate k' is computed by the formula K1 (p. 209). The formula (4) for the confidence interval is a simplified version of Esty 1986, formula C2 (p. 201). Formula C2 gives nearly identical results with the exception of Antiochus XII's sample for which it gives a broader 95% confidence interval of 7 to 49 dies.

We set this parameter equal to 2 as it is recommended by Esty and Carter 1991–2, and by Esty 2006.⁵⁹

The estimated die production of Antiochus XII is comparable with the estimated die production of Demetrius III in the period after SE 220 which lasted approximately the same time. It contrasts with the lower estimated die production of Demetrius III in the period before SE 220 because nearly 60% of his coins in the corpus (61 of 105) come from this early period. Nevertheless, no significant conclusion can be made from these observations because of a possible non-randomness of Demetrius III's sample discussed above and because of the small size of the sample of Antiochus XII (see the broad confidence interval). It is also necessary to emphasize that the estimates do not take into account dies that broke almost immediately and thus produced relatively few coins (see Esty 2006). In any case, Table 7 shows the much greater activity of Antioch mint, even if the longer period of Philip I's reign is taken into consideration.⁶⁰

CONCLUSIONS.

1. Demetrius III's tetradrachms were struck on the same weight standard both before and after SE 220.
2. The preserved coins of Demetrius III are characterized by significantly higher weight variability with respect to the preserved coins of Philip I from Antioch mint.
3. The coin production of Damascus mint under Demetrius III and Antiochus XII was much less intensive than the coin production of Antioch mint under Philip I.

DEMETRIUS III (97/6 – 88/7 BC)

Tetradrachms

Obv. Diademed head of Demetrius III r., with fringe of curly beard at jawline, diadem ends falling straight behind, fillet border.

59. If the numbers of coins produced by individual dies have a negative binomial distribution with a given shape parameter then the observed numbers of coins per die in a truly random sample have a zero-truncated negative binomial distribution with the same shape parameter (the second parameter is a function of the original second parameter and of the survival rate). The chi-squared goodness-of-fit test was used for the whole sample of Demetrius III's dies and for the sample of Philip I's dies to verify that the recommended choice of the shape parameter does not contradict our data. The null hypothesis that the shape parameter is equal to 2 was not rejected (we omit details for the sake of brevity). Small numbers of dies produced in Damascus before SE 220, after SE 220 and under Antiochus XII do not allow to verify the validity of the recommended choice via the chi-squared goodness-of-fit test (as the second parameter of the negative binomial distribution is unknown, it is necessary to divide data into at least three bins with sufficient numbers of observations).

60. Probably 88/7–c. 75 BC, see Hoover 2007.

Rev. ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ ΘΕΟΥ in three lines on r., ΦΙΛΟΠΑΤΟΡΟΣ
 ΕΩΤΗΡΟΣ in two lines on l., cult image of Atargatis standing facing with
 arms extended, holding flower, grain stalk rising from each shoulder.

CIΞ (SE 216 = 97/6 BC)

In l., field, ⚡ above, Ξ, in ex, to r., ⚡

Die A1

Obv. link to P5, below.

SC 2450.1

- | | |
|-----------------|---|
| 1. A1 P1 15.81 | CSE 858. |
| 2. A1 P1 15.96 | Ariadne 9 Dec. 1981, 293. |
| 3. A1 P1 | Spink NCirc Apr. 2001, GK0165. Doublestruck on reverse. |
| 4. A1 P2 15.32 | SNG Spaer 2825. |
| 5. A1 P3 15.73 | GM 64, 11 Oct. 1993, 221. |
| 6. A1 P4 | Cast in Paris (Van Lesser). |
| | In l., field, ⚡ above ⚡ |
| | SC 2450.2 |
| | Die A1 |
| | Obv. link to P1-4, above. |
| 7. A1 P5 16.14 | MuM Deutschland 27 March 1998, 10. |
| | IIΞ (SE 217 = 96/5 BC) |
| | In l., field, ⚡ above N |
| | SC 2450.3 |
| | Die A2 |
| 8. A2 P6 15.40 | Auctiones 8, 359=Sotheby's Zurich=GM 67, 2 May 1994, 341. |
| 9. A2 P7 15.58 | Berk 83, 26 Oct. 1994, 236=MuM FPL 239, Jan. 1964, 24. |
| | Die A3 |
| 10. A3 P8 | Paris, inv. H859 (616). |
| 11. A3 P8 15.74 | Paris, inv. 1973.1.251. |
| | Die A4 |
| | Obv. link to P13-P16, below. |
| 12. A4 P9 15.58 | LSM 116a=Naville 10, 1553. |
| 13. A4 P10 | 16.12 CSE 859=GM 90, 12 Oct. 1998, 476 = GM 89, 5 May |
| | 1998, 274. |
| 14. A4 P11 | 16.14 Berk 124, 3 Jan 2002, 214. |
| 15. A4 P12 | 15.16 GM 36, 8 Apr. 1987, 290. |
| | In l., field, ⚡ above N |
| | SC 2450.4 |
| | A4 |
| | Obv. link to nos. P10-P12, above. |

