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Graves, Crypts and Parthian Weapons excavated from the Gravesites of Vestemin

Keywords: Parthian Weapons, Vestemin, Iran, Crypts, Graves, military equipment

Introduction

This article describes a series of finds of Parthian military items in the graves and crypts of Vestemin in northern Iran. These findings are especially significant as they provide an array of discoveries of military equipment: swords, daggers, spearheads, arrowheads, armor and a possible helmet. This study obliges a revision of Winkelman's observation that "few finds of weapons have been made inside Iran" with respect to Parthian military equipment. In an overall sense, these findings may prove to be as significant to the domain of Parthian military studies as the well-known site of Dura Europos. The excavations have also discovered a coin of Philip the Arab or his son from the early Sasanian era which has assisted the authors' dating of the Vestemin site. The site of Vestemin is not exclusively a burial venue as the site also has defense works as well as a fortress dated the later Parthian era c. 1st century BCE to 3rd century CE). The military architecture of Vestemin will be analyzed in a forthcoming study by the authors.

Archaeological conditions, geographical and the environmental characteristics of Letsar village of Vestemin

Even as historical sources pertaining to Mazandaran during the Parthian era have been scant at best, excavations across the region's hills, gravesites, and fortresses have revealed a significant cultural and archaeological presence. One particular region in the center of Mazandaran (known locally as Letsar), is the village of Vestemin

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(known also as the region of Vestemin) located 80 kilometers south of the city of Sari, situated in the center of Mazandaran province. The village is also situated 9 kilometers southeast of the city of Kiasar. Vestemin has recently yielded valuable finds from the Parthian era. Notwithstanding the site's archaeological importance with respect to its gravesite/crypt architecture, Vestemin is of special significance given its relative close proximity to the Silk Road in Central Asia. Vestemin is also located approximately 70 km from Hecatompylos (Greek: 100 gates; New Persian: Sad-Darvazeh)⁴⁷, the capital of the Parthian empire in approximately 200 BCE.

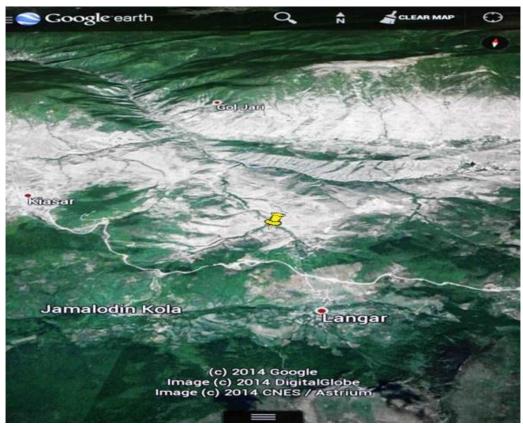


Fig. 1. Location of Lotsar, Vestemin (Photo: Karamian, Kiapi, Lojandi, 2017).

The specific region in which the excavations took place is known by the Parthian name of Letsar and is included in the environs of Vestemin village. Thus it was specifically in the Letsar area of Vestemin where the excavations took place. The village of Vestemin is situated in a mountainous area flanked by the village of Terkam, the Kiasar road to a concrete factory, the Sari to Semnan highway, and to dense forests to its east, north, south and west respectively. The Letsar zone itself is

⁴⁷ Located in modern-day Damghan.

in a mountainous area with its Parthian archaeological areas consisting of an eastern graveyard, western graveyard, elements of stone architecture and a fortress. This zone lies in an east-west direction within a 300-meter slope beside a mountain. The slope terminates at a gulley located to the zone's western flank. In addition to the south of the archaeological site is a shallow gulley that has been formed by a stream also known as "Letsar". The northern region of this Parthian site ends into yet a deeper gulley in which is located a spring known as "Babr Cheshme".

Access to the site of Letsar-Vestemin in general is by way of the Sari-Semnan highway, which then detours to rough paths traversing through the villages of Vestemin and Tarkam (ideal for all-terrain vehicles such as jeeps). After travelling through the villages one is able to reach the archaeological site after a distance of approximately 3 kilometers. Past this point, the most efficient means of access is the Kiasar road that connects to the cement factory of Kiasar.

Unfortunately the site of Vestemin discussed by our team has recently suffered damages. This is the result of an industrial project endeavoring to transfer oil/gas from the oil-production plant at the village of Qoosheh near the city of Damghan to the power plant at Neka in Mazandaran province⁴⁸. The pipeline of this project traversed right through the archaeological site of Vestemin, with bulldozers and other heavy machinery inflicting damages to the Parthian fort, eastern areas of the gravesites as well as a number of crypts in the western sections. Fortunately thanks to the efforts of Saman Surtiji who assisted the excavation team in officially registering the area as an archaeological site, all construction activities by the gas-pipeline company ceased in 2014. This allowed for archaeological expeditions to be conducted in the Parthian zones of Vestemin during the summer and fall of 2015 by the excavation work and analyses of the archaeological team (Mohammad Fallah Kiapi, Hossein Nemati Lojandi).

Despite the diversion of the Qoosheh-Neka pipeline, the project has continued in nearby areas. This raises concerns as the engineers and their equipment could very well unwittingly damage other hitherto unexcavated archaeological sites during their activities. These concerns pertain to not just the Vestemin zone, but all nearby environs in Manzadaran as these regions will most likely become a focus of archaeological work for Parthian studies due to the recent finds in Vestemin. It is here where our team has extended our gratitude to Saman Surtiji (supervisor of the team which identified the site as Parthian and was the first to engage in the investigations). They have generously shared the results of their exceptionally challenging and pioneering work with Reza Karamian and Kaveh Farrokh for the purposes of conveying these hitherto unknown findings to the wider international academic community engaged in Parthian

⁴⁸ Tabdil-e goorestan Ashkani be Moozeh/Do site Tarikhi ba booldozer takhreeb shod [Transforming a Parthian gravesite into a museum/Two historical sites destroyed by bulldozers], *Mehr News*, 21 Tir, 1394 [July 12, 2015], link: www.mehrnews.com/news/2854795/موزهـد هـا شدكان مي ـ گور سد تان لى دبعت (accessed March 3, 2017).

studies. Karamian has examined, dated and tabulated in detail the archaeological data with Kaveh Farrokh having analyzed and evaluated the data on swords, daggers, spearheads and arrowheads with respect to the domain of Parthian military studies as well as compared and contrasted data of Parthian spearheads with contemporary Roman counterparts. The Vestemin finds of the Philip coin, the single piece of armor and a possible helmet have been analyzed and evaluated by Farrokh with respect to Parthian and early Sasanian military studies.

Dating the Vestemin site and the "Philip" coin

Dating of the Vestemin site may be broadly traced to the period of the 1st century BCE to the 3nd century) CE. The 3rd century CE dating is ascertained by the discovery of a coin dated to the 3rd century CE (Fig. 2) with the weaponry discovered of the Parthian type broadly traceable to the late 1st century BCE or early 1st century CE to the 3rd century CE. Before discussing the weapons excavations, it is necessary to discuss the coin, and the significance of this particular finding.

The coin was discovered in a layer above the late Parthian levels, making this early Sasanian. This suggests that the 3rd century CE dating makes the site also transitional between the late Parthian and early Sasanian periods. The coin itself was discovered in a building attributed by the team to early Sasanian architecture. The characteristics of this structure will be discussed in forthcoming reports/papers.

The coin was analyzed by Kalliope Kritikakou-Nikolaropoulou of the Institute of Historical Research of the National Hellenic Research Foundation (IHR/NHRF) and Abazar Shobairi of the National and Kapodistrian Athens University. Kritikakou-Nikolaropoulou and Shobairi describe the item as an imperial bronze coin from the city of Kyrrhos in Syria⁴⁹, which can be attributed either to the Roman emperor Philip I (Senior, also called *Philip the Arab*, r. 244-249), or to his son Philip II (Junior, r. 247-249) due to the similar iconography used on their coins and especially on this specific type.

⁴⁹ For more on these types of Kyrrhos coins consult WROTH 1979: 137 and COHEN 2006: 181-184.



Fig. 2. Coin of Philip II discovered at Vestemin, northern Iran (Source: Sharifi, Kiapi, Nemati, & Karamian 2017).

On the obverse side of the coin, the emperor Philip's bust laureate, draped and cuirassed, is depicted as facing to the right. Around his head reads the Greek legend: *AYTOKKMIOYAIOCФIAIIIIIOCCEB* (= *IMPERATOR CAESAR MARCUS IULIUS PHILIPPUS AUGUSTUS*). On the reverse side of the coin is a representation of a hexastyle temple of Zeus Kataibates⁵⁰. The god appears within the temple enthroned with an eagle lying at his feet, as he holds a thunderbolt and scepter. At the top of the temple is what appears to be a running lamb. The inscription on the temple runs with the following Greek legend: $\Delta IOC KATEBATOY$ (for *KATAIBATOY*) and beneath it is the word *KYPHCTQN* (for *KYPPHCTQN*). This is translated as "of the Zeus Kataibates of the Kyrrhestians [people of Kyrrhos]". It should be noted that the depiction of Zeus Kataibates – which is otherwise uncommon – appears mainly on the Syrian imperial coinage of both Philips. This is because the cult of the thunderbolt was of major importance in this province with the god worshipped there as a state-deity. Note also that the mistaken spelling *KYPHCTQN* is typical for the coins issued by the Philips.

