

## TULUL ADH-DHAHAB (WADI AZ-ZARQA) LEAD SLING BULLETS FROM TERRACE I

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During excavations on the western hill ('Terrace I') of Tulul adh-Dhahab, four lead sling bullets - displaying some fragmentation or deformation<sup>2</sup> - were discovered close together in a burned layer, in a context suggestive of storage (see below). The sling bullets can assist with establishing the historical context of the excavation site and the conflict that took place there.

### Bullet no. 1

The first sling bullet (8304: **Fig. 1a - b**) was found sintered together with an arrowhead. In this case, if there was any impact damage, which would have demonstrated its use, it must have been very slight.

The bullet weighs 59.54g (actually the combined weight of bullet and arrowhead). It is 41 mm long, 20 mm wide (frontal perspective), and approximately 13 mm thick (an exact measurement is impossible because of the arrowhead).

### Obverse

The letters are about 5 - 8 mm high and the script runs from left to right; the letters are not dotted. The text reads: Βλήμα Διός = "The missile of Zeus". *blh`ma* is well documented (Euripides, Supp. 330; Dion. Hal. 10,16; in the specialist literature: Philon 2,431; Max. Tyr.



1a. Tulul adh-Dhahab, terrace I. Lead sling bullet 1 obverse



1b. Tulul adh-Dhahab, terrace I. Lead sling bullet 1 reverse

1. I am grateful to my colleagues Prof. Dr Thomas Pola (Dortmund) and Mrs Hannelore Kröger MA (Spence), who direct the excavations, for the confidence they have placed in me and for putting drawings and digital photographs at my disposal. I am also indebted to my Erlangen colleague, Prof. Dr Matthäus, to Dr Gian Franco Chiai (Berlin), to Dr Wolfgang Thiel (Munich) and to the members of my graduate seminar in Erlangen (especially Mr Aike van Douwe and Mr Boris Mijat) for their speed of assistance in view of the short period of time available to complete the task. Mrs Kröger generously provided me with a great deal of information about the excavations.

2. Basic information with further references: Peter Weiß and Niels Draskowski, Neue griechische Schleudernbleie. Thissaphernes und weitere Kommandeure, *Chiron* 40, 2010, pp. 123-153. Also important: John Ma, Autour des balles de fronde «camiréennes», *Chiron* 40, 2010, pp. 155-173; Alain Bresson, Rhodes during the siege of 305-304 BC: population, territory and strategy of defence, in: N. Faucherre and Isabelle Pimouguet-Pédarros, *Les sièges de Rhodes de l'Antiquité à la période moderne*. Centre de Recherche en Histoire Internationale et Atlantique, Presses Universitaires de Rennes no. 40, 2010, pp. 103-133.

9,8), usually in the plural.

One can almost hear the soldiers' battle-cry. It is something that often occurs<sup>3</sup> and in this case the battle-cry accords well with the emblem: a thunderbolt. Zeus, the thrower of thunderbolts, was the perfect patron deity for this probable specialist military unit and also provides a clue as to the origin of the troops (see below).

The *alpha* and the *sigma* differ in style from that on bullet no. 3, and the *eta* from that on bullet no. 4. Different individuals were therefore presumably responsible for the inscriptions on the bullets. The *mu* is rotated by 180 degrees, which is unusual but not unknown (retrograde script, on the other hand, is common and occurs on bullet no. 3). It is also curious that the formation of the *beta* appears to imply retrograde script. Our reading is supported by analysis of the emblem on the reverse.

#### Reverse

The unit that made and used this bullet was Greek or Macedonian; the emblem on the reverse is further evidence of this. Although obscured by the arrowhead, it is clearly a thun-

derbolt. These occur frequently on sling-shot bullets<sup>4</sup>, especially those discovered in Jordanian excavations, at Ptolemais (Akko)<sup>5</sup> and, especially, at Dor<sup>6</sup>.

