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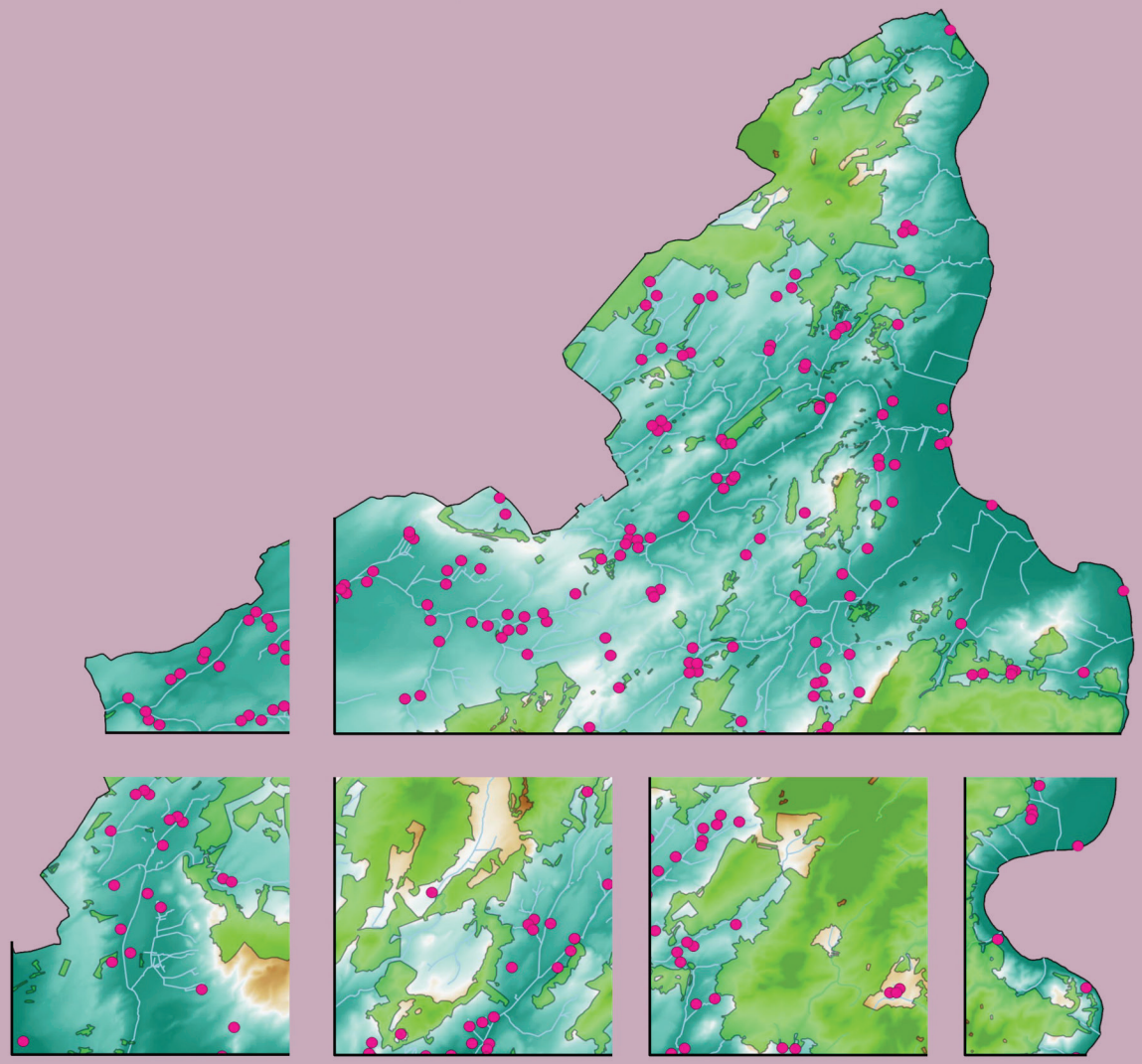

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The arrowheads from Grd-i Tle (Rania Plain, Iraqi Kurdistan)

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Abstract

The first season of the excavations of Grd-i Tle yielded four arrowheads (two 'Scythian type' trilobate bronze arrowheads and two iron arrowheads from the same archaeological context (SNR 133), from the debris outside the contemporary citywall. This article tries to examine on one hand the typology of the ancient Near Eastern arrowheads (with a special reference to the 'Scythian type' trilobate bronze arrowheads and the Assyrian iron arrowheads), on the other hand the chronological consequences of these finds.

During the excavation season of 2016,[1] altogether 4 arrowheads were found at Grd-i Tle. All of them came from Field 01, Trench 1 (790.540.NW). Trench 1 (NW trench) was opened along the outer surface of the walls which encircled the top of the tell in different periods. In a 5 m deep section at least eight consecutive walls, built on the top of each other and their debris were discovered and identified.[2]

The four arrowheads fall into two categories. These categories include: two 'Scythian' type trilobate bronze arrowheads and two iron arrowheads. All of them were discovered with the help of metaldetector: one of them was found *in situ* in the actual layer under investigation (*Fig. 1.2*), while three of them came from the spoil-dump of the same layer (*Fig. 1.1, 3, 4*).[3]

In the recent years several articles and monographs were published on ancient Near Eastern arrowheads. J. Curtis in his recent study on late Assyrian metalwork examined around 630 different arrowheads mainly from Assyrian sites.[4] His typology formed one of the bases of this work. He identified 7 different types of tanged iron and 3 different types of socketed bronze arrowheads from Assyrian sites. A. Hellmuth Kramberger also provided a chronology and typology of ancient Near Eastern arrowheads in her recent studies (see below).[5] Moreover, Derin and Muscarella collected almost all of the known Iron Age arrowheads from Anatolia and Iran.[6] In their article – similarly to the studies mentioned above – they provided a detailed list of archaeological sites which yielded arrowheads and an inventory of the arrowheads as well. The fourth later-day study on arrowheads by M. J. Szudy examines the question of archery in the Neo-Assyrian times and gives the most detailed typology and inventory of

1 Dezső et al. 2016, 233–240.
2 Dezső – Mordovin 2016, 241–262.
3 Dezső – Mordovin 2016, 250, Fig. 16. 1–5.
4 Curtis 2013, 39–43, Pls. XI–XIV.
5 Hellmuth 2006a; Hellmuth 2006b, 191–208; Hellmuth 2007, 66–84; Hellmuth 2008, 102–122; Hellmuth 2010; Hellmuth 2014, 1–38; Hellmuth Kramberger 2015; Hellmuth Kramberger 2017, 571–589.
6 Derin – Muscarella 2001, 189–217.