- 16.A4P13 15.46 LSM 116β=New York, inv. 1944.100.78009. Control mostly off flan
- 17.A4P14 15.59 Naville 10, 1552.
- 18.A4P15 16.11 Paris. Babelon 1567. Date off flan
- 19.A4P15 Berk 58, 28 Jun. 1989, 180.
- 20.A4P16 15.60 Time Machine (Vcoins.com), 39121.
In l., field, $\overline{\Lambda}$ above $\overline{\text{K}}$, in ex, to r., H
SC 2450.5
Die A5
- 21.A5P18 B. Bowlin col., Mississippi. Obv. doublestruck.
Die A6
Obv. link to P29–P35, below.
- 22.A6P19 15.77 London. BMC 1. I written as E in date.
- 23.A6P19 15.62 CNG 15 Sep. 1999, 563. Obv. doublestruck
- 24.A6P19 15.23 Leu 22, 8 May 1979, 167 =Leu 13, 30 Apr. 1975, 310.
- 25.A6P20 14.65 SNG *Spaer* 2826. Holed.
- 26.A6P21 15.19 LSM 115β =Künker 94, 27 Sep. 2004, 1435=Auctiones
20, 484 = Helbing 8, Nov. 1928, 4084. Lower l. control off flan. Oblate flan.
- 27.A6P22 15.33 NFA 1, 20 Mar. 1975, 213.
- 28.A6P23 15.64 LSM 115β =New York, inv. 1944.100.78008.
- 29.A6P24 15.47 Peus 372, 30 Oct 2002, 569=Cahn 71, 14 Oct. 1931,
557.
- 30.A6P25 Paris, inv. Y614 (1562a). Cut on Demetrius' neck.
Rev. defaced by many cuts.
- 31.A6P26 14.49 Uncertain Ebay sale, 1998.
- 32.A6P27 15.29 Edward Waddell, stock, Feb. 8, 2003.
- 33.A6P28 14.95 Ebay sale, Jan. 18, 2000, 235597466.
In l., field, $\overline{\Lambda}$ above $\overline{\text{K}}$, in inner r. field, STAR.
SC 2450.6a
Die A6
Obv. link to P19–28, above, and P30–P35, below.
- 34.A6P29 Cast in Paris (PAM 12). Holed.
In l., field, $\overline{\Lambda}$ above $\overline{\text{K}}$, in inner r. field, STAR.
SC 2450.6b
Die A6
Obv. link to P19–P28, above, and P31–P35, below.
- 35.A6P30 15.14 Cast in Paris (Haddad 5). Holed.
 HIE (SE 218 = 95/4 BC)
In l., field, N above $\overline{\Lambda}$, in ex, to r., H
SC 2450.7
Die A6

In l., field, N above $\hat{\Lambda}$, in inner r. field, Δ

SC 2451.1

Die A10

56.A10 P51 14.20 SNG *Spaer* 2853. Lower control described as Δ .

Die A11

Obv. link to P53–P58 and P69–70, below.

57.A11 P52 Cast in Paris (181; Gris 19).

58.A11 P52 16.07 Paris, inv. 1973.1.252.

In l., field, N above $\hat{\Lambda}$

SC 2451.2

Die A11

Obv. link to P52, above, and 55–58 and 69–70, below.

59.A11 P53 15.12 Paris. Babelon 1568.

60.A11 P54 15.75 Berk 126, 23 Apr. 2002 102=Berk 124 3 Jan. 2002 215.