On the Tulul adh-Dahab bullets, the thunderbolt is even better preserved on bullets nos 3 and 4, where the little wings which are often shown on either side can be easily made out. On bullet no. 3, however, and possibly also on bullet no. 4, they do not conform to the usual symmetrical arrangement. Like the letters on the respective obverses, the thunderbolts themselves vary in their execution. Presumably the different individuals who were responsible for the inscriptions also depicted the thunderbolts. Sling shot was simply manufactured on the spot as needed, with no great effort. This is why up-to-the-minute slogans for an ongoing battle are often found in the inscriptions. Nevertheless, the variations between the thunderbolts in the way the lightning flashes are depicted always occur within a certain spectrum. The flashes always emanate from the central flash-like branches, sometimes springing from a single point in the centre, sometimes from points distributed along

3. See examples, e.g. in Ma (see note 2), pp. 167-170.

4. E.g. Weiß and Dabrowski (see note 2), no. 20.

5. Described (without any contextual information) at: [http://www.google.de/imgres?q=ancient+lead+slingshot&start=112&hl=de&biw=1600&bih=670&tbnid=vP66oYkAXW7TMM:&imgrefurl=http://www.bible-history.com/past/images/&docid=0UjKTDB216X91M&imgurl=http://www.bible-history.com/past/images/lead\\_slingshot\\_acc0.jpg&w=275&h=490&ei=DVhGUYXbFsbCtQbP84DwCA&zoom=1&sa=X&ved=0CEkQrQMwFzhk&iact=hc&vpx=294&vpy=256&dur=2014&hovh=300&hovw=168&tx=114&ty=156&page=4&tbnh=138&tbnw=84&ndsp=44](http://www.google.de/imgres?q=ancient+lead+slingshot&start=112&hl=de&biw=1600&bih=670&tbnid=vP66oYkAXW7TMM:&imgrefurl=http://www.bible-history.com/past/images/&docid=0UjKTDB216X91M&imgurl=http://www.bible-history.com/past/images/lead_slingshot_acc0.jpg&w=275&h=490&ei=DVhGUYXbFsbCtQbP84DwCA&zoom=1&sa=X&ved=0CEkQrQMwFzhk&iact=hc&vpx=294&vpy=256&dur=2014&hovh=300&hovw=168&tx=114&ty=156&page=4&tbnh=138&tbnw=84&ndsp=44). More lead sling bullets, in this case with a scorpion emblem, originate from a Hellenistic concentration (not destroyed by fire), also containing arrowheads, next to the defensive wall, E. Stern *et al.* (eds), *New Encyclopedia of Archaeological Excavations of the Holy Land*, Washington DC, Vol. 1, 1993, Acco (see below) pp. 16-31, esp. p. 24 inc. Fig.

6. E. Stern, *Dor. Ruler of the Seas*, Jerusalem 1994, pp. 211-213 with a discussion of lead sling bullet finds from the area, including Akko-Ptolemais, Tel Tanninim and Jerusalem. Cf. D. Gera, Tryphon and the Lead Projectile from Dor, *Qadmoniot* 18, 1985, pp. 54-55 [Hebrew]; D. Gera, Tryphon's Sling Bullet from Dor, *Israel Exploration Journal* 35, 1985, pp. 153-163. See also E. Stern, J. Berg, A. Gilboa, B. Guz-Zilberstein, A. Raban, R. Rosenthal-Heginbottom and I. Sharon, *Excavations at Dor, Final Report, Volume I A, Areas A and C: Introduction and Stratigraphy*. Institute of Archaeology of the Hebrew University, Qedem Reports 1,

Jerusalem 1995; E. Stern, J. Berg, A. Gilboa, B. Guz-Zilberstein, A. Raban, R. Rosenthal-Heginbottom and I. Sharon, *Excavations at Dor, Final Report, Volume I B, Areas A and C: The Finds*. Institute of Archaeology of the Hebrew University, Qedem Reports 1, Jerusalem 1995; cf. in general terms the Tel Dor bibliography: <http://dor.huji.ac.il/bibliography.html>.

On the historical context of the finds, see W. Thiel, *Studien zum hellenistischen Siedlungswesen in Palästina und Transjordanien. Historische und archäologische Untersuchungen zur städtebaulichen Entwicklung ausgewählter Siedlungen unter den Ptolemäern und Seleukiden*, Munich 2007, pp. 37-46 and 63-125. Most authorities believe that the lead sling-shot from Dor is firmly dated evidence of the unsuccessful and subsequently lifted siege of Dor by Antiochus VII Sidetes in 139/138 BC. In 133/132 BC Antiochus had also besieged Jerusalem under John Hyrcanus and Simeon, the brother of and successor to Jonathan the Maccabean (see above for lead sling-shot from Jerusalem). However, this leaves open the question of whether all the lead sling-shot found at Dor should be linked to the activities of the Seleucid usurper Diodotus Tryphon (whose name appears on one of the bullets [see above]) or whether they are of a later date. The fact that some bullets from Dor resemble those from Tulul adh-Dahab in terms of weight, emblem and inscription, and that - according to Flavius Josephus - Dor was also besieged by order of Alexander Jannaeus at the beginning of his reign (probably around 103 - 101/100 BC), makes it tempting to hypothesise that the same unit was involved.

its length. They shoot away from the middle, bending outwards somewhat, and are slightly reinforced at their tips. Clearly, the men who produced the images had a shared conception of what a thunderbolt should look like.