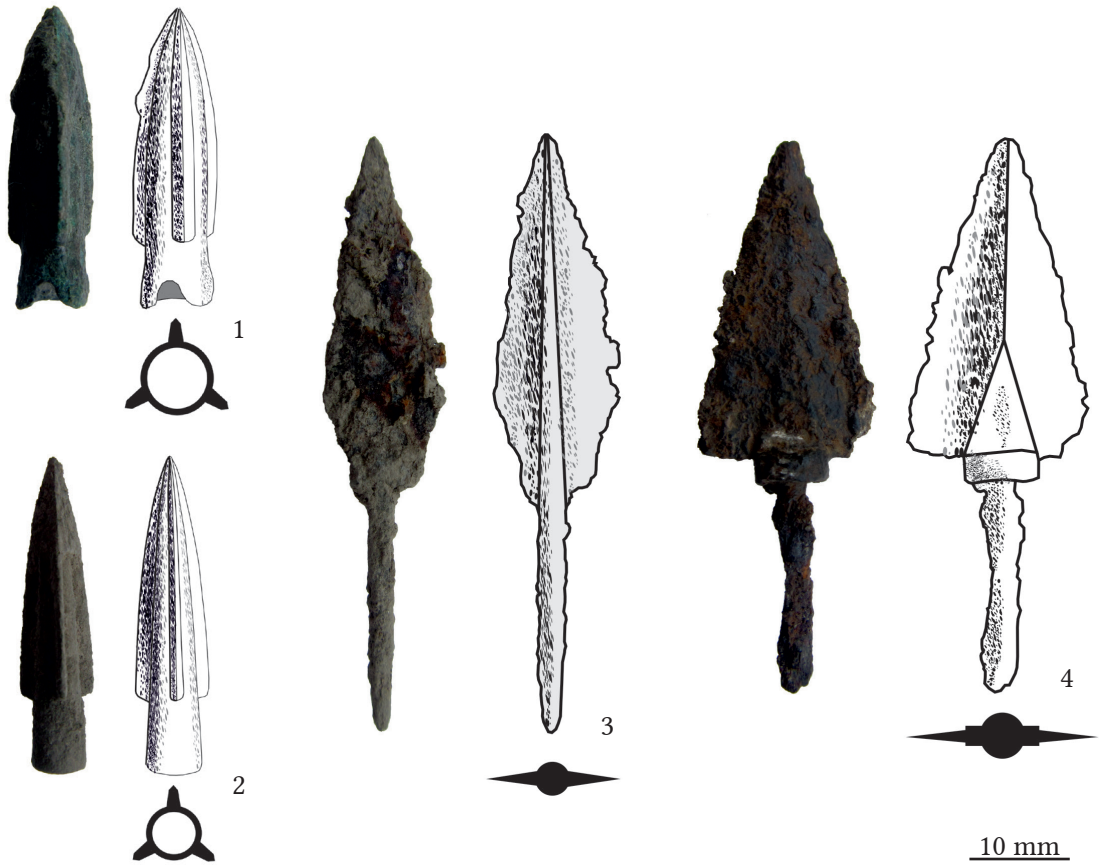

Fig. 1. 1–4 – Bronze and iron arrowheads from Grd-i Tle.

arrowheads of different types, complemented with technical details of their manufacture.[7] These comprehensive studies and their typologies make the reconstruction of the historical setting of the Grd-i Tle arrowheads possible.

'Scythian type' socketed bronze trilobate (three winged) arrowheads

These bronze arrowheads represent a characteristic, well-identified and widespread type of bronze arrowheads *(Fig. 1.1–2)*, the origins of which is linked to the late 8th century BC appearance of the Cimmerians (Assyrian Gimirrāia) and somewhat later of the Scythians (Assyrian Iškuzāia) in Anatolia, Urartu and other territories along the Northern borders of the Assyrian Empire. The royal correspondence of Sargon II (721–705 BC) refers to a Cimmerian campaign against the Urartian Kingdom as early as the reign of Rusa I (735–714 BC).[8] These Assyrian letters, actually military intelligence reports refer to this campaign[9] and to a battle, in which

7 Szudy 2015.

8 For a detailed discussion see Kristensen 1988. Also Dezső 2014, 221–235.

9 For example, the letter of Urda-Sîn, the Assyrian Palace Herald *(nāgir ekalli)* refers to the Urartian tactics against the Cimmerian king: "Perhaps we can attack him, once there is more snow." (Lanfranchi – Parpola 1990, 145 (ABL 112), Rev. 10–13). The Urartians thought that the snow will hinder the move of the Cimmerian horsemen. The Assyrian military intelligence (Dezső 2014, 221–235) monitored the moves of the Cimmerian army in Urartu, and an unfortunately unknown Assyrian official reported to Sargon II that the Cimmerian army pitched camp in the Urartian province of Uṣunali (Lanfranchi – Parpola 1990, 144 (GPA 243)).

the Urartians suffered a "terrible defeat from the hands of the Cimmerians."[10] It seems that – by a special providence – Sargon II himself lost his life in a battle somewhere in Tabal (Southeastern Anatolia) fought against the Cimmerians. Esarhaddon, king of Assyria (680–669 BC) defeated the Cimmerian king Teušpa in Šubuḫnu/Ḫubušna in 679 BC.[11] Consequently, the Cimmerians destroyed the kingdom of Phrygia (Midas (Assyrian Mita) died in 676/4 BC?), and encountered with Gyges (Assyrian Guggu), the king of Lydia, whom they defeated in a battle as well.[12] Then Gyges had a dream which advised him to ask the help of Assurbanipal, king of Assyria (668–631 BC). The Assyrian army overthrew the Cimmerians[13] and saved Gyges, who, however, subsequently sided with the Egyptians (Psammetichos), enemies of Assyria and broke his oath. When he deserted the Assyrian alliance the Cimmerians defeated Gyges and killed him in a battle (652 BC?).[14] His son (Ardys) invoked, again, the aid of Assurbanipal, swore an oath and saved himself.[15] Somewhen, following the suppression of the Babylonian revolt in 648 BC, the army of Assurbanipal beat the army of Tugdammē (Lygdamis), (king of the Cimmerians, the descendant of Ḫalgatê?), who submitted to the Assyrians. Later on, however, he broke his ceremonial oath, aimed to attack the borders of Assyria, but the Assyrians (defeated his army) and captured him. He was executed (in front of his troops?) and his body was cut into pieces.[16] After that – as far as we know – the Cimmerians disappeared from the written history of the Assyrian Empire.

