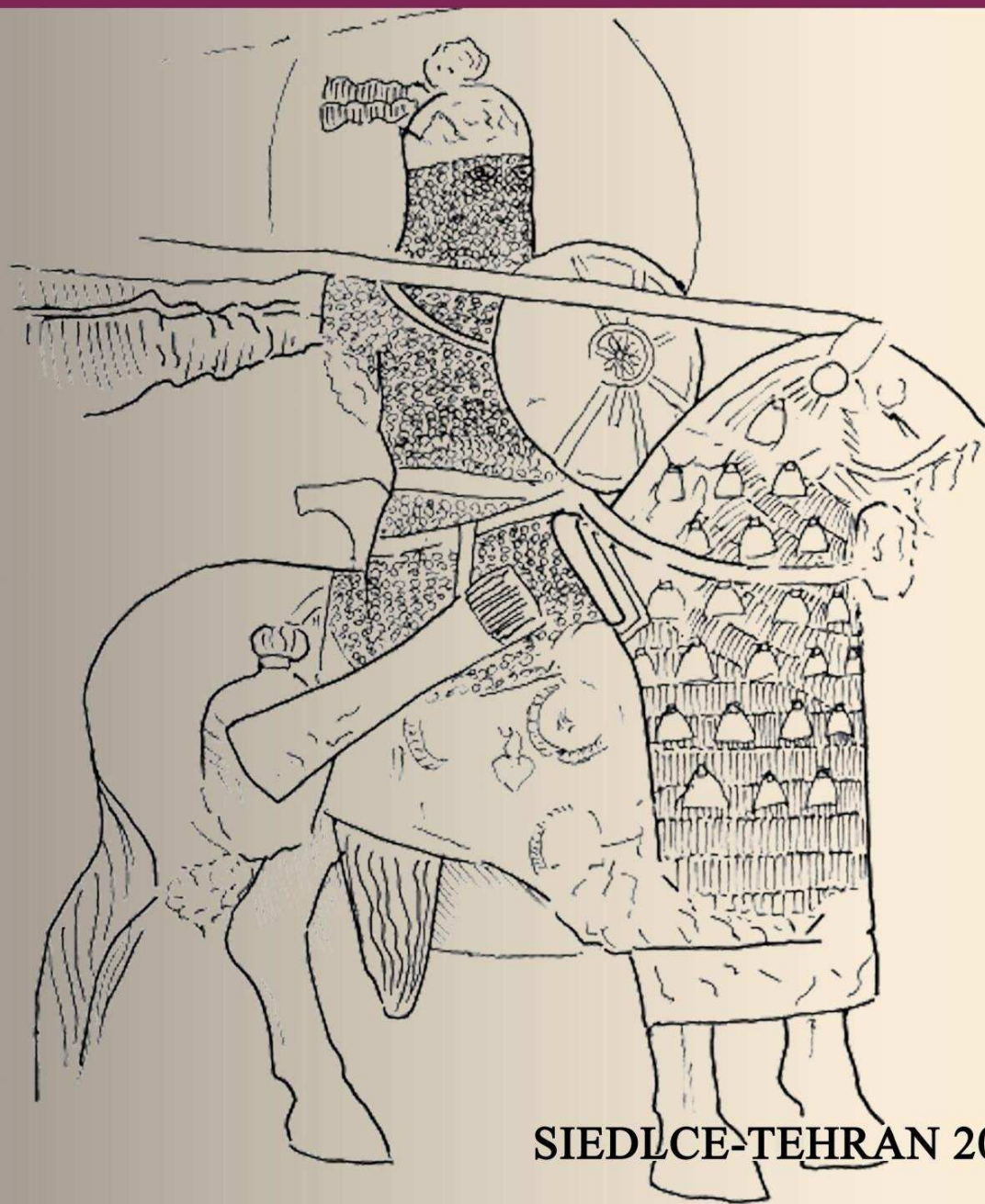


# A Synopsis of Sasanian Military Organization and Combat Units

Kaveh Farrokh & Gholamreza Karamian & Katarzyna Maksymiuk



**SIEDLCE-TEHRAN 2018**

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*If there is no army, the sovereign remains without servants,  
the religion without adherents, the arms become useless,  
mercy obsolete, and the treasury unprofitable.*

(Dēnkard III 134; translated by A. Tafazzoli)



## **Acknowledgements**

The book *A Synopsis of the Sasanian Military Organization and Combat Units* is the result of several years of collaboration between the authors who undertake daily research on the history of pre-Islamic Iran. The present work is primarily addressed to students of history who acquire their first experiences in exploring the history of the Near East. We hope that it will help readers with a fascinating (us) topic and will encourage them to continue their studies on Iranian military.

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## Introduction

One of the greatest challenges faced by the Sasanian army (Mid. Pers. *Spāh*)<sup>1</sup> was the vast landmass of the Sasanian Empire with limited military resources.<sup>2</sup> This necessitated the formation of a well-trained professional force capable of rapid deployment across the empire to confront military challenges posed along the empire's western (Roman-Byzantine), northern (Caucasus), southern and Central Asian frontiers.<sup>3</sup> The Parthians had developed in course of history a primarily all-cavalry force doctrine allowing for the rapid deployment of their forces to threatened sectors, usually to the west (Roman frontier) and Central Asia to the northeast. The nucleus of the Parthian force was in the combination of armored cavalry lancers (Gk. *kataphraktoi*) supported by horse archers (Gk. *hippotoxotai*),<sup>4</sup> as seen for example at the Battle of Carrhae (53 BCE).<sup>5</sup> While the Sasanians inherited the Parthian all-cavalry concept and applied this in cases such as the Battle of Callinicum (531 CE),<sup>6</sup> Sasanian battle doctrine was fundamentally different from its Parthian predecessor. The *Spāh* was not an "cavalry-only" force it deployed varied combat arms such as infantry (of various types), combat elephants, engineering units, on top of traditional division to heavy lancers and horse archers. Also the cavalry became more varied and included javelineers and other forms of light cavalry. References are available to camel corps and chariots, despite the latter's obsolescence as a battlefield weapon. This book focuses on the organization, weapons, equipment (suspension of equipment and equestrian gear) and tactics of all combat arms of the *Spāh*. There appears to have been a sophisticated system of tactics, with Dīnawarī for example classifying these into two distinct categories:

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<sup>1</sup> SHAHBAZI 1986: 489-499; TAFAZZOLI 2000: 4.

<sup>2</sup> JALALI 1383/2004: 48.

<sup>3</sup> DODGEON, LIEU 1992; GREATREX, LIEU 2002; POURSHARIATI 2008; DARYAEE 2009; MAKSYMCIUK 2015a.

<sup>4</sup> OLBRYCHT 2010a: 66-81; WOJNOWSKI, 2012; POTTS 2012.

<sup>5</sup> Plut. *Crass.* 23-27; Dio Cassius XL 21-24; BIVAR 1983: 48-56; SHAHBAZI 1990: 9-13; SIDNELL 2006: 237-242; SAMPSON 2008.

<sup>6</sup> Zachariah IX 4; Jordanes 363; SHAHĪD 1995: 134-142; GREATREX 1998: 200-207.

(1) battlefield tactics for set-piece battles against enemy armies and (2) siege tactics for the capture of enemy fortifications, strongholds and cities.<sup>7</sup>

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<sup>7</sup> Dīnawarī, *Uyūn al-Akhbār*, 112-115.

## Organization

The term often used to designate the Sasanian army in Middle Persian texts is the *Spāh* however there were also a number of similar terms signifying "military power" and "army" such as *Zōr* (Parth. *Zāwar*) and *Laškar*.<sup>8</sup> The *Nāma-ye Tansar*<sup>9</sup> and the *Dēnkard*<sup>10</sup> describe two major groups of warriors in the Sasanian military, the cavalry and the infantry. In practice, the Sasanian army's primary battlefield asset was the armored cavalry lancers, often supported by other combat arms such as infantry, including close combat troops as well as foot archers, slingers, battle elephants and auxiliary light cavalry forces. The deployment of multiple combat arms also facilitated Sasanian siege warfare capabilities, a task in which they equaled the Romans in skill.

Sasanian military organization was based on the *Wašt-Drafš-Gund* system of their Parthian predecessors.<sup>11</sup> The *Wašt* (Parth.), commanded by the *Wašt-Sālār* was a small detachment of troops. A larger unit of possibly one thousand troops was the *Drafš* (lit. banner) with the *Drafš-Sālār* in command. Each *Drafš* unit appeared with its own exclusive banners and heraldry consistent with their clan of origin.<sup>12</sup> The largest known unit was the *Gund* of possibly 12,000 warriors,<sup>13</sup> led by the *Gund-Sālār*<sup>14</sup> (Arm. *gundsatar*).<sup>15</sup> The term *Gund* originally designated "legion" or "regiment" but Pahlavi texts also aver to this as "army".<sup>16</sup>

While no direct evidence for the use of a decimal system by the Sasanian army has surfaced to date, the Sasanian military term *Hazār* (thousand) would suggest that the *Spāh* utilized a decimal system. The Achaemenids who utilized

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<sup>8</sup> TAFAZZOLI 2000: 6-7.

<sup>9</sup> *Nāma-ye Tansar*, 12.

<sup>10</sup> *Dēnkard*, IV.

<sup>11</sup> WIDENGREN 1976: 281.

<sup>12</sup> CHRISTENSEN 1944: 210.

<sup>13</sup> *Šāhnāme*, C. 1388.

<sup>14</sup> JALALI 1383/2004, 113.

<sup>15</sup> TAFAZZOLI 2000: 10.

<sup>16</sup> TAFAZZOLI 2000: 4-5.

the decimal system, designated the commander of one thousand troops as *Hazārapati* (Old Pers.; Parth. *Hazārpet* or *Hazāruft*) who could also be the court's master of ceremonies.<sup>17</sup> The Parthians may have also had a thousand-system as suggested by Lucian's 2<sup>nd</sup> century CE description of one thousand warriors (armored cavalry?) fighting under a distinct "Dragons".<sup>18</sup> This would be consistent with the presence of 1000 armored riders in Sūrēna's army (10,000) at the Battle of Carrhae (53 BCE) raising the possibility that the Parthians organized their troops with the thousand system.<sup>19</sup> Nöldeke has proposed that the Sasanian title of *Hazār-mard* (lit. thousand man) meant that the Sasanians also may have used the thousand system of organization.<sup>20</sup> This is consistent with a similar military Parthian term *Hazārpet* (lit. one thousand commander/chief/greater).<sup>21</sup> The *-Pet* designation has also entered the Armenian military lexicon. Jalali suggests that the selection of the *Hazār-mard* or *Hazārpat* was made form among the most (militarily) meritorious of the *Sarhangān* (singular: *Sarhang* = colonel) of a particular *Gund*.<sup>22</sup>

The *Hazār* title occurs from early Sasanian times in the inscriptions of Šāpūr I (r. 242-272 CE) on the Ka'ba-ye Zardošt at Naqš-e Rostam (ŠKZ). with respect to a certain Pābag identified as a *Hazāruft* (Gk. *Chiliarch*).<sup>23</sup> The term *Hazārpet* appears during the reign of four Sasanian kings (Yazdgerd I, Bahrām V, Yazdgerd II and Pērōz)<sup>24</sup> in reference to Mehr-Narseh Sūrēn, a high level minster (*Wuzurg*

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<sup>17</sup> GIGNOUX 1991: 423-424 ; FARZIN 1387/2008: 102.