Figurative representations of thunderbolts (on coins or reliefs) fall either into the staff- / lance-like category or the more distinctive fan-shaped category. The latter includes Greek types, where the lightning flashes usually fan out at the tips. In all of them the design is symmetrical. A frond-like design is typically eastern<sup>7</sup> and the images on our bullets clearly all belong to this type. Although the names vary, the script is not uniform and the thunderbolts are not even identical, the provenance of all four bullets and thus of the unit which fired them is the same.

The bullets from Dor also have thunderbolts. They have mostly been associated with military engagements in the 130s, but it is also possible that they were used at a later date. The same is true for a thunderbolt from Akko. From the illustrations that are available for Dor and Akko, all are of the type popular in the eastern Mediterranean region (Fig. 2).

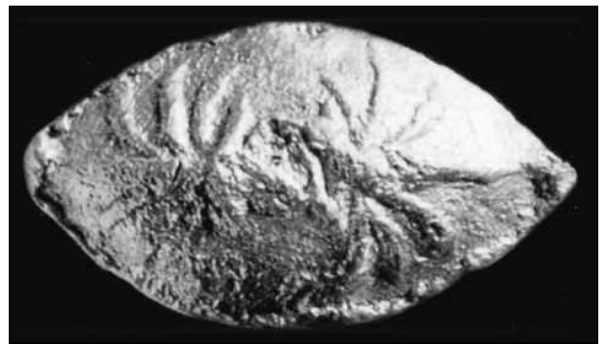
On closer inspection, however, the thunderbolts from Akko (in which the lightning flashes form a rosette springing from a single source) and Dor (where the rays are bent back like spiders' legs) differ quite considerably from each other. They also have little in common with the four examples under discussion here, even in view of the facts that the Tulul adh-Dhahab thunderbolts vary slightly amongst themselves, and that one is not even symmetrical. Moreover, the Greek letters on the Tryphon bullet from Dor<sup>8</sup>, when compared to those on our bullets, are written differently (e.g. on bullet no 4, the *iota* - though admittedly relatively insignificant - is different, as are the *kappa*, *eta* and *nu*).

#### Bullet no. 2

The second bullet (8320; Figs. 3a - b), which is 37 mm long, 20 mm wide, 11 mm thick and which weighs 39.97 g, is deformed at the front, either by impact or heat. Whatever the cause, it has not affected the weight, at least in comparison to the other bullets. The deformation

has also caused a hollow in the middle (approximately 3 mm in diameter and 1.5 mm deep). The overall damage, however, appears slight - too slight for the bullet to have been exposed to the prolonged influence of heat from a fire in the defenders' ammunition store, which is suggested by the burned layer of the find context (Hannelore Kröger [site director] pers. comm.). The bullets are therefore more likely to have been ammunition used by the attackers.

At any rate, damage is evident, whether caused by use or by deformation, and is most pronounced in the case of bullet no. 2. Presum-



2. Lead sling bullet from Akko (see note 5)



3a. Tulul adh-Dhahab, terrace I. Lead sling bullet 2 obverse



3b. Tulul adh-Dhahab, terrace I. Lead sling bullet 2 reverse

7. S. LIMC VIII 2 pl. 251, 173; 255, 222; 256, 230.

8. E. Stern 1994 (see note 6), p. 211 and Gera 1985 (see

note 6), pp. 153-163, esp. plate 19.

ably its inscription was lost when the damage was sustained, since every other lead sling bullet has an inscription. The emblem, though less well-preserved, is the same as that on bullets nos 1, 3 and 4. If bullet no. 2 was fired by the same unit as the others, but the damage suffered by the other bullets is - as described -less, an interesting secondary hypothesis would be that the bullets came into contact with heat at different stages of the siege. If the bullets came from the attackers, then bullet no. 2 may have been fired earlier and was therefore exposed to the heat for longer than the others.