61.A11 P54 14.96 Sternberg 8, 16 Nov. 1978, 193 = Superior, 8 Dec. 1993 (Abramowitz), 382=Hirsch 186, 10 May 1995, 537=Hirsch 190, 8 May 1996, 427=Hirsch 192, 27 Nov. 1996, 314.

$\kappa\xi$ (SE 220 = 93/2 BC)

Currently no specimens of this date are known.

$\Delta\kappa\xi$ (SE 221 = 92/1 BC)

In l., field, N above Δ

SC 2451.3

Die A11

Obv. link to P52–54, above, and P69–70, below.

62.A11 P55 15.83 SNG *Spaer* 2865.

63.A11 P56 16.11 LSM 126f=Hess, 18 Dec. 1993, 120=Naville 10,1555.

64.A11 P57 15.90 Spink America, 7 Dec. 1995, 2188=Noble 54, 22 Jul. 1997, 1766.

65.A11 P58 16.03 Spink, NumCirc, Aug. 2003, GK0610.

66.A11 P59 15.61 Zurqieh (vcoins.com), 370.

67.A11 P60 14.91 Eukratides (vcoins.com).

In l., field, N above Δ , in ex, to r., ⌘

SC 2451.4

Die A12

68.A12 P61 15.60 SNG *Spaer* 2862.

69.A12 P62 15.42 LSM 126 γ =London, inv. 4–3–125=Naville 10, 1556.

70.A12 P63 12.96 LSM 126 δ =New York 1944.100.78014. Corroded.

71.A12 P64 15.13 Superior, 8 Dec. 1993 (Abramowitz), 383=Meyers 12, 4 Dec 1975, 258=Glendining, 4 Oct. 1957, 192.

72.A12 P65 15.14 LSM 126 ϵ =New York inv. 1944.100.78015.

- 73.A12 P66 Kricheldorf, 7 Oct. 1957, 379.
- 74.A12 P67 15.42 Jean Elsen 91, Mar. 24, 2007, 139=Leu 74, 19 Oct. 1998, 263.
- 75.A12 P68 MUM FPL Jun/Jul. 1956, 13+Gans, 4 May 1955, 187.
BKΞ (SE 222 = 91/o BC)
In l., field, N above Δ
SC 2451.5
Die A11
Obv. link to P46 and P47–P52, above.
- 76.A11 P69 15.86 Paris, inv.1973.1.249.
- 77.A11 P70 15.09 MuM 51, 19 Jun. 1975, 221 =MuM FPL 256, Jul.–Aug. 1965, 49.
In l., field, N above Ě
SC 2451.6
A13
- 78.A13 P71 15.09 LSM 127=Naville 10, 1557.
- 79.A13 P72 15.65 Triton VI, 15–16 Jan. 2003, 466.
- 80.A13 P73 Cast in Paris (182).
- 81.A13 P74 15.79 Paris, inv. 1973.1.253.
A14
- 82.A14 P75 15.52 Brussels. De Hirsch 1726.
A15
- 83.A15 P76 15.46 Beirut. American University.
A16
- 84.A16 P77 16.19 Spink stock, Dec. 13, 2002, GK0554.
- 85.A16 P78 MuM FPL 388, Apr. 1977, 21.
Die A17
Obv. die link with P80–P81, below.
- 86.A17 P79 15.38 NFA 20, 9 Mar. 1988, 803.
In l., field, N above Λ, in ex, to r., ⚡
SC 2451.7
Die A17
Obv. die link with P79, above.
- 87.A17 P80 14.72 Superior, 11 June 1986 (Grove–Grover)=Malloy, 15 Mar. 1974, 180.
- 88.A17 P81 14.88 CNG 61, 25 Sep. 2002, 858.
Die A18
- 890A18 P82 15.78 GM 125, Oct. 13, 2003, 254.
Die A19

Obv. die link with P84–P85, below.