<sup>18</sup> Lucian 29: "he describes the Parthian 'Dragons' (they use this ensign as a numerical formula - a thousand men to the Dragon"

<sup>19</sup> DEBEVOISE 1968: 83; WIDENGREN 1976: 261-283.

<sup>20</sup> NÖLDEKE 1352/1973: 284; CRAWFORD 2013: 103.

<sup>21</sup> POURDAVOOD 1336/1957: 244-245.

<sup>22</sup> JALALI 1383/2004: 111; ZAKERI 1995: 82-84.

<sup>23</sup> ŠKZ 29/23; ŠKZ 31/25; in the inscriptions of Narseh (r. 293-302 CE) from Pāikūli a certain Ardašir was the *Chiliarch* (NPi 16/14); FRYE 1984, App. 4; MOUSAVI HAJI, KHORASHADI 2014: 141-160; KHURSHUDIAN 2015: 21-68, 101-119.

<sup>24</sup> Tabarī 866, 868, 871, 872; POURSHARIATI 2008: 60-70; GYSELEN 2008; MAKSYMIUK 2015b.

*Framādār*) who is designated as the *Hazārpēt* of Iran and Non-Iran (*Ērān ud Anērān*).<sup>25</sup> The inscriptions (ŠKZ, NPi) and Mehr-Narseh Sūrēn cases would appear to suggest that the *Hazār* designation was possibly indicative of a status higher than just a military commander of a thousand men. In the *Sūr ī saxwan*, the order and placement of the *Wuzurg Framādār* is only below the *Šāhānšāh* and the princes of the blood, while the *Spāhbeds*, the *Šahr Dādtwārān*, the *Mowān Handarzbed*, the *Hazārbed*, and the performer of the *Drōn-yaz* are all below him.<sup>26</sup> The *Hazār*-title may have superseded the *Aswārān-Sardār* (commander of the Cavalry).<sup>27</sup>

The thousand (decimal) system appears in the late Sasanian era in reference to a commander named Aspād-Gušnasp<sup>28</sup> who was in command of a thousand men in the army of Šahrwarāz in the 7<sup>th</sup> century CE.<sup>29</sup> Islamic-era historian Dīnawarī appears to support the usage of a decimal system when describing Emperor Maurice's (r. 582-602 CE) agreeing to Xusrō II's (r. 590-628 CE) request to furnish him with an armed force which included "ten of the Hazārmard".<sup>30</sup>

According to Ṭabarī ranks the *Spāh*'s three most important military titles as *Argbed* (most important), followed by *Artēštārān-Sālār* and the *Spāhbed*.<sup>31</sup> The literal Middle Persian translation of *Argbed* is translates commander of a castle or fortress (*Arg*) or "citadel chief".<sup>32</sup> This title is seen in early Sasanian

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<sup>25</sup> Ṭabarī 868; FARZIN 1387/2008: 104.

<sup>26</sup> DARYAEE 2007: 66-67.

<sup>27</sup> LUKONIN 1372/1993: 106-107; FARROKH 2005: 7-8.

<sup>28</sup> Gusdanaspes Aspad-Gushnasp, MARTINDALE 1992: 578; Ṭabarī 1046, where he is referred to as Asfād Jošnas and described as 'head of the cavalry of the military host.

<sup>29</sup> *Chronicon Paschale*, 731; Theophanes A.M. 6118.

<sup>30</sup> Dīnawarī, *Akhbār al-Tiwāl*, 121.

<sup>31</sup> Ṭabarī 869 : "The third was called Kārd[ār], supreme commander of the army, the name of his rank in Persian being Rathāštārān Sālār; this is a rank higher than that of al- Iṣbahbadh and is near to that of al-Arjabadh."; NÖLDEKE 1352/1973: 173; FIGULEVSKAYA 1354/1975: 110.

<sup>32</sup> TAFAZZOLI 2000: 9; Ṭabarī 810; NPi (Mid. Pers. 6, 8, 10, 15, 19, 30; Parth. 5, 7, 9, 13, 34), the *argbed* Šāpūr; BARTHOLOMAE 1916: 16; CHAUMONT 1986: 400-401.

times with Ardašīr I (r. 224-242 CE) as the *Argbed* for the fortress Dārābgerd.<sup>33</sup> Osheidari outlines the regal status of the *Argbed* title within the *Spāh*,<sup>34</sup> with Noldeke defining the *Argbed* as district commander<sup>35</sup> and Wiesehöfer identifying this as “supreme tax collector”.<sup>36</sup> There appears to have been a title similar but lesser in status than the *Argbed*, known as the *Dizbed* (commander of a fortress) as cited at the Ka‘ba-ye Zardošt at the time of Šāpūr I.<sup>37</sup>

Tafazzoli avers that the *Artēštārān Sālār*<sup>38</sup> (Mid. Pers. *Artēštār* (singular) = Miles, soldier;<sup>39</sup> *Sālār* = commander) provides the same designation as the *Spāhbedān-Spāhbed* (General of Generals).<sup>40</sup> The office of the *Artēštārān-Sālār* was not eliminated as a result of the reforms of the 6<sup>th</sup> century CE, but simply stripped of some of its functions. Shahbazi notes that this post was had transformed into a more ceremonial and religious post void of true military function by later Sasanian times.<sup>41</sup>