The Scythians appear in the Assyrian sources during the reign of Esarhaddon (680–669 BC), one of whose queries to the Sungod mentions that Bartatua (Protothyes), king of the Scythians asked a royal daughter for marriage from the Assyrian king.[17] It seems that – following this royal matrimony? – the Scythians became the allies of the Assyrians and were settled along the Northeastern borders of Assyria. The queries of Esarhaddon, however, regularly asked the Sungod, about the plans of the Scythians and the Cimmerians as well.[18] Somewhen,

10 Detailed reports of the Assyrian military intelligence arrived to Sargon II concerning the defeat of the Urartian troops they suffered on their campaign against the intruding Cimmerians. The letter of Aššur-rēsūwa, for example, reported that the defeated Urartian army retreated to the land Guriania (between Urartu and Cimmeria) (Lanfranchi – Parpola 1990, 92 (ABL 146+)). In another, more detailed report he let the king know that 9 governors of the Urartian king were killed in the battle, and the king fled on a lone horse, so his camp lifted up Melartua, his son, and made him king along the road. (Lanfranchi – Parpola 1990, 90 (ABL 646)). A similar report of an unknown vassal also mentioned that [x] magnates of the Urartian king were killed in the battle against the Cimmerians (Lanfranchi – Parpola 1990, 173 (CT 53, 99)). Three letters of Sennacherib, the crown prince, based on intelligence reports informed Sargon II that (1) the Urartian king suffered a terrible defeat and the governor of Waisi was killed (Parpola 1987, 30 (ABL 1079)); (2) 11 governors of the Urartian king were killed together with their troops in the battle against the Cimmerians, while his commander-in-chief (Kaqqadānu) was captured, together with two other governors (Parpola 1987, 31 (ABL 179)); (3) the Urartian king suffered a terrible defeat on his campaign against the Cimmerians (Parpola 1987, 32 (NL 46, ND 2608)).

11 Leichty 2011, 1, iii:43-46; 2, ii:1-4; 60, i:5; 77:18-19; 79:17-18; 93:6; 98:23-24: "I struck with the sword Teušpa, a Cimmerian, a barbarian whose home is remote, together with his entire army, in the territory of the land Ḫubušna." The epizode is recorded in the Esarhaddon Chronicle as well (Glassner 2004, 206-211, no. 18, 9'.

12 Borger 1996, Prisma E, Stück 14, 44–55.

13 Borger 1996, Prisma E, Stück 17, 1-20. Another passage sais that the Lydians defeated the Cimmerians (with Assyrian help): Prisma B §18, ii, 93; iii, 4; Prisma C §28, iv, 1–14; Prisma A §24, ii, 95–110; Prisma F §9, ii, 10–20.

14 Borger 1996, Prisma A §24, ii, 111–125.

15 Borger 1996, Prisma A §24, ii, 111–125.

16 Borger 1996, Prisma J, Stück 6.

17 Starr 1990, 20 (PRT 16).

18 Starr 1990, 23 (AGS 35), 24 (AGS 25+), 35 (AGS 36), 36 (AGS 10), 37 (AGS 24), 39 (PRT 95), 40 (PRT 38), 66 (PRT 20), 67 (AGS 31), 71 (AGS 30).

during his early reign (probably before the dynastic marriage) he defeated "Išpakāia, a Scythian, an ally who could not save himself."[19]

Later on, some Neo-Babylonian administrative texts deal with Cimmerian arrows. One of them mentions 200 Cimmerian reed arrows, 180 of which have got copper/bronze heads,[20] while the other text refers to 8 guards equipped with Cimmerian arrows.[21]

The dramatic 'interaction' between the Cimmerians and Urartians discussed above is recorded not only in written sources but witnessed by the destruction layers of Urartian sites and a huge number of 'Scythian' types of arrowheads recovered during the excavations of Urartian fortresses, where a lot of these arrowheads were found embedded in the walls. Such socketed trilobate bronze arrowheads are known, for example, from Karmir Blur.[22]

Furthermore, there is an ongoing debate over the 'ethnic marker role' of, for example, the socketed bronze bilobate/trilobate arrowheads.[23] Of course it is true, that this type of arrowhead could actually be used by anyone.[24] However, this type of arrowhead should not to be taken out from its original context, and should not be examined alone. Rather, it should be kept in mind that these arrowheads were mainly or only effective as part of a complex weapon system, the most important element of which was the powerful composite reflex bow. While the socketed bilobate/trilobate bronze arrowheads were most likely easily accessible from the 7th century BC in wide areas of the Near East, the manufacture of a reflex bow, to which this type of arrowhead belonged to, was, in all probability, inaccessible or very limited in these areas.

Scholars have long been interested in the study of the history of the Scythian type of weaponry[25] including the study of bows and arrows,[26] especially the chronology and typology of arrowheads and the role they could play in the reconstruction of the expansion of horse nomads during the (early) Iron Age. The first detailed typology of these types of arrowheads was provided by S. Cleziou.[27] The topic was also discussed in the context of the history of Iron Age Near Eastern arrowheads as well.[28]

As has been mentioned above, Derin and Muscarella collected almost all of the known Iron Age arrowheads from Anatolia and Iran in their joint article.[29] The detailed list of archaeological sites yielded arrowheads and the inventory of the arrowheads, as well as the

19 Leichty 2011, 1, iii:60–61; 2, ii:22–23; 3, ii:31'; 7, i':1'–2'.
20 Dougherty 1920, 237.
21 Contenau 1927, 114.
22 Azarpay 1968, Pl. 8.
23 For a good introduction see for example, Muscarella 1988, 107-108; Derin – Muscarella 2001, 189–217; Szudy 2015, 168–174.
24 As Szudy (Szudy 2015, 170) referred to Dandamaev and Lukonin (Dandamaev – Lukonin 1989, 226) "Archaeological finds – such as the socketed bronze arrowheads found together with iron leaf-shaped arrowheads in a store room at Karmir-Blur and the local manufacture of other Cimmerian-style objects there 15 – provide additional evidence of this adoption of styles by other peoples."
25 Černenko 2006.
26 Sulimirski 1954, 282–318; Hančar – Hančar 1972, 3–25; Cleuziou 1977, 187-199; Brentjes 1996, 179–210. For a good overview of the history of the topic see Szudy 2015, 170–173.
27 Cleuziou 1977, 187–199.
28 Derin – Muscarella 2001, 189–217; Yalçikli 2006; Yalçikli 2009, 181–190; For a recent, detailed and comprehensive study of the Assyrian and 'Scythian' arrowheads see Hellmuth Kramberger 2015.
29 Derin – Muscarella 2001, 189–217.