### Bullet no. 3

The third bullet (8321; **Figs. 4a - b**) has barely discernable impact damage, apart from the fact

that the beginning of the (retrograde) inscription on the obverse is probably missing.

It weighs 52.81 g, is 37 mm long, 19 mm wide and 16 mm thick. The height of the letters is roughly 5 - 8 mm (as on bullet no. 1). The letters are not dotted. The direction of the script is retrograde. Although the letters are of the same size as those on bullet no. 1 and are also all on one line, the script is nevertheless markedly different (see discussion of the *alpha* and *sigma* above).

### Obverse

[. .]EYΣAΙ. In view of the space available, one would have expected at least another two letters before the *epsilon*. However, nothing is visible. If no additional letters need to be taken



4a. Tulul adh-Dhahab, terrace I. Lead sling bullet 3 obverse



4b. Tulul adh-Dhahab, terrace I. Lead sling bullet 3 reverse

into account, the inscription may be a shortened version of the name Εὔσαμ<ος> or genitive Εὔσάμ<ου>. This name is known from several sources: LGPN I p. 185 (Lesbos, Mytilene: 3<sup>rd</sup> century AD) and LGPN III A, p. 176 (Acarnania, Oiniadai: 2<sup>nd</sup> century BC); cf. F. Bechtel, *Die historischen Personennamen des Griechischen bis zur Kaiserzeit*, Halle 1917 (ND Hildesheim 1964), p. 174. Unfortunately, few conclusions can be drawn from these sources about the provenance of the unit which used the bullets. In the Hellenistic period, as later in Roman times, army sling units were usually highly specialised. Certain regions concentrated on this method of combat, which required a great deal of practice: most frequently mentioned are the Aetolians, Acarnanians, Thessalonians, some of the Greek islanders (particularly the Rhodians) and later, in the Roman Imperial period, the Balearic islanders<sup>9</sup>. However, in the context of sling bullet finds from Kamiros on Rhodes, J. Ma and A. Bresson were able to show clearly that, despite this specialisation, these particular regions did not enjoy a monopoly<sup>10</sup>, a fact which opens up further interesting possibilities for the provenance of our sling troops.

#### Reverse

For the thunderbolt, see description of bullet no. 1. Close inspection shows that the design is not quite symmetrical. Compared with bullet no. 1, the individual lightning flashes on bullet no. 3 spring more from the centre.



5 a. *Tulul adh-Dhahab, terrace I. Lead sling bullet 4 obverse*



5 b. *Tulul adh-Dhahab, terrace I. Lead sling bullet 4 reverse*

#### Bullet no. 4

The fourth bullet (8322; **Figs. 5 a - b**) weighs 38.44 g, is 37 mm long, 19 mm wide and 12 mm thick; on the right- and left-hand sides there are signs of impact damage or deformation by fire.

#### Obverse

The letters are approximately 5 mm high, smaller than the lettering on bullets nos 1 and 3. This is probably because the inscription is on

9. Literature on the history of army sling units: V.A. Anochin and R. Rolle, *Griechische Schleuderbleie von den Mauern vor Olbia*. In: R. Rolle and K. Schmidt (eds.): *Archäologische Studien in Kontaktzonen der antiken Welt*, Veröffentlichung der Joachim Jungius Gesellschaft der Wissenschaften 87, Vandenhoeck & Ruprecht Göttingen 1998, pp. 837-848; M. Grünwald and A. Richter, *Zeugen Caesars schwerster Schlacht? Beschriftete andalusische Schleuderbleie aus der Zeit des Zweiten Punischen Krieges und der Kampagne von Munda*, *ZPE* 157, 2006, pp. 261-269. See also A.V.M. Hubrecht, *The use of the sling in the Balearic Islands*, *Bulletin Antieke Beschaving* 39, 1964, pp. 92-93; M. Korfmann, *Schleuder und Bogen in Südwestasien. Von den frühesten Belegen bis zum Beginn der historischen Stadtstaaten*, *Antiquita Series 3: Abhandlungen zur Vor- und Frühgeschichte, zur klassischen und provinzialrömischen Archäologie und zur Geschichte des Altertums* 13, Habelt Bonn 1972; W.B. Griffith, *The sling and its place in the Roman Imperial Army*. Proceedings of the Fifth Roman Military Equipment Conference. In: C. van Driel-Murray (ed.): *Roman*