The term *Spāhbed* (Mid. Pers. General, army chief; Arm. *Sparapet*) signified a high military official.<sup>42</sup> The *Ērān-Spāhbed* was commander-in-chief of the entirety of the *Spāh*'s troops<sup>43</sup> and differed from the *Artēštārān-Sālār* by lacking the latter's ceremonial-religious roles. The *Ērān-Spāhbed* was also entitled to a large portion of captured enemy supplies and booty in victorious scenarios.<sup>44</sup> The roles of the *Ērān-Spāhbed* were to:<sup>45</sup> (1) ensure (as commander of all provincial and district forces) the efficient distribution military forces throughout Iran

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<sup>33</sup> ZARRIN'KUB 1381/2002; 184; NAFISI 1331/1952: 257.

<sup>34</sup> OSHEIDARI 1371/1992: 97.

<sup>35</sup> NÖLDEKE 1352/1973: 55-56.

<sup>36</sup> WIESEHÖFER 1996: 188.

<sup>37</sup> ŠKZ 32/26.

<sup>38</sup> SUNDERMANN 1986: 662.

<sup>39</sup> VULLERS 1962: I, 76.

<sup>40</sup> TAFAZZOLI 2000: 10.

<sup>41</sup> SHAHBAZI 1375/1996: 32.

<sup>42</sup> TAFAZZOLI 2000: 7; GYSELEN 2004; MAKSYMUK 2018c.

<sup>43</sup> ZARRIN'KUB 1381/2002: 190.

<sup>44</sup> REZA 1374/1995: 16.

<sup>45</sup> JALALI 1383/2004: 109.

to maximize the empire's defense assets against foreign attacks as well as providing internal security<sup>46</sup> (2) act as minister of war (3) act as military chief of staff when the king assumed command of the *Spāh* (4) partake in meetings with top officials in the war council when war was imminent and (4) negotiate peace terms with enemies when authorized by the king. The *Ērān-Spāhbed* apparently reached its highest prestige as premier (military and civilian) official of the realm during the reign of Yazdgerd II (r. 439- 457 CE).<sup>47</sup>

District and regional commands appear to have fallen into three broad categories: *Marzbān*<sup>48</sup>, *Pāygōsbān*<sup>49</sup> and *Tirbad* (discussed in archery). The *Marzbān* (lit. borders/marches guardian/warden) is believed to mean "margrave, one who protects the land frontier"<sup>50</sup> signifying responsibility for frontier defense against potential invaders, consistent with a prime post-Islamic source, Ya'qūbī<sup>51</sup>. At wartime the *Marzbān* acted as one of the *Spāh*'s military commanders subordinate to his regional *Spāhbed*.<sup>52</sup> The *Marzbān* was to ensure the efficient mobilization of military forces within his jurisdiction to then join these with the main body of the *Spāh*. In peacetime, the *Marzbān* remained responsible for the supervision of troops under his jurisdiction but could also be deputized to administrative duties as determined by the state.<sup>53</sup> There may have been a number of "lesser" *Marzbāns* such as *Šahrab* in (Iranian) *Āturpatakān* and *Kanārang*<sup>54</sup> in the Xorasān region<sup>55</sup> identifies the *Kanārang* as responsible for guarding against the Hephthalites and Kušans) and *Bidaxš* in Armenia and Georgia.<sup>56</sup> The *Pāygōsbān* was possibly initially responsible for

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<sup>46</sup> JALALI 1383/2004: 87.

<sup>47</sup> CHRISTENSEN 1944: 421.

<sup>48</sup> KHURSHUDIAN 2015: 76-95.

<sup>49</sup> KHURSHUDIAN 2015:69-76

<sup>50</sup> MAHAMEDI 2003; 154.

<sup>51</sup> Ya'qūbī I 219.

<sup>52</sup> NAFISI 1331/1952: 249.

<sup>53</sup> JALALI 1383/2004: 112.

<sup>54</sup> KHURSHUDIAN 2015: 95-100.

<sup>55</sup> DIAKONOV 1346/1967: 421.

<sup>56</sup> OSHEIDARI 1371/1992: 69, 187, 431; HERMAN 2010: 58-82; RAPP 2014: 19.

managing state affairs in his respective region,<sup>57</sup> Ya'qūbī has defined this as “the one who drives enemies away from the homelands”.<sup>58</sup> The sources describing the Persian commander Xusrō II's Šāhēn Vahmanzādagān as *Fādhusbān*<sup>59</sup> (*Pāygōsbān*?)<sup>60</sup> of the West. The term remains challenging to decipher, as seen in the varying interpretations by scholars. Wiesehöfer for example defines the *Pāygōsbān* as the military commander of a province<sup>61</sup> in contrast to Adontz who sees this as a civilian authority in contrast to the (military functions) of the *Spāhbed*.<sup>62</sup> By the late Sasanian era the *Pāygōsbān* function may have changed in its function, possibly resembling at times the *Marzbān* (i.e. the *Marzbān* of Eṣfahān referred to as *Pāygōsbān*).<sup>63</sup>

There were a number of other military titles. The *Hām-Harz* (Mid. Pers. adjutant)<sup>64</sup> may have been equivalent to modern day lieutenants, staff sergeants or NCOs. *Dezhban* (guardian) officers supervised the conduct and efficiency of the *Spāh*'s various combat units,<sup>65</sup> a function attributed by Firdawsī's as early as the reign of Ardašīr I.<sup>66</sup> The *Dezhban* was also responsible for meting out punishment against soldiers who had transgressed the rules<sup>67</sup> as well as slaying fleeing troops who had deserted the army in battle.<sup>68</sup>

Military commanders and elite cavalry often hailed from the upper classes or the *Wuzurgān* (Mid. Pers. grandees, magnates) who according to Lukonin were persons in state service, chiefs of noble clans and semi-independent rulers

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<sup>57</sup> SAMI 1342/1964: II, 50.