A primary question is: how did the coin get to Vestemin? The first explanation that comes to mind is the lucrative commercial routes of the Silk Route. Another possibility is that the coin, if it is actually attributable to Philip the Arab, may have been collected as a "souvenir" during Šāpur I's successful campaign that defeated Philip the Arab (r. 244-249) in 253. The latter had become the emperor of Rome following the death of his predecessor Gordian III (r. 238-244) in 244. He then set out to make peace with the newly established Sasanians by paying them

⁵⁰ For more information the Zeus Kataibates cult consult COOK 1925: 13, and 15-16 for more information on this type of coin.

half a million Dinarii. This was essentially a ransom payment to ensure the safe repatriation of those Roman troops who had survived the military disaster at Pērōz Šāpur at the hands of the Sasanian $Sp\bar{a}h$ (army)⁵¹. In addition to this large sum, Philip also consented to the yielding of Roman Mesopotamia and Armenia to the Sasanians⁵². These peace terms however were considered as a major humiliation for the Romans. Zosimus for example complains of Philip's treaty with the Sasanians as a "most dishonorable peace"⁵³. The Romans however soon broke the peace treaty and attacked the Sasanian Empire by marching into Mesopotamia and Armenia in 252. Philip's advance caught the Sasanians by surprise⁵⁴ as the $Sp\bar{a}h$ had been campaigning to secure the allegiance of the empire's northern and northeastern regions. Sapur proved successful and soon returned west to face the Romans. The Spāh was now augmented with the formidable infantry warriors of northern Iran as well as cavalry from the northeast. As inscribed by Sāpur in the $\tilde{S}KZ$: "Caesar again lied and did wrong to Armenia and we attacked the Roman Empire..."55 The Spāh overran much Roman territory in the Near East, inflicting heavy losses on the Roman armies in 253⁵⁶. In that same year, the Spāh scored a major victory by destroying a Roman army of 60.000 troops at Barbalissos⁵⁷. So great was the magnitude of the Roman military disaster that according Zosimus "...the Persians could have conquered the whole of Asia had they not been overjoyed at their excessive spoils..."58. Perhaps one of those "spoils" was the Philip coin, collected by a north Iranian warrior who had been fighting in the ranks of the Spāh against Roman forces in 253.

Grave and Crypt Architecture and burials

The findings of the Vestemin site discussed in this study focus primarily on the military data excavated by the archaeological team. However it is important to note that Vestemin is not strictly and exclusively a military burial site in that it only was a venue for burying the dead and (Parthian-era) weaponry. In addition to the military objects discovered at Vestemin, the archaeologists have also excavated a large plethora of non-military objects such as seals as well as decorative metallic objects of gold, silver, bronze and iron. The non-military items discovered at Vestemin will be analyzed in an upcoming paper by the authors of this study.

As will be seen in the report, burials did not simply take place in one-time era $(1^{st} \text{ century BCE})$, given the ample evidence of subsequent internments in the crypts

⁵¹ MAKSYMIUK 2015: 32-34; FARROKH 2017: 155.

⁵² Zonaras XII, 19, p. 583, 1-5.

⁵³ Zosimus, III, 32 (4).

⁵⁴ Zonaras XII, 19, p.583, 5-9.

⁵⁵ Šāpur inscription (Parthian Pahlavi), ŠKZ, line 6 and (Greek), ŠKZ, line 10.

⁵⁶ DIGNAS, ŴINTER 2007: 80.

⁵⁷ FRYE 1985: 125; MAKSYMIUK 2015: 35-38.

⁵⁸ Zosimus, I, 27.2

of Vestemin. The Vestemin archaeological site features two graveyards, facing east and west respectively. The majority of excavation work conducted during the 2015 excavations focused on the graveyard on the western side with just a single grave having been excavated on the eastern side. The results of the excavations thus far on the western graveyard have yielded several unique findings, including the use of a crypt or "dakhma" (دخمه) type design. This is remarkable in that such a feature has been rare in the Parthian cultural milieu, at least with respect to finds made thus far at the time of writing. Before we proceed to examine the excavated military artifacts, we shall first examine the architectural aspects of the gravesite.

The architectural system of the Vestemin crypts are in three sections (Fig. 3): (1) upon entrance there is a rectangular space which then leads into (2) a door frame or doorway which leads into (3) the primary structure, the crypt or dakhma. The rectangular spaces measure (in average) at 1.60 meters in length (ranging between 1.40 to 1.80 meters) with the width often ranging between 60 to 80 centimeters. The depth of these (rectangular) spaces is a function of their west to east orientation, varying considerably from one crypt to another. The shallowest of these measures at 80 centimeters with the deepest at 2.70 meters.

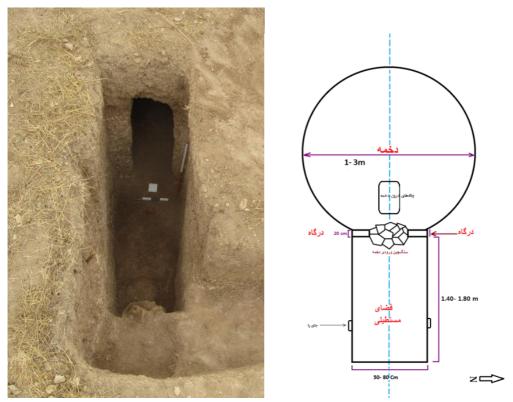


Fig. 3. Overall architectural layout of the Crypts (Source: Sharifi, Kiapi, Nemati, & Karamian 2017).

As noted previously a doorway or door frame connects the rectangular area to the actual crypt itself. That doorway or door frame had been walled off with stone and mortar by the original builders after the actual burial in the crypt itself. After excavation work in the rectangular area, the team first reached a vaulted chamber located at the western angle of this space featuring the following measurements: 50 cm (diameter) x 50 cm (height) x 20 cm (width). It was from this vaulted area where the actual crypt begins. The reason that the original Parthian builders had chosen a western orientation or angle for the vaulted chamber and crypt was, as noted previously, due to the slope of the actual ground going from the west towards the east.

The crypts are embedded in a rectangular pattern in the graveyard in the western side. Interestingly there are three examples on the eastern side (also rectangular pattern) featuring embedded "shelves" (in their crypts) allowing these to "double up" by having two crypts within them. The crypts in general have dome-like shapes with circular cross-sections, with their dimensions varying between the various crypts, ranging between 1 to 3 meters with respect to diameter. The dome height of the crypts was more difficult for the team to establish due to their structural deterioration over time.

Interestingly, upon entrance into the vast majority of the catacombs or crypts, there are often holes in the center of the floor that are variously rectangular, square, and sometimes circular in shape, with their dimensions varying between the crypts. The function and symbolism of these shapes are unknown and require more research as these (mainly) empty (geometric) holes fail to provide any cultural or anthropological data. In select cases where these had contained bones, plates or other objects, these had been for the main part destroyed due to natural causes (i.e. earthquakes, water infiltration, etc.) after the crypt burials.

One of the features discovered by the archaeology team was that burials ranged from individual (one person) to groups of five persons within a single crypt, which may suggest a family burial (necropolis?) in such cases. Crypt-type tombs were used for group burial during the Parthia era⁵⁹, with one notable example having been discovered in the Shushtar region in Iran's southwest Khuzistan province. These Vestemin "family" burials consist of infants, children, youth and middle aged persons and in only two cases did the team discover aged persons. The bodies, buried for the main part in a "squatting" or "tucked in" posture, are in an east-west orientation. This means that the head of the body is oriented eastwards with its feet facing west. Even in select graves where the type of burial is not of the "squatting" type, the tradition of placing the body in an east-west orientation remains intact. This raises one interesting parallel with respect to the recent excavations of Tavassoli, Tavassoli, Rashnoo and Asl of the post-Islamic era *Lahad* family tombs in the Khorramabad region of Luristan. These feature an enclosed four-walled small

⁵⁹ SAEEDI-HARSINI 1376/1997.

space in which the deceased have been placed according to Islamic *Qibla* practice or facing Mecca⁶⁰. The consistency of the Vestemin deceased persons' heads being placed in an east-west orientation is possibly attributable to a theological purpose, much like the Qibla practice discovered in the *Lahad* tombs in Luristan. The practice of rituals for burying the dead is one that has continued unabated from the ancient pre-Islamic era to Islamic eras⁶¹, albeit with the specifics of rituals changing over the centuries as religious practices changed.