*Military Equipment. The sources of evidence*, British Archaeological Reports International Series 476, Oxford 1989, pp. 255-279; D. Baatz, *Schleudergeschosse aus Blei. Eine waffentechnische Untersuchung*, *Saalburg Jahrbuch* 45, 1990, pp. 59-67; Th. Völling, *Funditores im römischen Heer*, *Saalburg Jahrbuch* 45, 1990, pp. 24-58; M. Feugère, *Les Armes des Romains*, *Collection des Hesperides*, Errance Paris 1993; M. Feugère, *L'équipement militaire d'époque républicaine en Gaule*, *Journal of Roman Military Equipment Studies* 5, 1994, pp. 3-23; H.P. Isler, *Glandes. Schleudergeschosse aus den Grabungen auf dem Monte Iato*, *Archäologischer Anzeiger* 1994, pp. 239-254; A. V. A. J. Bosman, *Pouring lead in the pouring rain. Making slingshot under battle conditions*, *Journal of Roman Military Equipment Studies* 6, 1995, pp. 99-103; G.D. Stiebel, *"...You were the word of war." A sling shot testimony from Israel*, *Journal of Roman Military Equipment Studies* 8, 1997, pp. 301-307.

10. Ma (see note 2), pp. 155-173, esp. 164-65, and Bresson (see note 2), pp. 113-117.

two lines. The style of script is different from that of bullet no. 1, as shown by the *eta*, if correctly deciphered. From left to right, the script reads: ΜΑΧΙΟ[Υ] || ΝΙΚΗ.

Fire damage makes the reading of the first line open to doubt; the second line is not in doubt and is also well-documented. According to Peter Weiß and Niels Draskowski (*Chiron* 40, 2010, p. 151, Fig. 101; Schleuderblei, *DNP* 11, 2001, p. 185) it was used to ‘summon victory’.

Some of the bullets from Dor also summoned victory in a similar way, for example: ΤΡΥΦΩΝΟΣ ΝΙΚΗ<sup>11</sup>. So, provided the name has been read correctly, the writer wished to say: “For victory by (or ‘over’) Machios”. In the first case, the person named would be an officer with whom the unit identified; in the second, it would be a prominent individual in the ranks of the defenders.

The name Machios is rare (it must be quoted here in a shortened form or else have been deformed, since the *upsilon* is no longer visible<sup>12</sup>), but is documented in Thessaly in the second half of the 3<sup>rd</sup> century BC (LGPN III B p. 271 [Pharsalos], IG IX 2, 234) and also at Hellenistic Pergamon (Perg. Forsch. 11, II 565; cf. Bechtel, p. 298).

#### Reverse

With slight variations, the reverse has a similar emblem to those of bullets nos 1, 2 and 3, although it is not as well preserved (and possibly also not quite symmetrical).

#### Summary

The first bullet is heavier than the others because of the arrowhead, but otherwise its measurements match those of bullets nos 2 and 4, although bullet 2 has traces of battle or fire damage. Bullet no. 3 differs in weight and thickness from the others, and also from the numerous other Greek bullets from other find sites, which are typically 2.8 - 3.5 cm and 30 - 45 g (*DNP* 11, 2001, p. 184 [P. Weiß]). Our bullets nos 1, 2 and

4 weigh, at 38 - 40 g, the equivalent of 1/10 of a *mina*, making allowance for some weight loss; in other words, they were of a standard size<sup>13</sup>.

#### Conclusions

The besiegers (the condition of the bullets suggests they should be attributed to the besiegers rather than to the besieged) appear to have brought special units with them, whose members used the Greek language and identified with Zeus, the thrower of thunderbolts. Radiocarbon dating and the most recently excavated coin series (H. Kröger pers. comm.) are indicative of the period immediately after the turn of the first century BC. Whilst this could be an argument for identifying the site as the Amathus mentioned by Flavius Josephus, there are caveats. In particular, there are hardly any of the Roman finds which would identify the provincial capital which Amathus later became. However, the history related by Flavius Josephus for the preceding period makes the theory more attractive when the lead bullets are taken into account.