<sup>58</sup> Ya'qūbī I 219.

<sup>59</sup> Ṭabarī 1002.

<sup>60</sup> Sebeos 124: Shahen Patgosapan.

<sup>61</sup> WIESEHÖFER 1996: 198.

<sup>62</sup> ADONTZ 1970: 168-169.

<sup>63</sup> JALALI 1383/2004: 110.

<sup>64</sup> TAFAZZOLI 2000: 12.

<sup>65</sup> IMAM-SHUSHTARI 1350/1971: 60.

<sup>66</sup> *Šāhnāmeḥ*, C. 1403; JALALI 1382/2003: 19.

<sup>67</sup> IMAM-SHUSHTARI 1350/1971: 60

<sup>68</sup> TASHKARI 1356/1977: 151.

of small provinces (wealthy landed gentry).<sup>69</sup> The *Wuzurgān* consisted of the clans of Parthian origin such as the *Andēgān*, *Wārāz*, *Kārin*, *Sūrēn* as well as those in Persis such as the *Farrukhāns*.<sup>70</sup> The great noble families are mentioned on the court list of early Sasanian kings (ŠKZ, NPi).<sup>71</sup> There are only vassal kings and dynasts (*Šahrdārān*) and princes of the royal blood as well as members of royal families (*Wāspuhragān*) having a higher rank.

Many persons hailing from these clans had inherited their military titles across the generations.<sup>72</sup> There appears to have been a registry of professional cavalry hailing from the upper nobility in the *Asābar Nipēk (List of Horsemen)* section of a Sasanian law book, *Mādayān ī hazār dādestān*. The *Asābar Nipēk* also describes specified land allotments required for “fully equipping” the elite mounted warrior.<sup>73</sup> Each of the upper nobles also appears to have had a list of dependents known as “free members of a community” whom he armed at his own expense, essentially having his own core of professional warriors.<sup>74</sup> *Wuzurgān* of Parthian origin had established their history of service prior to Sasanian times, with a prominent example being a military leader *Sūrēn* who destroyed a Roman invasion force at Carrhae in 53 BCE. In the midst of the supposedly powerful ruler Šāpūr II (r. 309-379 CE) the house of *Sūrēn Pahlav* played the key part. According to classical sources a member of *Sūrēn* clan commanded Persian army,<sup>75</sup> but what is of greater importance he carried out negotiations which resulted in the peace treaty of 363. He was also active in the negotiations with the Emperor Valens (r. 364-378 CE).<sup>76</sup> Ammianus Marcellinus describes this dignitary’s status as the Second Person After

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<sup>69</sup> DE BLOIS 1985: 5-15; TAFAZZOLI 1989: 427; LUKONIN 1993: 703; POURSHARIATI 2008; MAKSYMIIUK 2015b; MAKSYMIIUK 2015c.

<sup>70</sup> LUKONIN 1993: 702-706.

<sup>71</sup> ŠKZ 29/24/57; 31/25/62; 32/26/62; NPi 16, 23, 32, 46.

<sup>72</sup> Theophylact Simocatta III 18.7-9.

<sup>73</sup> *Mādayān ī Hazār Dādestān*, LI A 16-17.

<sup>74</sup> LUKONIN 1993: 700.

<sup>75</sup> Amm. Marc. XXIV 3. 1; XXIV 4. 7; Zosimos III 15. 5-6; III 19. 1-2.

<sup>76</sup> Amm. Marc. XXV 7. 5; XXX 2. 5; Malalas XIII 27; Zosimos III 31. 1.

the King (*Surena potestatis secundae post regem*).<sup>77</sup> Another representative of the Parthian clan in Šāpūr II court was Mehrān commanding the army that made military moves against Julian the Apostate (r. 361-363 CE) in Xūzestān in 363.<sup>78</sup> The Sūrēn family kept their status in the court in the 5<sup>th</sup> century. According to Armenian sources Rahām (Bahrām) of the Mehrān family of nobles, the commander of Iranian army, killed the elder son of Hormozd III (r. 457-459 CE) and placed his younger brother Pērōz (r. 459-484 CE) upon the throne.<sup>79</sup> Oriental sources unequivocally state that the key role in deposing of Sukhrā<sup>80</sup> the members of the Kārin clan in 6<sup>th</sup> century was played by the *spāhbed* Šāpūr of Ray, from the Mehrān family.<sup>81</sup> In Ṭabarī's account he is named as the supreme Commander of the Land (*Iṣbahbadh al-bilād*).<sup>82</sup> *Wuzurgān* of Parthian origins continued their service into late Sasanian times, notably Bahrām Čōbīn, a military commander of hailing from the Mehrān-Pahlavs, who commanded a cavalry force which captured Dārā in 572 CE<sup>83</sup> and defeated a large Turco-Hephthalite force in 588 CE.<sup>84</sup>

Estimates of the numerical strength of the professional core (versus total number of fighters that can be mobilized such as levies, etc.) of the *Spāh* vary with respect to primary sources consulted. Severus Alexander (r. 222-235 CE) for example claimed to have destroyed "One hundred and twenty thousand of their [Sasanian] cavalry"<sup>85</sup> in his victory speech to the Roman senate (September 25, 233 CE). While this would suggest that the early Sasanians were able to field very large numbers of professional cavalry, the credibility of these claims as recorded

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<sup>77</sup> Amm. Marc. XXX 2. 5.