- 90.A19 P83 15.39 Cast in Paris (Cahn).
 ΓΚΞ (SE 223 = 90/89 BC)
 In l., field, N above Ε̄
 SC 2451.8
 Die A19
 Obv. die link with P83, above.
- 91.A19 P84 14.57 NFA 6, Feb 27 385.
 92.A19 P85 15.90 Berk 139, 4 Aug 2004, 194.
 In l., field, N above Δ in ex, to r., Ϸ
 SC 2451.9
 Die A20
- 93.A20 P86 16.06 LSM 128=London. BMC 4.
 Die A21
- 94.A21 P87 13.99 Hirsch 173 19 Feb 1992, 492.
 ΔΚΞ (SE 224 = 89/8 BC)
 In l., field, N above Ε̄
 SC 2451.10
 Die A22
- 95.A22 P88 15.60 SNG Spaer 2866.
 96.A22 P89 16.09 Paris, inv.1973.1.250.
 In l., field, N above Ϸ̄, in ex, to r., Ϸ
 Die A23
 SC 2451.11
- 97.A23 P90 15.65 CNG 67, 905. Pellet on nose.
 98.A23 P91 16.15 Triton 8, 551. Pellet on nose.
 99.A23 P92 14.59 CNG 76, Sept. 12, 2007, 800 Pellet on nose.
 100.A23 P93 15.65 Paris. Babelon 1569. No pellet on nose; pellet to
 lower l. of Atargatis; holed.
- 101.A23 P94 14.48 Holyland Numismatics (vcoins.com), 733. No pellet
 on nose; pellet at r. end of ex. Line.
- 102.A23 P95 15.87 Tom Vossen (vcoins.com), 4870. No pellet on nose;
 pellet to l. of Atargatis.
 ΕΚΞ (SE 225 = 88/7 BC)
 In l., field, N above Ϸ̄, in ex, to r., Ϸ
 Die A24
 SC 2451.12
- 103.A24 P96 LSM 130=Cambridge, Leake coll.
 104.A24 P97 Berk 58, 28 Jun. 1989, 181.

In l., field, N above Ξ

Die A25

SC 2451.12

105. A25P96 15.93 CNG 76, Sept. 12, 2007, 801. Somewhat crude style.

Dubious tetradrachms

CI Ξ (SE 216 = 97/6 BC)

In l., field, \boxtimes above Ξ , in ex, to r., H

Die A1

1. A1 P1 18.15 Argenor, 3 May 2006, 182.

Δ K Ξ (SE 224 = 89/8 BC)

In l., field, N above Ξ , in ex, to r., H

Die A2

2. A2 P2 12.47 GM 117, 14 Oct 2003, 327.

Drachms

Obv. Diademed head of Demetrius III r., with fringe of curly beard at jawline, diadem ends falling straight behind, fillet border.

Rev. ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ ΘΕΟΥ in three lines on r., ΦΙΛΟΠΑΤΟΡΟΣ ΕΩΤΗΡΟΣ in two lines on l., Nike advancing l., holding palm branch and crowning final royal epithet with wreath, dotted border..

ZI Ξ (SE 217 = 96/5 BC)

In outer l. field, Δ

Die a1

SC 2452.1

1. a1 p1 3.78 Houghton and Spaer SM 157 (Feb 1990), p. 2, no. 2.=SNG Spaer 2827.

2. a1 p2 3.83 Houghton and Spaer SM 157 (Feb 1990), p. 2, no. 1=CSE 2, 800.

3. a1 p2 3.64 Kovacs (vcoins.com).

4. a1 p3 3.84 Houghton and Spaer SM 157 (Feb 1990), p. 2, no. 3.=Spink 65, 5 Oct. 1988, 89.

HII Ξ (SE 218 = 95/4 BC)

In outer l. field, Δ

Die a2

SC 2452.1

5. a2 p4 3.71 B. Nelson coll, Lancaster, PA.

Hemidrachms

Obv. Diademed head of Demetrius III r., with fringe of curly beard at jawline, diadem ends falling straight behind, fillet border.

The Silver Mint of Damascus under Demetrius III and Antiochus XII 233

Rev. ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ ΘΕΟΥ in three lines on r., ΦΙΛΟΠΑΤΟΡΟΣ
ΕΩΤΗΡΟΣ in two lines on l., diadem with ends downward, dotted border.

Undated

Between diadem ends, Λ

Die *a*₁

SC 2453

1. *a*₁ *p*₁ 1.81 SNG Spaer 2828; Houghton and Spaer *SM* 157 (Feb 1990), p. 2, no. 4.
2. *a*₁ *p*₁ 1.73 SNG Spaer 2829; Houghton and Spaer *SM* 157 (Feb 1990), p. 2, no. 5. Holed.
3. *a*₁ *p*₁ 1.41 SNG Spaer 2830; Houghton and Spaer *SM* 157 (Feb 1990), p. 2, no. 6.