A number of the Vestemin "family" burials exhibited the unique feature of having been modified as new burials arrived. Specifically, these are cases where a new body was being interned but the crypt lacked sufficient space. First, the older bones and objects associated with these had been removed from the crypt itself and placed into the rectangular space. The now vacated crypt space would now be used to place the newly deceased person. Interestingly this same practice of introducing newly deceased persons into crypts already laden with deceased persons is seen in the Lahad tombs of Luristan⁶².

It should be noted that Parthian tomb architecture was by no means monolithic especially across dispersed geographic regions. For example the multi-floor square buildings or towers at Palmyra could hold up to hundreds of deceased⁶³, with similar brick-built and limestone-built tower-graves near Dura Europos and at Edessa respectively⁶⁴. These however are completely distinct in design and capacity from the crypt burials at Vestemin.

Military Equipment at Vestemin

Perhaps the most succinct description of the nature and origins of Parthian military equipment and development has been provided by the 2nd century CE Latin historian, Justin: "The fashion of their [the Parthians] arms is that of their own country and of Scythia"⁶⁵. This is consistent Justin's observation with respect to the language of the Parthians: "Their language was midway between Scythian and Median and was a mixture of the two"⁶⁶.

The original *Parni* (or *Aparni*) arrivals into northeast Iran's Parthava province hailed from the *Dahae* North-Iranian Saka confederation in Central Asia⁶⁷. The term "Parthian" is generally considered to have been the result of the blending

⁶⁰ TAVASSOLI, TAVASSOLI, RASHNOO, ASL 2016: 280.

⁶¹ TAVASSOLI, TAVASSOLI, RASHNOO, ASL 2016: 280.

⁶² TAVASSOLI, TAVASSOLI, RASHNOO, ASL 2016: 284.

⁶³ SCHLUMBERGER 1980: 85-86.

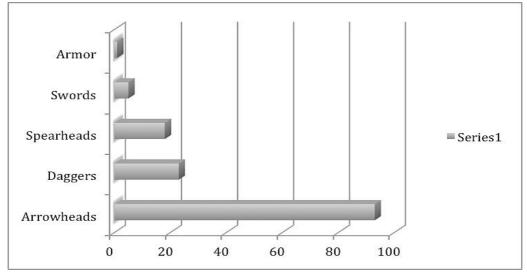
⁶⁴ COLLEDGE 1986: 12.

⁶⁵ Justin, 41. 2.

⁶⁶ Justin, 41. 1.

⁶⁷ While the *Parni* who were the dominating tribe, mention must be made that the *Xanthi* and *Pissuri* were also tribal elements of the Dahae confederation.

of the original inhabitants of the ancient Parthava province in northeast Iran with the Parni arrivals whose Saka-based language would have been of the North Iranian family⁶⁸. It is this blending of language and styles of weaponry that Justin alludes to, a process indicative of the long-standing technological and cultural contacts between the Iranian plateau and Central Asia since the Indo-European expansions into Central Asia and the Iranian plateau.



Bar Chart 1: Proportion of Parthian military equipment (total=140) excavated at Vestemin from top to bottom: Armor (n=1), swords (n=5), Spearheads (n=18), Daggers (n=23), Arrowheads (n=93) (Statistical analysis by Farrokh & Karamian, 2017).

However, one of the challenges of Parthian military studies in general has been the relative lack of finds with respect to (military) equipment. This challenge may have been ameliorated in these recent excavations at Vestemin especially with respect to Parthian weaponry and military items. In the first season of archaeological excavations in 2015 a total of 48 gravesites had been excavated with 27 of these yielding a total of 140 Parthian military equipment including swords (5 samples), daggers (23 samples), spearheads (18 samples), triangular arrowheads (most numerous of the finds at 93 samples) and armor (1 sample) (see Bar Chart 1 for a proportional breakdown of the weaponry excavated at Vestemin). Another excavated item is what possibly may be a helmet, but it is unclear if its function was military or ceremonial.

⁶⁸ The language of the Parni had already been diverging from the Old Persian dialects spoken in the Iranian plateau. The latter were already, even by the late Achaemenid-era, evolving towards Middle Iranian. Parthian (or Parthian Pahlavi), linguistic developments were a major influence on the evolution of future West Iranian languages (i.e. Persian, Kurdish [Kurmanji, Pahlawani, Gowrani, etc], Luri, Mazandarani, Gilaki, Baluchi, etc.).

1-Swords: Five swords have been discovered at Vestemin (Table 1; see also Fig. 4-5). Four swords were excavated from crypts in the western side of the Vestemin site (Fig. 6) with one in a grave on the eastern side of the Vestemin site (Fig. 5). The swords range from a maximum length of 92 centimeters to the shortest at 74 centimeters. The swords on the western side of the Vesternin site were discovered inside a crypt beside male skeletons and in one case next to a female skeleton flanked by another female skeleton and a child of approximately 3 years of age. Examinations by the archaeological team conclude that the sword blades were forged from iron. Wooden samples atop the blades lead us to conclude that the sheaths of these weapons had originally been built of wood. The dimensions and descriptions of all four swords on the western side are provided in Table 1 (see Sword 1, 2, 3, 4). All four are straight with double-sided blades and lack any type of curvature at any point of the blade. The western-side Vestemin sword handles are cast in one piece (like the blade). These handles do not exceed 10.5 cm in length and were originally covered with a wooden material; this is evident from the residual wooden materials still visible on the sword handles. The four swords from the western crypts feature a horizontal metallic section connecting the handle and blade, resulting in these having a cross-like shape. One of these swords exhibited a spherical object at the end of its handle; this was most likely a retainer or "fastener" of the wooden handle in order to prevent it from separating from the metal section (Fig. 4).

Comparisons may be made between the Vestemin sowrds and those excavated at Dura Europos. Two of the swords at Dura Europos as catalogued by James⁶⁹ have an overall length of 79 cm (cat.no. 512; dated to the 2^{nd} to 3^{rd} centuries CE) and 85.5 cm (cat.no. 513; not specifically dated by James but most likely of the 2- 3^{rd} century CE). The first Dura Europos sword (cat.no. 512) has been identified as a Roman long sword of the *Spatha* type which was most likely encountered by Parthian cavalry when in battle against Roman troops. This weapon (at overall length of 79 cm) is almost the same as Vestemin sword 2 which features an overall length of 80 cm. The second long sword (cat.no. 513) has not been clearly identified as Roman or non-Roman however in total length (85.5 cm) it is ranged between Vestemin sword 2 (80 cm) and sword 3 (90 cm). In the overall sense it may be surmised that Roman swords in the Syria-Mesopotamia theatre were similar in overall length to their Parthian counterparts, however more studies are warranted in this domain.

Like the other four swords from the western side of the Vestemin site, the sword from the eastern grave has a straight blade with no curvature evident. Nevertheless the four swords from the western side (which appear very similar in design) are clearly different from the sword discovered in the eastern grave. This sword is 92 cm in length with its blade at a width of 6 cm at its widest point (see Sword 5 in Table 1; Fig. 5). It is the handle of this sword that is distinctly

⁶⁹ JAMES 2010: 145-155, cat.no. 512, cat.no. 513.

different from those discovered in the western crypts. First it would appear that both the handle and the blade were originally cast from one piece. However it is also possible that the pieces (handle and blade) were first built separately and then mounted together, as there is a separating line between the blade and hand that is still discernable (Fig. 5). There is no connecting section or structure linking the handle and blade; specifically, there is no "separator" between handle and blade. As a result there is no "cross shape" as seen with the swords on the western side of the Vesternin site. Instead there is the curious feature of the handle appearing to attach to the blade through "extensions" or "clamps": one to the left and one to the right of the upper part of the blade, just at the beginning of the blade where the handle ends. Given the discernable lines delineating the "extensions" or "clamps" from the blade and handle, it is possible that these were also built separately and then fitted onto the weapon. It must be noted however that these are initial observations that require further follow-up examinations, especially detailed analyses with scientific equipment such as advanced imaging technology and metallurgical assessments. Another discovery with the eastern grave sword was the presence of two clamp-type appendages on the sides of the sword, which were probably used to connect the sword's wooden sheath to the warrior's belt (Fig. 5). It is possible that more swords of this type are still buried on the eastern side of the Vestemin site as more of this zone remains to be explored by archaeological teams. Likewise much more archaeological activities remain to be done on the western side of the Vesternin site. Thus it is very likely that more swords remain to be excavated and examined at Vestemin which can be considered as a "content rich" archaelogical site.



Fig. 4. One of four Parthian swords excavated from the crypts/graves at the western side of the Vestemin site (Source: Sharifi, 2015).



Fig. 5. Parthian sword excavated from a crypt/grave at the eastern side of the Vestemin site (Source: Sharifi, Kiapi, Nemati, & Karamian 2017) – for dimensions see "Sword 5" in Table 1. Note that this sword and the contents of the grave it was discovered in, have been badly damaged by bulldozers moving soil on behalf of a gas company laying pipelines.