<sup>78</sup> Amm. Marc. XXV 1. 11; XXV 3. 13.

<sup>79</sup> Elišē 242; Łazar P'arpec'i's III 60; A different version of events presented Ṭabarī 872 (sic!): "Fayrūz...marched against his brother Hurmuz, son of Yazdajird [II], who was at al-Rayy".

<sup>80</sup> JACKSON BONNER 2015: 110-114.

<sup>81</sup> *Šāhnāmeḥ*, C. 1605; Ṭabarī 885; Dīnawarī, *Akhbār al-Tiwāl*, 67.

<sup>82</sup> MAKSYMIUK 2018c.

<sup>83</sup> Theophylact Simocatta III 18. 10.

<sup>84</sup> SHAHBAZI 1988: 514-522. NAFISI 2013: 944-951.

<sup>85</sup> HA *Sev. Alex.* 56. 5.

in the *Historia Augusta* are now questioned by Western scholarship.<sup>86</sup> Ṭabarī for example reports the full professional complement of the Sasanian professional troops (*Savārān* and Daylamite infantry) standing at a maximum of 60-70,000 in 578 CE (approximately 250 years after Severus' speech).<sup>87</sup> Nevertheless the total number of 120,000 troops is verifiable if we include levies, non-professional (elite) troops and various recruits. Olbrycht's detailed analysis of the troop complements of the Parthian and Sasanian military provide totals approximating 120,000-150,000 when factoring all possible recruits from provinces, levies and auxiliaries in combination with the professional core.<sup>88</sup>

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<sup>86</sup> CHARLES 2007: 305-308.

<sup>87</sup> Ṭabarī 271.

<sup>88</sup> OLBRYCHT 2016: 292-296.

## Military Reforms

Xusrō I Anōšīrvān (r. 531-579 CE) had implemented a series of reforms during the 6<sup>th</sup> century CE (possibly originating during the previous reign of Kawād I (488-497/499-531 CE),<sup>89</sup> endeavoring to enhance the *Spāh*'s military effectiveness. These reforms could be classified into three broad categories: (1) rationalization of the empire's defense (2) military inspections and (3) the formation of new cavalry elite, the *Dehqāns*.

### Rationlization of the empire's defense

Rationlization of the empire's defense was implemented by the first was the elimination of the office of the *Ērān-Spāhbed* in favor of four regional generals or *Spāhbed*.<sup>90</sup> According to Ṭabarī until the Xusrō's reign there was only one supreme military commander (*Išbahbadh al-bilād, Ērān-Spāhbed, Artēštārān Sālār*) in Iran.<sup>91</sup> With no doubt this title defines the overall military leader but not the cavalry commander. In the playing chess manual the *Vizārišn ī catrang ud nihišn ī nēvardašēr* appears *Artēštārān Sālār* (contemporarily called queen) as the chief of the warriors and *Aswārān-Sālār* (horse or warrior at present) as the chief of horsemen.<sup>92</sup> Despite this *Kārnāmag ī Ardašīr ī Pābagān* as well as Muslim authors (the latter drew upon information basing on the lost the *Gah-nāmag*) confirm that the *Spāhbed* title denoted the highest military rank.<sup>93</sup> He led diplomatic missions e.g. Sūrēn<sup>94</sup> during the reign of Šāpūr II, Bōē<sup>95</sup> and Siyāwuš<sup>96</sup> during the reign of Kawād. Šāpūr of Ray Mehrān was also

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<sup>89</sup> *Šāhnāme*, C. 1620-C. 1624; Ṭabarī 960-961; GRIGNASCHI 1971: 87-147; RUBIN 1995; SCHINDEL 2003: 675-690; GARIBOLDI 2006.

<sup>90</sup> Ṭabarī 489.

<sup>91</sup> Ṭabarī 869; *Spāhbed* by the name of Raxš in ŠKZ 30/24/58 and NPi 16, 32 is mentioned.

<sup>92</sup> DARYAEE 2002b: 300; MACIUSZAK 2003: 95-97.

<sup>93</sup> CHRISTENSEN 1944: 265, 524-525; NYBERG 1964: 16. 8;

<sup>94</sup> Amm. Marc. XXV 7. 5; XXX 2. 5; Malalas XIII 27; Zosimos III 31. 1.

<sup>95</sup> *asṭbīd*: Yeshu' the Stylite 59; ἀσιετίος: Theophanes A.M. 5991; ἀσιεβέδης: Proc. Bell. I 9. 24.