composition of the groups according to their types (tanged/socketed, bilobate/trilobate, bronze/iron) led them to reconstruct a broad geographical distribution of the socketed bilobate and trilobate types (of which the socketed trilobate arrowheads form the 3rd group of bronze arrowheads, but not a single piece was recovered from Ayanis). According to their reconstruction,[30] in the Iranian sites the trilobates predominate: the destruction levels of all the eleven pre-Achaemenian sites contained trilobate arrowheads, while only four of them yielded bilobates. Out of the eight Urartian sites two produced only bilobates, one a single trilobate, five sites yielded both types but in five of these sites bilobates predominate. There is a single site, Karmir Blur, where trilobates formed the main bulk of the recovered arrowheads. In the rest of the Anatolian sites the bilobates predominate: eleven sites produced only bilobates, four only trilobates and four sites contained both forms.

Derin and Muscarella provides furthermore an overview of those scholars who connected the socketed bilobate bronze arrowheads to the Cimmerians and the socketed trilobate bronze arrowheads to the Scythians.[31] This geographical distribution corresponds with the known historical fact (see above), that – at least in the early times, as long as the Assyrian Empire existed – the Cimmerians were active mainly in Anatolia, and the Scythians mainly in Northwest Iran. Anyway, it is quite sure that the socketed type of arrowhead was unknown in the Near East before the arrival of Cimmerians and Scythians.

However, in their article they also discuss – inter alia – two moulds from Carchemish and from the British Museum. Both moulds were made for casting more than one arrowheads. The British Museum example was used for casting two trilobate and one bilobate arrowhead, while the Carchemish example was used for casting two trilobates, one barbed. These examples – as they phrase – show "there was apparently a functional, surely not an ethnic distinction between bilobate and trilobate arrows."[32] The same applies for barbed and not barbed examples as well.

The chronology and typology of the different types of 'Scythian' arrowheads and their diffusion was recently reconstructed by A. Hellmuth Kramberger. She reconstructed 20 main-types and various subtypes for Eastern Middle Europe, and almost 40 main-types and various subtypes for the northern Black Sea region.[33]

Different subtypes of this type[34] are known from a vast stretch of regions (from Central Asia through Eurasian steppes to the Carpathian Basin)[35] where (mainly) the Scythians were active during the 8th–4th centuries BC. The Scythian socketed bronze arrowheads have got not only

30 Derin – Muscarella 2001, 196–197.
31 Derin – Muscarella 2001, 198.
32 Derin – Muscarella 2001, 196.
33 Hellmuth 2006a; Hellmuth 2006b, 191–208; Hellmuth 2007, 66–84; Hellmuth 2008, 102–122; Hellmuth 2010; Hellmuth 2014, 1–38; Hellmuth Kramberger 2015.
34 Hellmuth 2006a, Hellmuth 2010.
35 See for example the large numbers of arrowheads from Smolenice-Molpír (Slovakia) (Hellmuth 2006b, 191–208) and Dédestapolcsány (Hungary) (V. Szabó – Czajlik – Reményi 2014), where altogether 234 pieces of bronze arrowheads of different types of 'Scythian' arrowheads (1. outer long socketed two winged (barbed and not barbed as well), 2. outer long socketed three winged (barbed and not barbed as well), 3. inner socketed three winged) were discovered in the wall and debris of a rampart of a Hallstatt settlement, which – similarly to Smolenice-Molpír – was besieged during the 7th century BC.

a three winged/bladed type,[36] but a two bladed/winged type as well,[37] and the later history of the type also included the two winged and three winged Parthian/Sauromatian/Roman iron arrowhead types – with a significantly different distribution.[38]

J. Curtis listed socketed bronze arrowheads of three types from Assyrian sites:[39]

- two winged arrowheads with side catch
- three winged arrowheads with side catch; and
- three winged arrowheads. Such bronze arrowheads are known from Assyrian sites, as for example Nimrud,[40] Kouyunjik,[41] Khorsabad,[42] Ashur,[43] and Tell Ibrahim Bayis[44] as well, which shows that the Scythians, either as allies (allied troops), or as raiders after the fall of the Assyrian Empire were active in the region.

Although for the first sight it would easily seem that the socketed bronze trilobate arrowheads show a quite uniform shape, a detailed examination shows that several subtypes existed. These subtypes reflect differences in the geographical and chronological distribution of the socketed bronze trilobate arrowheads.

As it has already been mentioned above, several scholars constructed typological and related chronological systems for these types of arrowheads. If one takes a closer look on our arrowheads it becomes clear that both of them belong to the same subtype, which is characterized by a longer socket and squared shoulders of the blades. The best typological and chronological framework of the socketed bronze trilobate arrowheads was built by M. J. Szudy.[45] He separated eight different subtypes of this type of arrowhead.[46] Exact parallels of the Grd-i Tle socketed bronze trilobate arrowheads are clearly belong to his 3a–11 group.[47] According to his framework the long socket and the squared shoulders are those characteristic features, which form the base of this separate group. There are altogether three examples known from those sites which he surveyed. One of them is from Assur,[48] a second is coming

36 Hellmuth Kramberger 2015, 27–32: *2.5 Dreiflügelige Pfeilspitzen (Typ Ib-reiternomadisch Variante a, b)*, with two basic types: the almond shaped blade (with Abb. 33: map of distribution) and a triangular shaped blade (with Abb. 35: map of distribution).

37 Hellmuth Kramberger 2015, 20–26: two winged bronze arrowheads of the 'Scythian' socketed type (*2.4 Zweiflügelige Bronzepfeilspitzen (Typ Ia-reiternomadisch Variante a, b))* with almond shaped blade (Abb. 26, map of distribution: Near-East, Anatolia, Cis- and Transcaucasia, South-Russian and Ukrainian steppes), and diamond shaped blade (Abb. 30, with almost the same distribution as the previous type).