Antiochus XII

(87/6 – 84/3 BC)

Tetradrachms

Obv. Diademed head of Antiochus XII r., *beardless*, diadem ends falling straight behind, fillet border.

Rev. ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ ΕΠΙΦΑΝΟΥΣ in three lines on r., ΦΙΛΟΠΑΤΟΡΟΣ
ΚΑΛΛΙΝΙΚΟΥ in two lines on l., cult image of Hadad standing facing on double basis, holding grain stalk, flanked by two bull foreparts, laurel wreath border.

Undated, Probably of SE 226 (= 87/6 BC)

In outer l. field, ☒

Die *A*₁

SC 2471.1

1. *A*₁ *P*₁ 15.19 Houghton and Spaer *SM* 157 (Feb 1990), p. 4, no. 7=*LSM* 134=*Egger* 45, Nov. 1913, 746=*Jameson* 2361.

CKΞ (SE 226 = 87/6 BC)

In ex., to l. of date, ☒

SC 2471.2

Die *A*₂

2. *A*₂ *P*₂ 15.47 Houghton and Spaer *SM* 157 (Feb 1990), p. 4, no. 1=*LSM* 132=*London. BMC* 2.

Die *A*₃

3. *A*₃ *P*₃ 15.90 Houghton and Spaer *SM* 157 (Feb 1990), p. 4, no. 2=*Paris. Seyrig coll.*

4. *A*₃ *P*₄ 16.11 *CSE* 2, 816 Date written as CKΓ.

ZKΞ (SE 227 = 86/5 BC)

In outer l. field, ☒; in ex., to l. of date, Λ

SC 2471.4a

Die A4

5. A4 P5 15.22 Houghton and Spaer SM 157 (Feb 1990), p. 4, no. 4 = Paris, Seyrig coll.
 6. A4 P6 16.02 Berk 124, Jan. 3, 2002, lot 216.

Die A5

7. A5 P7 15.82 Houghton and Spaer SM 157 (Feb 1990), p. 4, no. 5 = CSE 2, 816.
 In outer l. field, $\overline{\text{P}}$; in ex., to l. of date, Λ
 SC 2471.4b

Die A6

8. A6 P8 15.70 Houghton and Spaer SM 157 (Feb 1990), p. 4, no. 3 = LSM
 134 = Imhoof-Blumer, *Monnaies grecques*, p. 47, no. 121. Date written as $\Sigma\text{K}\epsilon$.

Obv. Diademed head of Antiochus XII r., with short curly beard, diadem ends falling straight behind, fillet border.

Rev. ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ ΕΠΙΦΑΝΟΥΣ in three lines on r., ΦΙΛΟΠΑΤΟΡΟΣ ΚΑΛΛΙΝΙΚΟΥ in two lines on l., cult image of Hadad standing facing on double basis, holding grain stalk, flanked by two bull foreparts, laurel wreath border.

HK ϵ (SE 228 = 85/4 BC)

In outer l., field, $\overline{\text{P}}$ above Λ

SC 2472.1

Die A7

9. A7 P9 13.10 Houghton and Spaer SM 157 (Feb 1990), p. 4, no. 6 = CSE
 864 = NFA 18, 31 Mar. 1987, 401.

ΘK ϵ (SE 229 = 84/3 BC)

In outer l., field, $\overline{\text{P}}$ above

SC 2472.2

Die A8

10. A8 P10 16.10 Triton VI, 15–16 Jan. 2003, 467.
 11. A8 P11 15.92 CSE 2, 817. Date written as CK Γ .

Obv. Diademed head of Antiochus XII r., with short curly beard, diadem ends falling straight behind, fillet border.

Rev. ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ ΔΙΟΝΥΣΟΥ in three lines on r., ΕΠΙΦΑΝΟΥΣ ΦΙΛΟΠΑΤΟΡΟΣ ΚΑΛΛΙΝΙΚΟΥ in two lines on l., cult image of Hadad standing facing on double basis, holding grain stalk, flanked by two bull foreparts, laurel wreath border.

$\Lambda\epsilon$ (SE 230 = 83/2 BC)

In ex., to l. of date, $\Delta\kappa$, to r. of date, $\overline{\text{P}}$

SC 2472A

Die A8

12. A8 P12 15.71 CNG