Alexander Jannaeus, who besieged Amathus at the beginning of the 90s BC and later destroyed it, had Greek mercenaries from Pisidia and Cilicia amongst his troops (Flav. Josephus, *Bell. Jud.* 1,4,2-3; *Arch.* 13,13,3-5; cf. G. Boettger, *Topographisch-historisches Lexicon zu den Schriften des Flavius Josephus*, Leipzig 1879, see above pp. 20-21). These Greeks, along with 1,000 cavalry troops, would certainly have been amongst the contingent of 8,000 mercenaries (*Bell. Jud.* 1,4,5) upon whom Alexander could rely. Alexander avoided Syrian mercenaries on principle because they were hated both by the Jewish population (*Bell. Jud.* 1,4,3) and by himself (*Arch.* 13,13,5). The letters on the bullets are consistent with a Late Hellenistic date.

Many Greek towns had the thunderbolt-throwing Zeus as a protective deity on their coins, sometimes personified as a thunderbolt<sup>14</sup>. The mercenaries could therefore have come from Asia Minor or from any other part

11. Gera (see note 6), pp. 153-163 and plate 19.

12. In contrast to the 4<sup>th</sup> century BC, when the *upsilon* can be left out (Weiß and Draskowski [see note 2], p. 128; A. Bresson [see note 2], p. 117).

13. Cf. S. Aybek and B. Dreyer, Eine wehrhafte Stadt in spät-hellenistisch-römischer Zeit. Die Katapult-Arsenale der Stadt Metropolis (Ionien), *IstMitt* 61, 2001, pp. 205-217.

14. From the evidence of coin designs, these included

Olympia, the kingdom of Bithynia, Seleucia in Pieria, Caelia in Apulia, Kentoripai in Sicily, Oinoanda, Termessos and Lokroi in Italy, Kaunos, Syracuse, Byzantion (here Athena carries the thunderbolt), Cyrene, Abbaitis (Phrygia), Sinope, Tralleis, Cassope (Epirus), Hydissos (Caria), Myndos (Caria), Amastris and Olba. The designs are on the “Ancient Coin Research” database and can be printed for academic purposes.

of Magna Graeca. One clue may however help us further, namely the form of the thunderbolt, which (according to evidence in LIMC [see above]) is of a typically eastern style, with each tip having a frond bending away from it. This design is very close to that of the Phrygian town

of Abbaitis<sup>15</sup> (Fig. 6). The thunderbolts from Oinoanda in Lycia<sup>16</sup> and Termessos in Pisidia<sup>17</sup> are also similar (Figs. 7 and 8) as are, potentially, the thunderbolt from Tralleis<sup>18</sup> (Fig. 9) and the thunderbolts from the towns of Hydissos<sup>19</sup> and Myndos in Caria<sup>20</sup> (Figs. 10 and 11).



6. Coin minted in Abbaitis



9. Coin minted in Tralleis



7. Coin minted in Oinoanda



10. Coin minted in Hydissos



8. Coin minted in Termessos



11. Coin minted in Myndos

15. Abbaitis (Phrygia): BMC 5 and Pl. II, 1; SNG Cop. 1. SNG Tübingen 3889 – Numismatik Lanz München, Auction 120 (10.5.2004), Lot 169, Fig. after [http://www.acsearch.info/ext\\_image.html?id=1192](http://www.acsearch.info/ext_image.html?id=1192).
16. Oinoanda: NC 2005, S. 65, 1 b, Ira & Larry Goldberg coins & collectibles, Auction 72 (3.2.2013), Fig. after [http://www.acsearch.info/ext\\_image.html?id=564692](http://www.acsearch.info/ext_image.html?id=564692). On Zeus in Oinoanda, see H. Brandt and F. Kolb, *Lycia et Pamphylia. Eine römische Provinz im Südwesten Kleinasiens*, Mainz 2005, pp. 34 and 113; also p. 112 for Lycia.
17. Termessos: SNG BN 2089; beneficiaries of Dr Busso Peus, Auction 403 (27.4.2011), Lot 732, Fig. after [http://www.acsearch.info/ext\\_image.html?id=473232](http://www.acsearch.info/ext_image.html?id=473232).