Fig. 6. Excavated burial site in the Western Crypt area (Source: Sharifi, 2015). Note sword at the lower right side of the photo. A dagger can be seen near the sword tip with another dagger located much further to the left of the sword handle (just below a vase).



Fig. 7. Excavated burial site in the eastern Crypt area (Source: Sharifi, 2015).

One curious feature of the Vestemin swords in general was their manner of burial. On the western side, a number of swords were either laid down or placed in a standing position beside the deceased. However the sword in the eastern grave had been placed below the neck of the warrior's skeleton (Fig. 7). Nevertheless, the soil removal activities of the bulldozers of the gas company working to place pipelines have severely damaged the contents inside the eastern grave, notably the sword.

	Length	Length	Width of	Dimensions of	Blade	Total
	of	of	blade	hand guard	thickness	sword
	sword	sword	(at center)	(cm)	(mm)	length
	handle	blade	(cm)			(cm)
	(cm)	(cm)				
Sword 1	7.5	63	3.5	10 x 2 x 1.3	5.0	74.0
Sword 2	10.5	68	3.7	10 x 1.5 x 1.2	4.0	80.0
Sword 3	10.0	78.5	4.0	10 x 2 x 1.3	5.0	90.0
Sword 4	6.4	67	3.3	10 x 1.5 x 0.6	4.0	74.0
Sword 5	16	76	6.0	na	5.0	92.0

Table 1: Dimension	s of excavated	l swords from	gravesites/crypts	at Vestemin
Table 1. Dimension	s of excavaled	i sworus nom	gravesnes/crypts	at vestemm

Up to the time of these excavations finds of Parthian swords in Iran were limited to the four samples excavated in 1960-1966 and currently housed at the storage facilities of the Iran Bastan Museum: (Inventory numbers: 1603/18028, 1604/18029, 3630/19198, 3631/19199)⁷⁰. The total sword length (handle, horizontal cross-section and blade) sword 3 and 5 in Table 1 measure at 90.0 cm and 92.0 cm respectively making these longer than the four Parthian swords housed at the Iran Bastan Museum: 62 cm (Inv. Number: 1603/18028), 83 cm (Inv. Number: 1604/18029), 84 cm (Inv. Number: 3630/19198) and 87.5 (Inv. Number: 3631/19199)⁷¹. Like the Vestemin finds, the swords housed at the Iran Bastan Museum have been distorted by weathering and rusting.

The five Parthian swords excavated at Vestemin along with the four already housed at the Iran Bastan Museum can be discussed with respect to the sword portrayals at the archaeological city-site of Hatra, contemporary to the Parthian era. The Vestemin and Iran Bastan swords resemble the Hatra portrayals in that they appear flat and narrow with scabbard ends that are straight or pointed. However the dimensions of the Iran Bastan swords have more in common with the depictions of the gods at Hatra who carry swords of the shorter type of broadsword

⁷⁰ FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016: 47-51, 53; KHORASANI 2006: 82-83.

⁷¹ FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016: 49, 53; KHORASANI 2006: 82-83.

at an approximate length of 80 cm^{72} . These shorter broadswords are not depicted with officers, noblemen or royalty at Hatra.

The Vestemin finds are closer to the monarch and officer portrayals whose swords are reported at a maximum length (sword handle and blade) of 100-130 cm⁷³. As noted already, the longest swords at Vestemin are in the 90-92 cm range, however rusting and weathering may well have reduced and distorted their original dimensions, which may have even closer approximated the weapons carried by the Hatrene monarchs and officers. Though prone to erosion by weathering over time, the Hatrene sword portrayals are not as vulnerable to dimensional distortion as has occurred with rusting upon the Parthian swords at Vestemin (and Iran Bastan Museum).

As noted previously by Farrokh, Karamian, Astaraki and Delfan⁷⁴, the Parthian swords at the Iran Bastan Museum are similar in their dimensional attributes when compared to their preceding Scythian long swords ranging 74-80 cm length from the 7th century CE graves at Starshaja Mogila, and the Karmir Blur and Irmiler Blur Scythian graves in Armenia/Anatolia⁷⁵. This is not altogether surprising given that the Parthians (like the Persians and the Medes) were ethnically and linguistically related to the Saka (known as Scythians in Europe) making them a subset of a wider Iranian military culture.

Interestingly, the length of the Scythian/Saka sword increases to 125 cm by the $6^{th}-5^{th}$ centuries BCE as seen in the Tagisken Kurgan sword. In tandem with the Saka/Scythians are developments in sword technology discovered in the Iranian Sauramatian gravesites of the 6^{th} century BCE. These continued their development towards what is identified as the Prochorovka (or early Sarmatian) stage of the $5^{th}-4^{th}$ centuries BCE. A notable discovery of the early Sarmatian type is the 130 cm sword along the Don River's Uzboj region along the Ustjurt plateau⁷⁶. Meanwhile, the Scythian/Saka sword length has reached a total length of 135 cm by the 4th century CE as evidenced by the sample excavated in Khosrabad, Uzbekistan⁷⁷.

Nevertheless the question of direct Scythian to Parthian influence is not as linear as it may appear at first. From the 1st century CE, Parthia became the neighbor of another rising Iranian empire, that of the Kushans. According to Trousdale it was the Kushans who introduced the Parthians to the long sword⁷⁸, a technology that was to reach further west into Hatra and Palmyra. In practice it is more likely that this technology was already shared between the Kushans and the Saka/Scythians. Another possibility is that this sword technology had already been transferred by

⁷² WINKELMANN 2009: 241.

⁷³ WINKELMANN 2009: 241.

⁷⁴ FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016: 50.

⁷⁵ BRENTJES, BRENTJES 1991: 21.

⁷⁶ LEBEDYNSKY 2002: 80, 89, 91.

⁷⁷ BRENTJES, BRENTJES 1991: 22-25, fig. 28.

⁷⁸ TROUSDALE 1975: 100.

the Saka/Scythians to the Kushans, before their migration (as one of the branches of the Yueh-chi tribal confederation) from northwest China towards Bactria from the 2^{nd} century BCE. Another development by the 2^{nd} century CE was that the Sarmatians had also become neighbors of the Parthian empire⁷⁹. The evolution of Sarmatian swords had continued in the meantime into the Middle Sarmatian stage $(2^{nd} \text{ century BCE-}2^{nd} \text{ century CE})^{80}$. Sarmatian technological contacts with the empires of Iran may explain in part the longer (sword) length of Sasanian scabbard slide swords. In general the research literature, basing its thesis on contemporary finds, has often concluded that the scabbard slides of the Sasanians were longer (extended to 1-1.11 cm)⁸¹ than their Parthian predecessors. However, this assumption has now been put into question given the finds at Vestemin. While more excavations are required at Vestemin, the samples uncovered thus far serve to question the notion that Parthian swords were "significantly shorter" than their earlier Sasanian counterparts.

2-Daggers: One of the most remarkable series of finds at Vestemin pertains to the variety and numbers of daggers excavated. A total of 23 daggers have been excavated from 16 of 48 excavated graves/crypts at Vestemin (Table 2). All of these were excavated in the crypts on the western side with virtually no daggers unearthed from the eastern side. The daggers were discovered in the laid down to the ground orientation (like the deceased) or leaned against the wall of the crypt(s). Like the data discussed with respect to swords, etc. in this study, the new data on daggers represents a seminal paradigm shift in the study of Parthian daggers. This data will be examined with respect to three Parthian daggers already housed at the Iran Bastan Museum (Inv. Numbers 3629/19197, 1614/18039, 3628/19196)⁸².

Each dagger has been built of iron, including the handle, the section connecting the handle with the blade, and of course the blade itself (see Fig. 8, 9 and 10). It is not possible to gauge the exact thickness of the blades, as the remains of the wooden material of the sheaths have been impressed upon the iron blades over the centuries. The length of the daggers and the width of the blades do vary considerably (Table 2). However as noted with the swords discussed earlier, the role of corrosion and weathering over long periods of time must be considered in terms of their influence in distorting the (original) dimensions of the daggers examined in this study.

The longest of the daggers uncovered at Vestemin is dagger number 22 measuring at 40 cm in length with its blade width measuring at 4.0 cm (Table 2, Fig. 9). This is still 8 cm shorter than the longest Parthian dagger currently housed

⁷⁹ Now dominating a vast region from Eastern Siberia to the Volga River in Eastern Europe, the Sarmatians had also become the neighbors of the Parthian Empire.

⁸⁰ Also known as the Middle Suslovska stage.

⁸¹ Early Sassanian scabbard slide swords had a width in the 5-8.5 cm range.

⁸² FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016: 51-53; KHORASANI 2006: 83.

at the Iran Bastan Museum measuring (handle to blade tip) at 48 cm (Inv. Number: 3629/19197). The dagger with the greatest blade width is dagger number 15 measuring at 4.7 cm, with this weapon measuring at 32.0 cm in total length (Table 2). The blade with the least width is dagger number 17 which measures at just 2 cm, with the weapon measuring at a total of length of 26.0 cm (Table 2).