38 Hellmuth Kramberger 2015, 42–45: two winged (*3.3 Zweiflügelige Pfeilspitzen aus parthisch-römischer Zeit (Typ IIa-parthisch-römisch Variante a1, a2, b1, b2, c1, c2, d, e))*; 45–50: three winged *(3.4 Dreiflügelige Pfeilspitzen aus parthisch-römischer Zeit (Typ IIb parthisch-römisch Variante a, b, c, d, e))* with a map of distribution (Abb. 46: from Judaea, Mesopotamia and in Europe along the *limes* from the Balkans to Britannia).

39 Curtis 2013, 159–160.

40 Curtis 2013, nos. 231–233 (with side-catch/barb), nos. 234–244 (without side-catch/barb).

41 Curtis 2013, no. 245.

42 Curtis 2013, no. 246.

43 Curtis 2013, no. 247.

44 Curtis 2013, no. 248 (two examples).

45 Szudy 2015, 9.8. Type 3a – TRILOBATES, 261–268.

46 Szudy 2015, 261–268, Types 3a–1, 2, 3, 4, 5, 8, 11, 14.

47 Szudy 2015, 266–267.

48 Assur 53, Vorderasiatisches Museum, inv. no. 11319, Szudy 2015, 266–267, Pl. 44.

from Ayanis,[49] but the best parallel is an arrowhead from Nush-i Jan.[50] As Szudy noted, "as each of the three extant examples come from different regions (Northern Iraq, Transcaucasia and Iran), this type appears to have been rare but widely spread."[51]

The chronological framework, the timespan to which these pieces can be dated is otherwise fairly wide. All of the pieces are from destruction levels, however, the Assur piece has got no date (consequently it can broadly be dated to the time of the destruction of the city or to the preceding period (second half of the 7th century BC), the Ayanis example is dated to 650–590 BC (the destruction of the site), while the Nush-i Jan arrowhead is dated between 700–500 BC.[52] Two further similar pieces are published by Muscarella.[53] The "Ziwiye" example is not dated, but the Yarim Tepe arrowhead is dated by the excavators to the Parthian period, which – according to the Grd-i Tle arrowheads, and the typologies of Hellmuth Kramberger, Curtis, and Szudy – seems to be very late.

Similar arrowheads were found in other archaeological sites as well. Such pieces would be the two socketed bronze trilobates which were excavated in Tall Šēḫ Ḥamad/Dūr-Katlimmu,[54] destroyed at the end of the 7th century BC. This type of socketed bronze trilobate arrowhead belongs to Hellmuth Kramberger's group 1b, variant b.[55] A further, quite similar arrowhead was retrieved from Kaman-Kalehöyük (Turkey),[56] which also shows that this type of arrowhead was used from Iran (Nush-i Jan) to Anatolia (Ayanis, Kaman-Kalehöyük) but appears in Assyrian sites, as Assur and Dūr-Katlimmu as well. It is, however, still unknown what made the difference between those groups of forms which were classified as separate subtypes by the scholars of the field (see above). The possible regional, chronological or even ethnic differences between the use of different subtypes needs further research.

'Assyrian type' tanged leaf-shaped iron arrowhead

One of the iron arrowheads from Field 01, Trench 1 shows a classic leaf-shaped (slightly rhomboid) form with a long tang and a midrib in the angle of the tang, running along the blade of the arrowhead *(Fig. 1.3)*. The arrowhead does not have a stop at the base of the blades. This arrowhead shows the signs of a very fine craftsmanship and a high technological level, which make it one of the nicest pieces of this type recovered in excavations.

The main difference between the study of the molded bronze and forged iron arrowheads is that – as has been mentioned above – the molded bronze arrowheads (socketed bilobates and trilobates) could be mass produced by a good-wearing material, while the forged tanged iron arrowheads had to be hammered individually, which means that only similar forms and not exactly the same type of iron arrowheads could be produced. The different blacksmiths would produce a much larger variety of arrowheads – even of the same type as well. For this reason,

49 Ayanis 107, Derin – Muscarella 2001, Fig. 7; Szudy 2015, 266–267, Pl. 44.
50 Nush-i Jan 13, NU 70/351, Curtis 1984, 27, Fig. 6:250; Szudy 2015, 266–267, Pl. 44.
51 Szudy 2015, 267.
52 Szudy 2015, vol. II, 30.
53 Muscarella 1988, cat. no. 173 (MMA 63.102.6, Yarim Tepe 60/2, A2 floor 1.3 cm) and cat. no. 523 (MMA 61.66.2, allegedly from Ziwiye, 3.3 cm).
54 Hellmuth Kramberger 2015, Cat. nos. 010, 015.
55 Hellmuth Kramberger 2015, 26, *Typ Ib-reiternomadisch Variante b.*
56 Hellmuth Kramberger 2015, 24, Abb. 29, c.

the typology of the tanged iron arrowheads shows a much complex and complicated system in contrast to the molded socketed bronze trilobates, where the size and weight of the arrowheads is quite homogeneous. A further problem with the identification of our leaf-shaped tanged iron arrowhead is that:

- This shape was the most widespread not only in the Neo-Assyrian Empire during the 9th–7th centuries BC, but in the neighbouring territories (Anatolia, Urartu, Iran) as well.
- The corroded state of the huge numbers of known leaf-shaped tanged iron arrowheads hardly make it possible to identify the exact shape (rounded leaf-shaped or rhomboid) and the existence of a midrib or even the stop as well.

In spite of these difficulties several scholars made an attempt to build a typological system and a chronological sequence for the iron arrowheads of the Iron Age Near East, especially of the Neo-Assyrian period.