- On Zeus in Termessos, see H. Brandt and F. Kolb, 2005, pp. 75-76 (temple of Zeus Solymos?), 117 (cf. p. 111 Selge).
18. Tralleis: SNG Kayan 1010; Auction House H. D. Rauch, Auction 88 (17.5.2011), Lot 163, Figure after <http://www.acsearch.info/record.html?id=483018>.
19. Hydissos (Karien): SNG Keckman 56; beneficiaries of Dr Busso Peus, Auction 376 (29.10.2003), Lot 434, Fig. after [http://www.acsearch.info/ext\\_image.html?id=151746](http://www.acsearch.info/ext_image.html?id=151746).
20. Myndos (Caria): Coin Hoards VIII, 1994, pp. 56, 481; beneficiaries of Dr Busso Peus, Auctions 407/408 (7.11.2012), Lot 637, Figure after [http://www.acsearch.info/ext\\_image.html?id=614442](http://www.acsearch.info/ext_image.html?id=614442).

Compared, for example, to the emblem of the Syrian town of Seleucia Pieria, the ‘branches’ of these thunderbolts are bent further outwards (except in the case of the Tralleis emblem) and the wings in the middle are more emphasised. One must, however, be careful not to discount specialist sling troops from Syria, simply on the basis of an emblem whose appearance was certainly partly determined by time constraints, individual imagination and the peculiarities of the material it was made of.

It is after all possible that the same dies were used for several towns<sup>21</sup>. The thunderbolt is a general symbol for Zeus, who was the patron deity of many towns in Asia Minor. The emblem occurs on many coins and also on other artefacts (see discussion above on the thunderbolt symbol on lead sling shot). But these examples show - and this is new - that there were differences between localities and periods. To account for these, there must have been differences in the minting process. For example, it is possible that a town might have ordered a coin, had a die manufactured and then, for the sake of civic identity,

had its own thunderbolt engraved on the die. To investigate this theory, however, one would have to compare all known coin reverses on which this symbol appeared, in order to reconstruct the differences between the dies<sup>22</sup>. Unfortunately it is not possible to pursue this matter further here.

It is also important to remember that there is no guarantee that the visual representation of the attributes of ‘official’ patron deities was taken as the model for the design of emblems on lead sling bullets. Nevertheless - and this we may state with certainty in this context - Zeus was amongst the most frequently represented deities in Pisidia and Cilicia<sup>23</sup> and the known depictions of the thunderbolt of these and neighbouring regions in southern Asia Minor are similar to those on the reverses of the lead sling bullets from Tulul adh-Dhahab.

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21. K. Kraft, *Das System der kaiserzeitlichen Münzprägung in Kleinasien. Materialien und Entwürfe*, Berlin 1972; on the current state of the discussion with further ideas (concerning, amongst other things, local representations of deities) see G. F. Chiaï, *Die Götter und ihr Territorium: Münzen als Quellen zur Interpretatio im kaiserzeitlichen Phrygien*, in: G. F. Chiaï, Chr. Kunst and R. Häußler (eds), *Interpretatio Graeca, Romana, Indigena. Religiöse Kommunikation zwischen Globalisierung und Partikularisierung*, Osnabrück 2013, pp. 51-70.

22. I am grateful to G. F. Chiaï for this idea (*per litteras*).

23. S. Pilhofer-Froehlich, *Romanisierung in Kilikien? Das Zeugnis der Inschriften*, Munich 2006, pp. 77-78, esp. p. 77: “*Der inschriftlich und numismatisch mit Abstand am häufigsten vorkommende Gott ist Zeus*” (Eng. “Zeus is the deity most frequently mentioned in inscriptions and depicted on coins”). This refers only to the mention of the name, but includes epithets. Such

epithets presuppose familiar Greek conceptions (Soter, Ktesios, Olympios, Polieus, Hypsistos) or indicate the conflation of a local deity with the most important Greek god (Pisarisseeus, Olbrios, Megas Lamotes, Korykios, Megas, Megistos, Keraunios, Phanaseus, Bronton, Androklas, Aneiketos, Kosmios, Epekoos, Boreios). For southern Pisidia (Etenna), see H. Brandt and F. Kolb, 2005, p. 117; cf. 115; 111 (Selge). Regarding the most prominent deity of this region, Zeus Sabazios, see *ibid.* p. 97. See also P. Depord and E. Varinlioglu, *Les Hautes Terres de Carie*, Bordeaux 2001, pp. 77; 129-132; 140-149; 165-168; 173, 191; 216; 219; 238; cf. Chr. Marek, *Geschichte Kleinasiens in der Antike*, Munich 2010<sup>2</sup>, pp. 627-647, esp. 628-638. The examples there presented are, however, a warning against going too far in attempting to make exclusively local attributions, given how widely Zeus was worshipped and the variety of forms that worship took.