The shortest of these is dagger number 5 measuring at a total length of just 16 cm, with its blade width at 4.0 cm (Table 2, Fig. 10). The shortest dagger housed at the Iran Bastan Museum measures (handle to sword tip) at 28.0 cm (Inv. Number: 1614/18039). Interestingly two of the daggers excavated at Vestemin (Dagger number 3 and 8, Table 2) also measure (handle to tip) at 28.0 cm. Dagger number 18 measures at 27.0 cm, dagger numbers 17 and 20 measure at 26.0 cm with dagger number 4 measuring at 25.0 cm. Perhaps one type of standard dagger that may have been produced by the Parthian military industry may have measured in the 25.0-28.0 cm range; note that three samples measure at 28.0 cm (one already in the Iran Bastan Museum with 2 recently discovered in Vestemin). The Vestemin data appears to also show another possible type of "standard" Parthian dagger. One of the daggers currently housed at the Iran Bastan Museum measures at 36 cm (Inv. Number: 3628/19196). This is very close to the measurements of dagger numbers 7 and 14 from Vestemin measuring at 35.0 cm and 36.5 cm respectively (Table 2). Perhaps there may have been another "standard" Parthian dagger measuring in the 35.0-37.0 cm range.

Daggers were accorded an elevated status in Parthian military culture as alluded to by Farrokh, Karamian, Delfan and Astaraki with respect to two reliefs (albeit highly weathered and eroded) from the later Parthian era (1st to 3rd centuries): the Behiston relief of Vologases (Valaksh)⁸³ carrying two daggers and the Hung-e Nowruzi relief of a mounted warrior (possibly Mithradates [Mehrdad] I, 165-132 BCE)⁸⁴. Like swords, daggers appear to be associated with persons of regal stature among the Parthians. Wearing of daggers can be seen as far back as the Tuva and Iranic Altai Sakas and earlier in the 12th century BCE (the Karasuk Siberian culture). The Sarmatian successors of the Saka or Scythians continued the tradition of wearing daggers from the 4th century BCE. Parthian daggers bearing the steppemotif appeared as a result of contacts through the Parthian Empire's northeastern regions⁸⁵. The dagger-motif continues into the 3rd century CE with the advent of the Sasanians and among the Sarmatians resident in the Caucasus and Eastern Europe. Interestingly, the priest figures at Hatra are not displayed with daggers⁸⁶.

⁸³ Note that it remains unknown as to which Vologases is alluded to as six monarchs with the same name are known to have reigned between 51-228 CE.

⁸⁴ FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016: 47; KHORASANI 2006: 81. Note that much of the detailed information on these weapons has been eroded due to severe weathering over the centuries.

⁸⁵ WINKELMANN 2009: 245. These depictions can be seen in Parthian art works and regal venues.

⁸⁶ See WINKELMANN 2003: 45.



Fig. 8. Parthian dagger excavated at Vestemin (Source: Sharifi, Kiapi, Nemati, & Karamian 2017).



Fig. 9. Parthian dagger number 22 excavated at Vestemin – dimensions: total length= 40.0 cm, blade width = 4.0 (Source: Sharifi, Kiapi, Nemati, & Karamian 2017).



Fig. 10. Parthian dagger number 5 excavated at Vestemin – dimensions: total length = 16.0 cm, blade width = 4.0 (Source: Sharifi, 2015).

Table 2: Dimensions of excavated daggers from gravesites/crypts at Vestemin

	Length of dagger	Width of blade	
	(cm)	(cm)	
1	32.0	4.0	
2	21.0	2.5	
3	28.0	2.8	
4	25.0	4.5	
5	16.0	4.0	
6	19.0	2.2	
7	35.0	3.0	
8	28.0	2.6	
9	18.0	3.0	
10	31.0	4.0	
11	31.0	4.0	
12	39.0	3.8	
13	32.0	3.3	
14	36.5	3.3	
15	32.0	4.7	
16	5 25.0 2.9		
17	26.0	2.0	
18	27.0	2.8	
19	38.0	3.5	
20	26.0	3.3	
21	21 35.0 4.0		
22	22 40.0 4.0		
23	34.0	3.8	

3-**Spearheads**. The excavations have also unearthed a very large number of Parthian spearheads (18 in total) from the Western side of the Vestemin graves/crypts that vary greatly with respect to length and width (Table 3, data on two samples not available). These were discovered in 13 of 48 grave/crypts excavated by the archaeological teams. Much like the Parthian swords and daggers examined in this study, the data on the spearheads provide valuable data that have been unavailable to the present. However the term "spearheads" is being used with some license here as the dimensions of these samples vary considerably. This again may have to do with weathering, erosion and rusting, thereby distorting the original dimensions of these samples. Note

also that dimensionally speaking seven of the Vestemin spearhead samples match in length with Roman javelins (Table 3) as will be discussed shortly below.

The spearheads are made of iron with all of these being of two-piece construction composing of the blade and a stem section. The shapes of these samples tend to vary, such as elongated or rhomboid shaped (Fig. 11) and cedar shaped (Fig. 12). Many of the spearheads' stem sections have wooden remains within them. This is not surprising as this simply indicates that the builders had fastened (or socketed) the stem sections of the spearheads onto wooden shafts.

The first question to be asked with the Vestemin data is whether these correlates with available data on five Parthian lance heads housed at the Iran Bastan Museum in Tehran¹. Khorasani's analyses in 2006 reveal these five lance heads bearing the following lengths (from shortest to longest): two samples at 23.2 cm, 33.5, 37.0 cm and 37.5 cm². Interestingly the longest lance head examined by Khorasani approximates the length of the Roman iron lance head housed by the Ancient Resource venue (#WP2387) measuring at 40.6 cm. The longest of the Vestemin "spearheads" is spearhead number 1 measuring at 18 cm, with this sample also having the greatest width in the entire array of spearheads at 6.5 cm (Table 3). Note that this is over 5.0 cm shorter that the shortest Parthian lance head and almost 20.0 cm shorter than the longest Parthian lance head at the Iran Bastan Museum. Our tentative hypothesis at this juncture is that spearhead number 1 may have been some type of cavalryman spear or possibly a lance head.

Also of interest is that many of the excavated spearheads at Vestemin appear to be of a similar length as their Roman counterparts of the 1st to 3rd century CE³. Specifically, there are three clusters of measurements that are broadly similar in length to a Roman spearhead and two javelin heads (all dated to the 1st to 3rd centuries CE) housed at the Ancient Resource venue⁴. The first cluster composes of spearheads 2 (length=11.0 cm), 8 (length=10.3 cm), 9 (length=11.5 cm), 10 (length=11.5 cm), 11 (length=10.0 cm), and 12 (length=10.3 cm) which are similar in length to the Roman iron spearhead (Ancient Resource, Scholastic Collection: #AM2040) measuring at a length of 9.3 cm (Table 3). The lengths of the second and third clusters of the Vestemin spearheads resemble the lengths of two Roman javelin heads. The second cluster is composed of spearheads 3 (length= 7.4 cm), 4 (length= 7.2 cm), 5 (length= 7.0 cm), and 6 (length= 8.3 cm) that are similar to the Roman iron javelin tip (Ancient Resource venue, UK gallery: #WP2431) measuring at a length of 7.7 cm. The third cluster composes of spearheads 7 (length= 6.4 cm) and 15 (length= 7.0 cm) are similar to the Roman iron javelin head discovered in Israel (Ancient Resource venue: #WP2199) measuring at a length of 6.6 cm. However spearhead 14 (length=

¹ National Museum of Tehran, Catalogue: 295-299.

² KHORASANI 2006: 246.

³ For a comprehensive overview of Roman weapons consult BISHOP, COULSTON, 2006.

⁴ Link: http://www.ancientresource.com/index.html (accessed: Sept 3, 2017).

6.6 cm) is exactly the same length as the Roman javelin head excavated in Israel (Ancient Resource venue: #WP2199).

The shortest of the Vestemin spearheads is spearhead number 13 measuring at just 0.75 cm with its width at 1.3 cm (Table 3). Of course, as alluded to earlier, extreme weathering and erosion has significantly impacted a large portion of the Vestemin finds with spearhead number 13 most likely also having been affected. However even as we factor in erosion/weathering for dimensional distortion, it is important to note that short javelin head (or short spearhead) type weapons certainly existed in antiquity. One example is the sharp-headed iron javelin head (dated to the 1st- 2nd century CE) measuring at just 1.64 cm (Ancient Resource: #WP2155), identified by the Ancient resource venue as being of the "*plumbata*" type.



Fig. 11. Two Parthian spearheads excavated at Vestemin (Source: Sharifi, 2015).

Fig. 12. A Parthian spearhead excavated at Vestemin (Source: Sharifi, 2015). The tip of the sample which has been broken off, was not found by the archaeological team.