J. Curtis, for example, mentioned in his study all the above identified 7 different types of tanged iron arrowheads from Assyrian sites.[57]

- The type 1 have a slender leaf-shaped blade with a tapering tang without a midrib. The tang is thickening at the point where it joins the blade to prevent the head from sinking into the shaft.[58] There are 427 examples of this type. One piece came from Balawat, while the others are exclusively from Nimrud, most of them from the Fort Shalmaneser, which might serve as an armory during the last years and days of the city. Their sizes vary from 3.5 cm to 8.21 cm, while their weights are between 3.2–4.57 g.
- The type 2 shows a similar form as the previous but there is a stop at the top of the tang.[59] 106 pieces of this type are known from Nimrud, 3 from Kouyunjik, 3 from Sharif Khan and 2 from Balawat. Their lengths vary between 4.1–10.8 cm, their weights are between 4.9 and 26.5 g. Most of the pieces are again from Fort Shalmaneser.
- From our point of view the type 3 is the most interesting, since it shows definite similarities to our iron arrowhead No. 3. The shape of these pieces is similar to the pieces of the previous groups, however, with a significant change: there is a mid-rib running along the blade. The stop could be prominent, but on some pieces the stop is so slight as to be almost non-existent.[60] There are altogether 28 pieces are known: 18 from Nimrud, 9 from Sharif Khan and 1 from Kouyunjik. Their lengths vary between 7.15–9.1 cm, their weight is between 9.88–18.0 g.
- The type 4 is a variant of the previous one with angular shoulders in the base of the blade. Only three examples are known from Nimrud, Fort Shalmaneser.[61]
- Examples of the type 5 show, however, a quite different shape: the pieces are almost poker-shaped, the blades are slender and almost straight-sided. They are so

57 Curtis 2013, 39–42.
58 Curtis 2013, 39–40, Pl. XI.
59 Curtis 2013, 40, Pl. XII.
60 Curtis 2013, 40, Pl. XIII.
61 Curtis 2013, 40, Pl. XIII.

thick that the section of the blades is sometimes almost circular. There is a stop at the base of the blade.[62] All seven pieces are from Nimrud, Fort Shalmaneser. Their lengths vary between 7.5–8.8 cm, while their weights are between 9.97–15.87 g.

- The type 6 is represented by arrowheads with a leaf-shaped blade but a straight-sided tang.[63] Three pieces are known from Nimrud, and two pieces are from Kouyunjik. The examples of this type vary in length between 6.68–7.75 cm, while only a single piece was measured: it weighed 13.06 g.
- The type 7 arrowheads are long, having slender lanceolate blades with a little distinction between blade and tang. Some of the tangs show a rectangular section. All the 7 known pieces are from Fort Shalmaneser, Nimrud. Their lengths are between 9.3–11.6 cm, while only the weight of a single piece is recorded: 19.39 g.

The other comprehensive study on Assyrian arrowheads was published most recently by A. Hellmuth Kramberger.[64] She studied the arrowheads of Tall Šēḫ Ḥamad (Dūr-Katlimmu). Her typology of the two winged iron arrowheads[65] separated 6 different types:

- *Typ IIa-neuassyrisch Variante a1.* This type – the only one known piece[66] – has got a leaf-shaped blade with a short tang.
- *Typ IIa-neuassyrisch Variante a2.* This type is similar to the previous one but with a longer tang. There are two pieces representing this type.[67]
- *Typ IIa-neuassyrisch Variante b1.* This type is characterized by a somewhat different, rhomboid form and a mid-rib running along the center of the blade. The tang of the arrowhead, however, is short. There are 6 pieces belonging to this group.[68]
- *Typ IIa-neuassyrisch Variante b2.* This type differs from the previous type mainly in its longer tang. There are three exemplares known.[69]
- *Typ IIa-neuassyrisch Variante c.* This type is characterized by two blades terminating at their lower end in barbs.
- *Typ IIa-neuassyrisch Variante d.* This type is characterized by a rhomboid or nearly triangular blade with a stop at the base and a short tang. Four exemplars were recovered from Dūr-Katlimmu.[70]

The basic shape and the blade (with the mid-rib) of the iron arrowhead from Grd-i Tle fits into her b1 and b2 groups.

62 Curtis 2013, 40, Pl. XIII.
63 Curtis 2013, 40, Pl. XIII.
64 Hellmuth Kramberger 2015.
65 Hellmuth Kramberger 2015., 37–42: *3.2 Zweiflügelige Pfeilspitzen aus neuassyrischer Zeit (Typ IIa-neuassyrisch Variante a1, a2, b1, b2, c, d).* For her overall typology see p. 54, Abb. 53, which provides a chronological chart for the main types including at least three arrowheads out of the four found from Grd-i Tle.
66 Hellmuth Kramberger 2015., Cat. no. 34, length: 7.5 cm.
67 Hellmuth Kramberger 2015., Cat. nos. 25, 26.
68 Hellmuth Kramberger 2015., Cat. nos. 27, 29, 33, 36, 37, 42.
69 Hellmuth Kramberger 2015., Cat. nos. 28, 30, 38.
70 Hellmuth Kramberger 2015., Cat. nos. 35, 39, 40, 41.

The general form of this leaf-shaped tanged iron arrowhead is known from outside of Assyria, from Urartu and Iran as well. From Urartu, Ayanis is one of the best candidates, since in here altogether 70 tanged iron arrowheads were cataloguized by Derin and Muscarella.[71] Some of these pieces show similarity in their overall shape to our arrowhead, but seemingly without midrib.[72] As for Iranian sites, we can find similar arrowheads to the Grd-i Tle tanged iron one. During the excavations of War Kabud, Pusht-i Kuh, Luristan, for example, altogether 136 arrowheads were found in 31 tombs,[73] out of which only a single piece was made of bronze, 135 was made of iron. Arrowheads of a similar leaf-shaped type are represented in the graves (B195-7),[74] and known from the destruction layers of Hasanlu as well.[75]

The most comprehensive study and most detailed typology of the leaf-shaped tanged (iron) arrowheads was elaborated by M. J. Szudy.[76] His typology includes five different kinds of stops, six different sections, nine kinds of shoulders and eleven overall blade shapes.

The general shape of our arrowhead appears in Szudy's type 5a-1 (lenticular leaf-shaped w/unstopped tang) with a large number of examples from Nimrud and Lachish,[77] but these pieces lack the midrib. The same shape appears with a stopped tang (type 5b-1),[78] which phenomenon is missing from our arrowhead. A few pieces with a rhomboid leaf /rounded shoulders and unstopped tang (type 5f-1) are known from outside the borders of Assyria (Transcaucasia and Iran).[79] The ribbed arrowheads form a different group of types in Szudy's typology.[80] Type 5p-1 contains several arrowheads which are similar to the Grd-i Tle specimen.[81] As the geographical distribution of the pieces shows, this type of arrowhead was widespread not only within the Assyrian Empire, but in Iran as well. Surveying the tanged iron arrowheads it becomes quite clear that the Grd-i Tle arrowhead falls into a category, specimens of which were the most widespread not only in the Assyrian Empire, but in the neighbouring regions, Iran, Transcaucasia (Urartu, e.g. Ayanis) and Anatolia as well.