<sup>96</sup> ἀδρασταδάραν σαλάνης: Proc. Bell. I 6. 18; I 11. 25

a supreme military commander but there is no knowing about his diplomatic activity.<sup>97</sup>

The basis of military reform in 6<sup>th</sup> century was replacement of the single commander by four *Spāhbeds* beholden directly to the king.<sup>98</sup> The quadripartition of military power was employed: a quarter of the east (*kust ī xwarāsān Spāhbed*), a quarter of the south (*kust ī nēmroz Spāhbed*), a quarter of the west (*kust ī xwarbārān Spāhbed*) and a quarter of Ādurbādagān (*kust ī Ādurbādagān Spāhbed*). The term *abāxtar* (north) was generally avoided because of its negative religious connotation (Fig. 1).<sup>99</sup>

Study on *Spāhbeds* identity can corroborate the continued participation of the Parthian dynastic families in the post-reform period. There is not any doubt that function of *Spāhbed Xwarāsān* was transferred by Xusrō to Kārin,<sup>100</sup> *Spāhbed Ādurbādagān* to Mehrān<sup>101</sup> whereas *Xwarōārān* to Ispāhbudhān.<sup>102</sup> Of course one can assume that allocation of the territories far from homelands of the families had to weaken their power in the empire.<sup>103</sup> Three out of four *kust ī* the power was given to the members of the Parthian nobility. The Pahlav clan members held high offices in military structures, and shaped the Sasanian state's foreign policy. Īzad Gušnasp was responsible for contacts with Byzantium, while the negotiations with Central Asian powers were led by Sitād Mehrān. It should be pointed out here that most of the House of Mehrān was faithful to the crown even

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<sup>97</sup> Bal'amī 147; Ṭabarī 869.

<sup>98</sup> Ṭabarī 894; FRYE 1984: 154; TAFAZZOLI 2000: 8; GYSELEN 2001a; GYSELEN 2001b; GYSELEN 2007.

<sup>99</sup> DARYAEE 2002a: 11-14; DARYAEE 2007: 66 note 7; DARYAEE, SAFDARI 2010: 2-4.

<sup>100</sup> Dīnawarī, *Akhbār al-Tiwāl*, 102-103; *Nihāyat*, 380.

<sup>101</sup> Sigillographic material examined by R. Gyselen, shows two seals dated to the reign Xusrō I, which can be ascribed to the *Spāhbeds* from the family of Mehrān. MAKSYMUK 2015c.

<sup>102</sup> Isfandiyār 91; KHURSHUDIAN 1992; KARIMIAN 2008: 108; POURSHARIATI 2008: 104-118, 127-160; *contra* MAKSYMUK (2015b: 193) that Ispāhbudhān is branch of Sūrēn one in fact.

<sup>103</sup> POURSHARIATI 2008: 97.

during the rebellion of Bahrām Čōbīn. Nastuh, son of Sitād<sup>104</sup> led Sasanian forces against the usurper, even though all they belonged to the same clan (Fig. 2-4).

Each *Spāhbed* may have had a *Marzbān* commander subordinated to their office with king also appointing a viceroy-type office known as the *Pāyγōsbān* to each *Spāhbed*'s region. The *Bundahišn* text also mentions a certain *Spāhbedān*- *Spāhbed* or "General of Generals"<sup>105</sup> which may suggest that this office supervised and coordinated the four regional *Spāhbeds* when the *Spāh* was obliged to fight on separate fronts simultaneously.

In support of the *Spāhbed*'s tasks in repelling attacks on multiple frontiers, the empire constructed (and strengthened) a series of existing wall-systems of defense corresponding to the northern, eastern/northeastern and southern sectors.<sup>106</sup> These were the Wall of Darband in the Caucasus,<sup>107</sup> the Walls of Tammīša and Gorgān which shields against the Turkman steppes,<sup>108</sup> and War ī Tāzīgān (Wall of the Arabs) barrier facing the southwest against nomadic raiders from the Arabian Peninsula.<sup>109</sup>

The system proved efficient when implemented strictly for the defense of the empire. Howard-Johnston<sup>110</sup> and Reza<sup>111</sup> have summarized the plans of Justin II (r. 565-574 CE) for attacking the Sasanian Empire on three fronts in the early 570s: (1) the north by instigation of a anti-Sasanian uprising in Perso-

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<sup>104</sup> *Šāhnāmeḥ*, C. 1942.

<sup>105</sup> *Bundahišn*, II 8. 15.

<sup>106</sup> MAHAMEDİ 2003: 145.

<sup>107</sup> KETTENHOFEN 1994: 13-19; MAKSYMIUK 2015d; MAKSYMIUK 2016a; DARYAEE 2016a; GADJIEV 2017; MAKSYMIUK 2018b.

<sup>108</sup> BIVAR, FEHÉRVÁRI 1966: 35-50; FRYE 1977; KLEISS 1999; BALL 2001: 365; SAUER, REKAVANDI, WILKINSON, NOKANDEH 2013, KLEIBER 2006–2007: 173-195.

<sup>109</sup> *Khandaq-ī Sābūr*: SPRING 2015: 44; DARYAEE 2016a.

<sup>110</sup> HOWARD-JOHNSTON 2010: 50-51.

<sup>111</sup> REZA 1374/1995: 96-97.

Armenia in 572 CE<sup>112</sup> followed by (2) Romano-Byzantine attacks along the empire's western Mesopotamian front by spring 573 CE<sup>113</sup> followed by (3) Turkish offensives (pre-arranged by Turkish and Byzantine embassies<sup>114</sup>) against Marv and Nišāpūr in the empire's northeast.<sup>115</sup> Reza proposes that the Sasanians stemmed the Turkish offensive, obliging them to cease hostilities, thereby enabling the *Spāh* to shift the bulk of its forces from the northeast to the west.<sup>116</sup> Howard-Johnston proposes the opposite by stating that the *Spāh* first militarily disabled the Romano-Byzantines in northern Mesopotamia, allowing them to redeploy the bulk of their forces to the northeast in order to stem the Turkish offensive.<sup>117</sup> Justin II was decisively defeated by the *Spāh* at Nisibis<sup>118</sup> that had been besieged by the Romano-Byzantines, with the Sasanians subsequently capturing Dārā.<sup>119</sup> Meanwhile, minimal forces had been put in place to contain the threat to the north posed by Perso-Armenian rebellion until the resolution of the battles in the northeast and west.