Table 3: Dimensions of excavated spearheads from gravesites/crypts at Vestemin and comparisons with Roman weaponry

	Spearhead	Spearhead	Roman Weapons of similar length
	Length	Width	$(1^{st} to 3^{rd} centuries CE)$
	(cm)	(cm)	(cm)
1	18.0	6.5	na
2	11.0	2.6	9.3 - iron spearhead (Ancient Resource, Scholastic
			Collection: #AM2040).
3	7.4	1.6	7.7 cm - iron javelin tip (Ancient Resource venue, UK
			gallery: #WP2431)
4	7.2	2.0	7.7 cm - iron javelin tip (Ancient Resource venue, UK
			gallery: #WP2431)
5	7.0	2.0	7.7 cm - iron javelin tip (Ancient Resource venue, UK
			gallery: #WP2431)
6	8.3	1.8	7.7 cm - iron javelin tip (Ancient Resource venue, UK
			gallery: #WP2431)
7	6.4	1.8	6.6 cm - iron Javelin head (Ancient Resource venue:
			#WP2199)
8	10.3	1.4	9.3 - iron spearhead (Ancient Resource, Scholastic
			Collection: #AM2040).
9	11.5	1.8	9.3 - iron spearhead (Ancient Resource, Scholastic
			Collection: #AM2040).
10	11.5	2.0	9.3 - iron spearhead (Ancient Resource, Scholastic
			Collection: #AM2040).
11	10.0	2.1	9.3 - iron spearhead $1^{st} - 3^{rd}$ century CE (Ancient
			Resource, Scholastic Collection: #AM2040).
12	10.3	2.1	9.3 - iron spearhead (Ancient Resource, Scholastic
			Collection: #AM2040).
13	0.75	1.3	1.64 cm - iron javelin head (Ancient resource:
			#WP2155); NOTE: dated 1^{st} - 2^{nd} century CE (not to 1^{st}
			to 3 rd centuries CE)
14	6.6	1.5	6.6 cm - iron Javelin head (Ancient Resource venue:
			#WP2199)
15	7.0	1.5	6.6 cm - iron Javelin head (Ancient Resource venue:
			#WP2199)
16	13.0	2.2	na
17	na	na	na
18	na	na	na

One curious feature discovered by the archaeological teams was that 16 of the 18 spearheads had been broken at the juncture where the wooden shaft meets the (metallic) stem of the spearhead. This has been attributed by the archaeological team to the deliberate breaking of the spears by persons who had constructed the crypts. This is because there has been no significant structural damage within most of the crypts such as collapsing mortar, stone blocks, doorways, etc., although some have been damaged due to natural causes such as earthquakes as alluded to earlier. However, none of the 16 "broken" spearheads appear to have been broken by collapsed structure(s). More surveys of the spearheads are required to ascertain their breaking by deliberate human action. If human action is verified by further studies, one possible hypothesis may be that there may have been a type of entombing ritual in which spearheads were broken off from their wooden shafts to be placed alongside the dead in the crypts.

While lance depictions with Iranian-style armored cavalry have certainly been found in mural drawings at Dura Europos, the site has thus far not yielded much evidence of lances, spears and javelins. It is unfortunate that despite being an archeologically abundant site, James notes that with respect to Dura Europos "There is remarkably little evidence for hand-held or hand-thrown shafted weapons"⁵. There is one definite spearhead excavated from Dura Europos as catalogued by James (cat. no. 639)⁶ which is also of relevance to our analyses in this study. Its' length is 11.3 cm, making it remarkably similar in this dimension with Vestemin spear number 2 (11.0 cm), number 9 (11.5 cm) and number 10 (11.5 cm).

4-Arrowheads: The most numerous finds at Vestemin are Parthian triangular arrowheads of which 93 have been excavated (samples in Fig. 13-14). These were distributed somewhat unevenly in the crypts: there were as few as one to sixteen arrowheads per crypt. In addition there were cases where the arrowheads did not seem to have been set in any particular pattern or order in the crypts and seemed as if they were just scattered upon the crypt floors. Despite the large sample, these arrowheads are remarkably consistent in their dimensions. These in general do not exceed a length of 5.5 cm and width of 1.1 cm. The general shape of most of these arrowheads is distinctly triangular, pointed tipped and short tanged. There is a stem at the bottom of these arrowheads in which a wooden shaft was fitted, again rather conventional construction for missiles of this type in antiquity. However these arrowheads have been severely damaged due to high levels of metal oxidization.

⁵ JAMES 2010: 188.

⁶ JAMES 2010: 188.

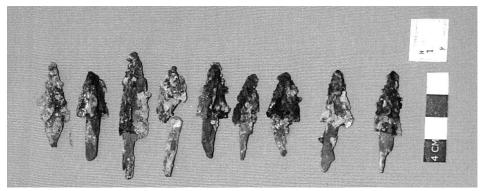


Fig. 14. Arrowheads excavated at Vestemin (Source: Sharifi, 2015). Note that traces of the wooden shaft remain visible in eight of nine samples above. The third arrowhead from left bears resemblances with an iron arrowhead discovered in Luristan's Djub-e Gaubar region.

A large number of the Vestemin arrowheads are distinctly similar to two 1st to 3rd century CE triangular-pointed tipped, short tang Roman arrowheads discovered in southeast Europe's Thrace-Macedonia region close to the Black Sea (Ancient Resource: #WP2126). The Roman triangular arrowheads also closely approximate the length of the Vestemin arrowheads by measuring at a length of 5.2 cm. Given its high degree of similarity to the (Parthian) arrows of Vestemin, the "Roman" sample at the Ancient Resource venue may need to be re-assessed as it may have belonged to an auxiliary (horse?) archer recruit of possible Iranic origins (Parthian auxiliary, Alan, etc.) serving with Roman forces in the region.

However there are at least two arrows that are of a different type. One of these is a double winged arrowhead resembling two arrowheads that have been superimposed (see Fig. 13). This is notable as only one of this type of arrow of bronze material has been discovered to date; this was excavated from one of the tombs of the 3000-year old site of Marlik⁷ (known also as Cheragh-Ali Tappeh located in northern Iran's Gilan province). This type of arrowhead would have required considerable skill to manufacture and most likely originated in the workshop(s) of contemporary experienced blacksmith(s). While distortions such as oxidization and erosion over time have made comparisons with excavated arrowheads at Dura Europos challenging, the fifth arrowhead from left in Fig. 13 appears to have a comparable counterpart in the form of a three-bladed tanged iron arrowhead (third from left in Fig. 14) bears similarities to an iron arrowhead discovered in Luristan's Djub-e Gaubar region⁹. While accounting for considerable erosion and oxidization, the same third

⁷ KHORASANI 2006: 307; NEGAHBAN 1995: 87.

⁸ JAMES :2010: 202.

⁹ KHORASANI :2006: 308, Fig. 384.

arrowhead from left in Fig. 14 bears some similarities with a three-bladed tanged iron arrowhead discovered at Dura Europos as catalogued by James (cat. no. 694)¹⁰.

It remains unclear as to why arrowheads form such a large proportion of Parthian military equipment at Vestemin (see Bar Chart 1). Classical sources have praised the archery skill of the Parthians and their Sasanian successors¹¹. Archery certainly played a pivotal role in Parthian military doctrine, with the efficacy of horse archery well documented with respect to the Parthian victory at the Battle of Carrhae (53 BCE)¹². Archers can also be seen on Parthian coins¹³. As military heirs of the Parthians, the Sasanians continued the deployment of archery that played a central role in their military doctrine with respect to set-piece battles and sieges¹⁴.

5-Armor: The single sample of Parthian armor was recovered from Vestemin's graveyard on the eastern side (Fig. 15). This appears to be of the lamellar type. The sample is an article of what appears to be type of rough cloth (possibly leather deformed over time?) upon which thin metal strips have been attached.



Fig. 15. Garment with thin metallic strips (these are on reverse side of the item) (Source: Sharifi, 2015). The linear outline (left-right) of the metallic strips is clearly visible on the side shown. Note part of skeleton protruding from bottom of item.

¹⁰ JAMES: 2010: 202.

¹¹ Strabo XV. III 18; Procopius I 18; Herodian VI 5. 1-6; Ammianus Marcellinus XXV I. 13; Maurice XI.I.

¹² Cassius Dio, XL 22.2; Plutarch, *Crassus* 25, 1-5.

¹³ AKBARZADEH 2016: 76-82; LERNER 2017: 1-24.

¹⁴ ZAKERI 1995: 51; MATUFI 1378/1999: 443; INOSTRANCEV 1926: 13-25.