Following the discussion of archaeological evidence we can check the representational evidence of the Assyrian palace reliefs, where a large number of arrowheads were represented in a scale which makes the reconstruction of their shape possible. It seems a promising possibility, however, the arrowheads of the Assyrian palace reliefs show a relatively few types with the dominating role of a single type, the rhomboid/diamond shaped arrowhead. These main types are as follows:

- Rhomboid/diamond shaped arrowhead with or without midrib. This type of arrowhead forms the overwhelming majority of the arrowheads represented on the

71 Derin – Muscarella 2001, 208–210.
72 Derin – Muscarella 2001, Nos. 29, 34, 40, 45.
73 Haerink – Overlaet 2004, 41.
74 Haerink – Overlaet 2004, 42, Fig. 12.
75 Muscarella 1988, Cat. nos. 80–82, 84, 85.
76 Szudy 2015, 278-310: 9.12. Type 5 – Leaf-shaped tanged arrowheads, 310-341: 9.12.3. 5f through 5j – Rhomboid section arrowheads.
77 Szudy 2015, Pls. 48–102.
78 Szudy 2015, Pls. 114–180.
79 Szudy 2015, Pls. 187–188.
80 9.12.5. 5p through 5t – ribbed arrowheads, Szudy 2015, 315–333.
81 Szudy 2015, Pls. 192–195.

Assyrian palace reliefs of Assurnasirpal II (883–859 BC),[82] Tiglath-Pileser III (745–727 BC),[83] Sargon II (721–705 BC),[84] Sennacherib (704–681 BC),[85] and Assurbanipal (668–631 BC).[86]

- Leaf shaped arrowhead. The leaf shaped arrowheads appear on the palace reliefs of Tiglath-Pileser III,[87] and some representations of the type can be identified on the palace reliefs of Assurbanipal as well.[88]
- Triangular arrowhead. Triangular arrowheads appear only on some palace reliefs of Sargon II.[89]

It seems to be clear that such a picture might easily be much more the result of an artistic tradition and not necessarily reflects the constant use of a main type for three hundred years. However, for a certain level it indeed represents the main arrowhead types which are known from the archaeological evidence (e.g. from Nimrud and Lachish).

Tanged triangular shaped iron arrowhead

This arrowhead, found in the same layer as the previous ones is the most enigmatic piece of our collection *(Fig. 1.4)*. As it was already seen, only a few similar arrowheads are know from the archaeological record – which makes this arrowhead a very rare type. In fact, only a single

82 Layard 1853, Pl. 10 (royal hunting), Pl. 13 (royal battle – both the king and the enemies), Pl. 14 (royal battle – Assyrian charioteers), Pl. 15 (two arrows in the hand of the king), Pl. 17 (siege scene – both the Assyrians and the defenders), Pl. 18 (siege scene – Assyrians), Pl. 19 (siege scene – both the Assyrians and the defenders. One of the Assyrians' arrowheads has got a mid-rib), Pl. 20 (siege scene – Assyrian king), Pl. 21 (two arrows in the hand of the king), Pl. 23 (two arrows in the hand of the king), Pl. 26 (battle scene – Assyrian cavalrymen), Pl. 27 (battle scene – both the Assyrian charioteers and the enemies), Pl. 29 (siege scene – defenders), Pl. 33 (siege scene – both the Assyrians and the defenders). Some arrowheads show a midrib: Layard 1853, Pl. 19 (siege scene – both the Assyrians and the defenders. One of the Assyrians' arrowheads has got a mid-rib), Pl. 28 (battle scene – Assyrian armored charioteers – arrowheads with mid-rib), Pl. 31 (hunting – crown prince – arrowhead with mid-rib).

83 Barnett – Falkner 1962, Pl. XI: rhomboid/diamond shaped? (siege), Pl. XV: rhomboid/diamond shaped? (Royal chariot – battle against the arabs), Pls. XXXI–XXXII: rhomboid/diamond shaped? (siege), Pls. XXXIII–XXXIV: rhomboid/diamond shaped? (siege), Pls. XXXV–XXXVI: rhomboid/diamond shaped? (siege/battle), Pl. XXXIX: rhomboid/diamond shaped? (siege), Pls. LIV–LV (siege). Several arrowheads can not be classified: Pl.. LXII: ? (siege), Pl. LXXIV: ? (siege), Pl. LXXVI: ? (siege), Pl. XC: ? (siege).

84 All of the rhomboid shaped arrowheads are featured with a midrib. Botta – Flandin 1849, Pl. 49 (siege), Pl. 57 (chariot battle), Pl. 58 (chariot battle, royal chariot), Pl. 59 bis (chariot battle), Pl. 62 (siege), Pl. 67 (chariot battle), Pl. 70 (siege), Pl. 76 (chariot battle), Pl. 77 (two registers, siege), Pl. 89 (siege), Pl. 90 (siege), Pl. 92 (battle), Pl. 93 (siege), Pl. 95 (siege), Pl. 98 (siege), Pl. 99 (siege), Pl. 111 (hunting), Pl. 145 (siege), Pl. 147 (siege), Pl. 158 (arrow of Aššur).

85 Barnett – Bleibtreu – Turner 1998, Nos. 32, 50, 70, 72, 84, 85, 90, 91, 228, 238, 239, 240, 241, 318, 364, 365, 366, 368, 407, 410, 428–431, 481, 482, 627, 691, 721, 722, 724, 726.

86 Barnett 1976, Pl. V (with mid-rib?) (inspecting bows and arrows, royal hunt), Pl. VIII with mid-rib (royal lion hunt), Pl. IX with mid-rib (royal lion hunt), Pls. XLVII/LI with midrib (king inspecting bows), Pl. LII with midrib? (royal hunt), Pl. LVI with midrib (royal hunt), Pl. LVII with midrib (royal hunt), Pl. LIX with midrib (royal hunt), Pl. LXIX with midrib? (siege). Barnett – Bleibtreu – Turner 1998, Nos. 15, 16 (Elamites), 381, 382, 383.

87 Barnett – Falkner 1962, Pl. LII (siege), Pl. LXXII: leaf-shaped? (siege), Pl. LXXIII: leaf-shaped (siege), Pl. LXXVII: leaf-shaped? (siege).

88 Barnett 1976, Pl. XII: leaf-shaped or rhomboid with mid-rib (royal lion hunt), Pl. XVI: leaf-shaped or rhomboid with mid-rib(?) (siege), Pl. LXXI: leaf-shaped (siege). Barnett – Bleibtreu – Turner 1998, No. 14 (Elamites).