This was found under the leg of a young male trooper (in his early 20s?) (Fig. 16). The deteriorated state of the sample would make it appear that the metal strips had been pressed or "impressed" upon the cloth, however it is more likely that the metal strips had been originally woven onto the garment. Technology for lamellar armor construction was known in Iran since Achaemenid times as highlighted by excavations at Persopolis yielding 5th century BCE iron and bronze plate armor¹⁵. The origins of this technology had appeared a number of centuries earlier at least as early as the 7th century BCE where it was used by armies of the Eurasian steppes, China and the ancient Near East¹⁶. Armor was integral to the equipment of Parthian armored cavalry lancers. It may be hypothesized that the young trooper in the Vestemin site had been a member of the Parthian armored cavalry forces. Note that this skeleton is reminiscent of the fallen Sasanian trooper at Dura Europos' tower 19 in c. 233 CE (Fig. 17), however bulldozing activities by the aforementioned gaspipe laying company have severely damaged the Parthian skeleton. Despite this, the researchers of this study would recommend follow-up studies comparing the skeletons of the young Parthian warrior at Vestemin with the fallen Sasanian trooper at Dura Europos' Tower 19. This could be a series of research activities such as comparing DNA samples as well as forensic reconstructions, etc.



Fig. 16. Partial photo of skeleton of young Parthian warrior from the eastern side of the grave/crypts at Vestemin (Karamian, 2016). Unfortunately, this was severely damaged by bulldozers removing soil for a gas and pipe laying company in northern Iran.

¹⁵ SCHMIDT 1956: 100.

¹⁶ ROBINSON 1975: 153, 162.



Fig. 17. Skeleton of Sasanian warrior at Dura Europos' Tower 19 (History Buff).

The armor of Parthian lancers is generally acknowledged as having afforded considerable protection against contemporary Roman javelins¹⁷. The Parthian lancer's heavy armor served two functions. First, armor had to be sufficiently robust against enemy missiles as the lancers attacked into enemy lines. Second, resilient armor was vital for Parthian cavalrymen who became engaged in close quarters combat against professional Roman infantry. Plutarch describes the armor of the Parthian lancers as follows: "...their armored cavalry has weapons of offense which will cut through everything and defensive equipment which will stand up to any blow..."¹⁸. The neck-guard of the helmet of the late Parthian knight also featured armor of the plate-laced construction type as seen with the aforementioned site of Firuzabad. Note the contrast

¹⁷ MATUFI 1378/1999: 152.

¹⁸ PLUTARCH, Crassus, 18.

of Parthian defensive armor in comparison to the aforementioned fallen Sasanian trooper at the Dura Europos (Fig. 17). The latter was wearing an iron mail shirt consisting of rings (each ring approximately 8mm diameter and 1mm thickness) and most likely of the pullover type with the sleeves having been possibly wrist length¹⁹. The use of mail by early Sasanian cavalry can be clearly seen at the early 3rd century CE battle scene panel at Firuzabad. In this venue is illustrated (left to right): unknown Sasanian knight wrestling unknown Parthian knight, Sasanian prince Šāpur lancing Parthian vizier Darbandan and Sasanian challenger (later king) Ardašīr I, and (soon to be deposed) Parthian king Ardavān. The Sasanian combatants are seen with mail (as part their mail "pullover shirts" evidently), with the Parthians not seen with mail. Wójcikowski provides an examination of why the Parthians may not have adopted mail, hypothesizing that they may have judged their existing systems of armor (i.e. lamellar, scale) as adequate for contemporary battlefield conditions²⁰.

6-Combat helmet, ceremonial helmet or bowl? More difficult to determine is the original function of the item discovered on the stomach-abdomen area of a deceased person in a single crypt in the eastern graveyard at Vestemin (Fig. 18). At first glance this would appear to be a helmet, especially as there appears to be a "cup-like" upper part attached or mounted onto a sloped bottom rim. However the construction of this "helmet" is of silver, making it highly unlikely that this was intended for battlefield use. There are two possible explanations for this item. First, this may not be a helmet at all but some type of bowl. The object clearly needs to be carefully restored and then precisely dated. The available image would suggest that the object bears a significant resemblance with the crenelated Achaemenid bowl dated to (c.) the 5th Century BCE currently housed in the British Museum²¹. The bowl was discovered in Altintepe, in Eastern Turkey. More specifically this Achaemenid bowl is made of silver (like the Vestemin find). It was originally a thick silver piece sheet that was hammered, resulting in the lower part being formed into a hemisphere shape with a broad lip and small shoulder at the joint or connection. In practice this type of bowl is of the late Assyrian type, which were later copied with baser materials like ceramic and bronze. If the Vestemin object is revealed to be a bowl after restoration and (possibly) dated to the Achaemenid (or earlier, even late-Assyrian?) era, then this may have been some type of prestige or coveted objected that had been possibly passed on over the generations in the region.

Second, the item may indeed be a helmet but one intended for ceremonial or ranking purposes. These were not uncommon in the wider military cultures of antiquity. Examples include Dacian ceremonial type helmets of copper

 ¹⁹ JAMES 2010: 116. Fig. 52.
 ²⁰ WÓJCIKOWSKI 2013: 237, note 21

²¹ British Museum, Inv. Number: 123256.

contemporary to the Parthian era discovered in Romania²² with a possible depiction in Koblenz, Germany of a Parthian man wearing a Kedaris type helmet²³. The (non-combat) Sasanian late 3rd century CE relief of Bahrām II (r. 273-276) at Naqš-e Rostam displays two noblemen to his right wearing headgear closely resembling the Kedaris shape. Thus it is possible that the deceased was a high-ranking nobleman or Parthian military officer who had been buried with a ceremonial helmet, headgear or crenellated bowl as an indication of his rank and status.



Fig. 18. Helmet-looking object excavated at Vestemin.

This particular find is of interest as it adds to current queries in the studies of Parthian helmets. Put simply, discernable depictions of Parthian helmets are currently limited to the following eight samples²⁴. The first is a depiction of a "coal skuttle" type helmet in a 3rd century BCE-2nd century CE clay plaque of a Parthian to Seleucid armored lancer at the British Museum (Inventory number: 91908)²⁵. A second depiction is from Nysa's 2nd century-1st century BCE bowl shaped, high crest and Hellenic appearing helmet on the head of a Parthian trooper ²⁶. A third illustration (albeit highly weathered) is available at the relief of Khong-e Azhdar relief in which a mounted figure (possibly Mithridates I (r. 165-132 BCE) wears a one-piece helmet or headgear. Note that while other Parthian reliefs in Iran such as the those of Gōdarz II in

²² One of these is housed in the Museum of National History & Archaeology in Constanta, Romania, with the other Dacian (?) helmet housed in Paris' Musee d'Art Classique de Mougins.

 $^{^{23}}$ This is in reference to a late 2^{nd} century CE stone relief from Koblenz in which a Parthian man is shown wearing a Kedaris or a Phrygian cap without ear-flaps.

²⁴ FARROKH, KARAMIAN, KUBIK, OSHTERINANI 2017: 121-163.

²⁵ British Museum, Plaque; number 91908.

²⁶ LITVINSKY 2003.

Bīsotūn and Tang-e Sarvak provide overall outlines of cavalrymen, these are far too weathered to provide much information on Parthian helmets. A fourth depiction from the Parthian era is the "egg shaped" helmet with visor of the Saka warrior from 1st century BCE Khalchiyan. A fifth is the detailed 2nd century CE depiction of a multisegmented Parthian helmet at the Doric victory column of Marcus Aurelius in Rome's Piazza Colonna. The latest depiction of Parthian headgear can be seen with respect to the Parthian knight at the left side of the early 3rd century CE Firuzabad joust relief²⁷. Two other possible depictions can be found with respect to the pointed helmets at Panj-e Ali in Loristan, Western Iran²⁸ and at Dura Europos. It is unclear however if the Panj-e Ali depiction represents an actual combat helmet or ceremonial headgear²⁹ in contrast to the Dura Europos graffiti depictions of conical helmets with riveted rows of metallic plates. However current scholarship now chronologically sets the Dura Europos site in 232/233-256 CE³⁰, however the depicted knight with the conical helmet may be a member of a Parthian clan in Sasanian service. The Panj-e Ali site has been dated to the late Parthian or early Sasanian periods (c. 200s-220s CE), thus the knight may be of the late Parthian type 31 .

The challenge however is that no known actual Parthian helmets have been found up to the time of the Vestemin finds. While the object in Fig. 18 may be a helmet (most likely ceremonial), the question of whether it actually is a helmet requires further studies and analyses. There is however one helmet (height=29 cm) currently housed at the Iran Bastan Museum (Inventory number: 4461), discovered in northwest Iran's Talysh region that has been identified by the museum as Parthian. This chronological identification however has been questioned during the Third Baltica Iranica Conference at Siedlce University in Poland given its high structural similarities to earlier (pre-Achaemenid) Assyrian helmets of the 8th to 7th centuries BCE³².

7-Other martial equipment and various objects: In addition to the aforementioned finds of weaponry, excavations at the eastern and western areas of the Vestemin graves/crypts have yielded various other items such as a grindstone used for sharpening blades (Fig. 19) and buckles (more likely) used for scabbard slide system belts (Fig. 20-21). It is very likely that the scabbard slide system belts were of leather as the expedition team has discovered strong traces of leather on one of the buckles. There are similarities between the belt buckles in Fig. 20 and 21 and those discovered at Dura Europos. Broadly speaking, the Vestemin belt buckles in Fig. 20 and 21 are smaller in size than their counterparts at Dura Europos. The left and right belt buckles

²⁷ This relief illustrates combat between the Parthians led by Ardavān and Sasanians led by Ardašīr.