89 Botta – Flandin 1849, Pl. 86: triangular? (siege), Pl. 91: triangular? (battle/siege).

parallel is known from Assur.[90] Szudy formed a separate sub-type (5y-22) for this arrowhead with the remark that the date of the piece is doubtful. Szudy refers to the catalogue of the Assur project, which suggest that it might be "Arabic."[91] There are two similar forms with a wide stop from Carchemish (Carchamish 25, 26, type 5e-20) from the late 7th century BC destruction layer of House D.[92] However, some similar Boğazköy iron arrowheads have got parallels from other Anatolian sites (Nemrud-Dağı, Arsameia on the Nymphaios) with a clear Hellenistic context.[93] Following these arguments about not the same, but only similar forms of arrowheads(!), Szudy tends to date this triangular arrowhead to the Hellenistic period.[94]

The dating of this triangular shaped iron arrowhead to the Medieval Ages ("Arabic") can be ruled out. Its dating to the Hellenistic period would be a possibility, but the context of the Grd-i Tle specimen, its connection to the two socketed bronze trilobates and the tanged leaf-shaped iron arrowhead with midrib would easily suggest that this type of arrowhead (together with the two Carchemish and the single Assur arrowheads) can be dated to the late 7th century BC. Otherwise, the date of the three other Grd-i Tle arrowheads should be brought down, which may cause more serious problems in the dating. The early dating would furthermore be corroborated by some arrowheads with similar form, like two arrowheads from Sialk,[95] three examples from Assur,[96] and one from Marlik.[97]

Conclusions

Surveying the evidence and attributing the four arrowheads found in the same stratum during the excavations of Grd-i Tle, two types of conclusions can be drawn. One of them is a chronological, while the other is contextual.

Chronological framework

Since these four arrowheads came from the same stratum of the fortifications of Grd-i Tle we should find the chronological timespan within which – according to our knowledge – these types were manufactured and used. The 'Assyrian type' tanged leaf-shaped iron arrowhead *(Fig. 1.3)* even with its midrib was such a general form which was used for a long timespan including the Neo-Assyrian period as well, that it could provide a very wide timespan and chronological framework for the accumulation of these four arrowheads. The dating of tanged triangular shaped iron arrowhead *(Fig. 1.4)*, however, is so doubtful and based only on secondary, indirect evidence, that it cannot be used to secure the chronology of the group of our arrowheads. Its best parallel from Assur, however, hints to the direction that its dating to the Hellenistic period should possibly be revised. The dating of the remaining two arrowheads *(Fig. 1.1–2)* shows the most coherent picture, since the appearance of this type of socketed bronze trilobate arrowheads could be dated to the late 8th – early 7th century BC. This special type with its long socket and square shoulder is also a rare subtype of the socketed bronze trilobates.

90 Szudy 2015, 191, 340, Pl. 216.
91 Szudy 2015, 191.
92 Szudy 2015, 305–306.
93 Szudy 2015, 306.
94 Szudy 2015, 191, 305–306.
95 Szudy 2015, Pl. 212, Sialk 71, 77.
96 Szudy 2015, 331, Pl. 211, Assur, 54, 55, 57.
97 Szudy 2015, 331, Pl. 211, Marlik 13.

The date of its Assur example is unidentified, but – according to their archaeological context – the Ayanis and Nush-i Jan examples are dated to 650–590 BC and 700–500 BC respectively. Concluding the evidence we propose a late 7th – early 6th century BC date for the group of our four arrowheads, which timespan could also be expanded a little bit in both directions.

Contextual framework

It is very tempting to see these four arrowheads coming from the same stratum of a 4 m wide trench as the evidence of a siege or battle in front of the walls of the heavily fortified town of Grd-i Tle.[98] It would even be more tempting to key these arrowheads to the final years and collapse of the Assyrian Empire, where arrowhead finds could be used as a testimony of the destruction of the Assyrian capitals (not only Nimrud, but Assur[99] and Nineveh[100] as well).[101] It cannot be ruled out that these arrowheads are the testimony of some violent acts against the heavily fortified town ruling the landscape (the whole plain to the pass of the Lower-Zab from the Peshdar Plain to the Rania Plain),[102] since it has got a very low probability that these different types of arrowheads came under the soil by chance. As for now, however, we cannot say with confidence that the socketed bronze trilobates belonged to the attacking Scythians, while the tanged iron arrowheads were discharged at them by the defenders. This question would only be answered if wider stretches of the same stratum would provide larger numbers of arrowheads with a similar pattern of types. At this point we can only note that this accumulation of arrowheads could hint to the direction of a (violent) act, which affected the town during the timespan when these types of arrowheads were used (late 7th – 6th century BC).

Catalogue

1. *Bronze arrowhead.* 'Scythian' type of socketed trilobate bronze arrowhead. Length: 34 mm, weight: 3.6 g. Grd-i Tle, Field 1, 790.540.NW, SNR 126–133. (GDT-M-790.540.01) *(Fig. 1.1).*
2. *Bronze arrowhead.* 'Scythian' type of socketed trilobate bronze arrowhead. Length: 30 mm, weight: 4.5 g. Grd-i Tle, Field 1, 790.540.NW, SNR 133. (GDT-M-790.540.77) *(Fig. 1.2).*
3. *Iron arrowhead.* Leaf-shaped iron arrowhead. Length: 67 mm, weight: 5.2 g. Grd-i Tle, Field 1, 790.540.NW, SNR 126–133. (GDT-M-790.540.02) *(Fig. 1.3).*
4. *Iron arrowhead.* Triangular-shaped iron arrowhead. Length: 62 mm, weight: 6.9 g. Grd-i Tle, Field 1, 790.540.NW, SNR 133. (GDT-M-790.540.78) *(Fig. 1.4).*

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98 For the fortifications of the tell excavated during the first season see Dezső – Mordovin 2016, 241–262.
99 At Tower C 157 pieces of socketed bronze arrowheads were found during the excavations, which provide undisputed evidence for the siege of the city (Andrae 1913, 143; Andrae 1977, 143, Szudy 2015, 190).
100 Pickworth 2005, 295–316.
101 Arrowheads could document violent destructions not only in Assyria, but outside the Empire as well (see for example Karmir Blur and Ayanis in Urartu, or Hasanlu in Iran).
102 Dezső – Mordovin 2016, 241–262. It should be noted that the tip of the arrowheads are not recurved or broken, so none of them hit stone.

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