²⁸ FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016: 31-40.

²⁹ FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016: 38.

³⁰ WOJCIKOWSKI (2013) 233-234; NIKONOROV 2005: n. 12.

³¹ FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016 31-32.

³² Discussed in detail in forthcoming article by FARROKH, KARAMIAN, KUBIK.

in Fig. 20 are very similar in shape to two samples discovered at Dura Europos as catalogued by James (cat.no. 38, cat.no. 42)³³: both the Vestemin and Dura Europos samples are of the "ring with bar-across" design. The rings of the Vestemin samples are broadly 2cm in diameter with the rings of the Dura Europos samples (as catalogued by James) are 2.1 cm (cat.no. 38, copper ally ring buckle) and 4.5 cm (cat.no. 42, copper alloy ring buckle) respectively. The middle belt buckle in Fig. 20 (ring shape only) also has four counterparts at Dura Europos that are similar in shape³⁴.



Fig. 19. Grindstone excavated at Vestemin (Source: Sharifi, 2015).



Fig. 20. Parthian buckles excavated at Vestemin (Source: Sharifi, 2015)



Fig. 21. Parthian buckles excavated at Vestemin (Source: Sharifi, Kiapi, Nemati, & Karamian 2017).

³³ JAMES 2010: 77.

³⁴ JAMES 2010: 77, cat.no. 43, cat.no. 44, cat.no. 45, cat.no. 46.

However while similar in shape the Vestemin sample (middle object in Fig. 20) is approximately 2cm in diameter whereas the Dura Europos samples as catalogued by James are considerably larger at 5.8 cm (cat.no.43, copper alloy ring), 6.0 cm (cat.no. 44, copper alloy ring), 4.9 cm (cat.no. 45, copper alloy ring) and 6.0 cm (cat.no. 46, copper alloy ring) in diameter respectively. The three samples at Vestemin seen in Fig. 21 have one similar looking counterpart that has been discovered thus far at Dura Europos as catalogued by James (cat.no. 39)³⁵. The diameter of the Vestemin samples in Fig. 21 are generally in the 2 cm range whereas the Dura Europos counterpart as catalogued by James (cat.no. 39) is larger at a diameter of 2.9 cm. Thus excepting the Dura Europos sample cat.no. 38 measuring at 2.1 cm diameter, all other samples in this category are larger than their Parthian counterparts.

Considering the Military Context: The Parthian Spada

While the rich range of finds of Vestemin requires more studies, especially with respect to the armaments and tactics of the Parthian armies, some tentative observations may be made. The swords, daggers and spears deployed by Parthian cataphracts would most likely have been of the types excavated at Vestemin and those already housed in the Iran Bastan Museum. Nevertheless, archery played a critical role as indicated by the large proportion of arrowheads excavated at Vestemin; more specifically, 93/140 or 66% of all weapons found at Vestemin (see also Bar Chart 1). The range and quantity of swords, daggers, arrowheads and spearheads discovered at Vestemin would also suggest that the Parthians (like their Sasanian successors) were capable of fielding and equipping large numbers of troops. Olbrycht's detailed analysis of the troop complements of the Parthian military machine arrive at maximum totals of approximately 120,000-150,000 when factoring all possible recruits from Iran's provinces, levies and auxiliaries in combination with the professional $core^{36}$. Olbrycht's analyses combined with the data excavated thus far at vestemin would appear to corroborate Syvanne's observation that the Parthians were capable of fielding a large force of cataphract lancers. While the proportion of Parthian horse archers to armored cataphract lancers is often believed to have been ten to one based on the accounts of the battle of Carrhae (53 BCE), Syvanne's analyses of a wider range of classical sources show that the proportion of cataphracts in the Parthian army in general may have been higher³⁷.

³⁵ JAMES 2010: 77.

³⁶ OLBRYCHT 2016: 292-296.

³⁷ SYVÄNNE 2017: 33.

Notes on Weapons and Female Parthian Burials at Vestemin

Interestingly at Vestemin there are no strictly male versus female graves per se, and a number of the burials excavated thus far appear to have been familial (men, women and children). More specifically the male and female burials are not differentiated in any discernable way with respect to crypt architecture or graves. However what is notably remarkable is the fact that Parthian daggers were buried in equal numbers with male and female burials. Specifically 12 of these daggers were buried with females and 11 with males. Parthian spearheads and arrowheads were also distributed in an equivalent fashion in male and female crypts. One of five swords discovered at Vestemin was also interned alongside a female skeleton. This would suggest that in the case of military culture at least, males and females in Parthian society were not differentiated with respect to weapons, or more specifically daggers.

Women have played a significant role in wider Iranian martial culture³⁸. This can be attested to in the Kurgan burials of Scythian women alongside daggers and swords in the southern Russia, Ukraine and Black Sea region³⁹, with similar finds made in female Sarmatian graves⁴⁰. Despite the paucity of classical sources, there are a number of references to the martial role of women during the Parthian era. One example is Rhodogune, the daughter of Parthian king Mithradates I (c. 171-138 BCE) who was married to the Seleucid king Demetrius II in 138 BCE. According to Polyaenus⁴¹ Rhodogune who had been informed of a revolt while preparing for a bath, vowed not to bathe or brush her hair until the revolt had been crushed. Polyanus then notes that Rhodogune rode with her horse at the head of her army and as a general, led a very successful battle. The Tractatus De Mulieribus (penned anonymously in Greek) provides further details of this report by describing a golden statue of Rhodogune which shows her hair as half-braided, with the other half unbraided⁴². As noted by Polyanus: "From this circumstance, the seal of the kings of Persia bears on it Rhodogune with disheveled hair."⁴³

Interestingly, a 2004 Reuters news report entitled "Women Went to War in Ancient Iran"⁴⁴ has reported of DNA tests made on a 2000-year old skeleton in northwest Iran from the Parthian era (r. 250 BCE-224 CE), revealing the bones as belonging to a woman. The Persian-language newspaper *Hambastegi* in Tabriz reported: "Despite earlier comments that the warrior was a man because of the metal sword... DNA tests showed the skeleton inside the tomb belonged to a female

³⁸ FARROKH 2014: 105-107; FARROKH 2013: 48-71; FARROKH 2011: 34-41.

³⁹ CERNENKO 1983: Plate F, 37.

⁴⁰ BRZEZIŃSKI, MIELCZAREK 2002: Plate A, 43-44.

⁴¹ Polyaenus 8. 27.

⁴² Tractatus De Mulieribus, Chapter 26, 8.

⁴³ Polyaenus 8. 27.

⁴⁴ Women Went to War in Ancient Iran, Reuters, December 3, 2004, link: http://www.hyscience.com/ archives/2004/12/bones_suggest_w.php (accessed: Sept 5, 2017).

warrior...⁹⁴⁵. Northwest Iran is also ancient Media Atropatene, the historical Azerbaijan (as opposed to the newly created Caucasian Republic of Azerbaijan in 1918, known as Albania in antiquity)⁴⁶ where Curtius⁴⁷ and Arrian⁴⁸ report of a contingent of female cavalry being provided by the local Satrap Atropates to Alexander upon his arrival to the region⁴⁹. The (post-Alexandrian) Vestemin finds provide further corroboration of the existence of female warriors in ancient Iran, itself a subset of wider Iranic martial culture that was to endure into the subsequent Sasanian era (224-651 CE).

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⁴⁵ As cited NBC news; *Warrior woman found in Iranian tomb: Gender determined by DNA testing, archaeologist says*, NBCNews.com, December 6, 2004; link:

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⁴⁶ MATINI 1989: 445.

⁴⁷ Curtius 10. 4. 3.

⁴⁸ Arrian 7.13. 1-6.

⁴⁹ MAYOR 2014: 318-338.

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Summary

Graves, Crypts and Parthian Weapons excavated from the Gravesites of Vestemin

The article describes a series of finds of Parthian military items in the graves and crypts of Vestemin in northern Iran. These findings are especially significant as they provide an array of discoveries of military equipment: swords, daggers, spearheads, arrowheads, armor and a possible helmet. This study obliges a revision of Winkelman's observation that "few finds of weapons have been made inside Iran" with respect to Parthian military equipment. In an overall sense, these findings may prove to be as significant to the domain of Parthian military studies as the well-known site of Dura Europos. The excavations have also discovered a coin of Philip the Arab or his son from the early Sasanian era which has assisted the authors' dating of the Vestemin site. The site of Vestemin is not exclusively a burial venue as the site also has defense works as well as a fortress dated the later Parthian era c. 1st century BCE to 3rd century CE).

Key words: Parthian Weapons, Vestemin, Iran, Crypts, Graves, military equipment