Despite its success in the 570s the four *Spāhbed* system was also beset by two fatal weaknesses. First, the system was designed to defend the empire from attacks from multiple fronts, implying a defensive (versus an offensive) doctrine. While the system did allow for strikes into enemy territory, there are no indications that the four *Spāhbed* system had been designed for the launching of major wars aiming for vast territorial expansion, like the one launched by Xusrō II against the Romano-Byzantine Empire in 603 CE.<sup>120</sup> The system appeared

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<sup>112</sup> MAKSYMIUK 2016b

<sup>113</sup> COWE 1991: 265-276. DIGNAS, WINTER 2007: 109-115; TROMBLEY 2007: 321-356; MAKSYMIUK 2011: 101-104; MAKSYMIUK 2015a: 75-78.

<sup>114</sup> John of Ephesus VI 23; Theophylact Simocatta III 9. 3-10; Menander X 1-3; Menander XIII 5; HARMATTA: 249-252; ISAAC 1995: 125-155; MAKSYMIUK 2018a: 17.

<sup>115</sup> HOWARD-JOHNSTON 2010: 54.

<sup>116</sup> REZA 1374/1995: 97.

<sup>117</sup> HOWARD-JOHNSTON 2010: 53, 55.

<sup>118</sup> REZA 1374/1995: 97.

<sup>119</sup> John of Ephesus VI 5; MAKSYMIUK 2016a.

<sup>120</sup> Mika'el Rabo X 25; RUSSELL 2001: 41-71; DIGNAS, WINTER 2007: 115-118; SARRIS 211: 242-249; MAKSYMIUK 2015a: 86-91.

effective in that war's initial stages as even as the *Spāh* advanced into Romano-Byzantine territories in the Near East, Egypt and Anatolia, the empire was able to repel a large and dangerous the Western Turks offensive in 618-619 CE.<sup>121</sup> Nevertheless, the system failed when faced with a combined Khazar-Byzantine alliance coming through the empire's northern Caucasus front, leading to the war's end in 628 CE.<sup>122</sup> The system had failed as the bulk of the *Spāh*'s forces had been used for garrisoning conquered Romano-Byzantine territory, leading to a paucity of forces to defend the northern sector. This was based on the four- *Spāhbed*'s doctrine of focusing the bulk of the *Spāh*'s resources on the more critical sector while maintaining the minimum forces necessary for avert disaster on the "less critical" sectors.

The second weakness was also inherent to the system's doctrine of defense: the placement of powerful forces in each of the *Spāhbed* commanded frontier regions, leaving the interior of Iran sparse with respect to professional troops. This would not pose a crisis if the frontier defenses and garrisons repelled enemy invasions but if the enemy succeeded in breaking through any of the empire's *Spāhbed* -manned regions, they often advance into the Iranian interior due to its lack of strategic reserves. The *Spāh*, already weakened as a result of Xusrō II's war with the Romano-Byzantines, was unable to muster fresh reserve forces after its defeats against the Arabo-Muslim invaders in the aftermath of the Battles of Qaddisiyah (636 CE), Jalula (636 CE) and Nihavand (651 CE), allowing for the eventual conquest of the interior of Iran.<sup>123</sup>

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<sup>121</sup> DOBROVITS 2003: 3-8.

<sup>122</sup> FIEY 1987: 96-103; HOWARD-JOHNSTON 1999: 1-44; GHODRAT-DIZAJI 2011: 315-329; MAKSYMIUK 2015a: 92-98.

<sup>123</sup> FRYE 1984: 154; *contra* SKUPNIEWICZ (private correspondence with Maksymiuk): "Year 636 devastated the system, one kust was almost entirely lost the other was heavily crippled, actually Nihavand proves opposite than said above - it shows that despite failure of spahbedan system, Iran was able to field substantial army and challenge

## Military inspections

The second area of reforms was in military inspections. These had existed since early Sasanian times as indicated in the *Fārsnāmeḥ* with respect to the armies of Šāpūr I,<sup>124</sup> with the reforms making these more systematic and comprehensive. A type of or Ministry of war<sup>125</sup> appears to have been formed with one its primary functions having been military inspections.<sup>126</sup> The objective of the reformed reviews was to assess the readiness of military personnel for battle, notably with respect to their equipment and training.<sup>127</sup> Inspections of troops and military training regimens were to occur every four months.<sup>128</sup> Comprehensive military reviews could last up to forty days, with the king himself also obliged to present himself and his equipment for vigorous inspection.<sup>129</sup> There were also “surprise” inspections, when the *Šāhānšāh* and his military escort would unexpectedly arrive at various garrisons to inspect its respective military forces.<sup>130</sup>

## A new cavalry elite

Whitby has analyzed Xusrō I’s concerns with the upper nobility’s powerful political and military presence and ways of counterbalancing their influence.<sup>131</sup> The upper nobles wielded considerable political and economic influence, having the capability of challenging Ctesiphon’s enforcement of royal edicts<sup>132</sup> and shifting their loyalty away from Ctesiphon, thereby endangering the Sasanian state.<sup>133</sup> Warriors from the feudal lord’s estate would often be beholden to him

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the early caliphate army, i.e. the superpower of the time. Nihavand was not an easy victory for the Arabs despite the fact that the Iranian army was gathered in somehow desperate manner”.

<sup>124</sup> ZOKA, IMAM-SHUSHTARI, GHAEM-MAGHAMI 1349/1970: 21-30.

<sup>125</sup> Dīnawarī, *Akhbār al-Tiwāl*, 74.

<sup>126</sup> Mostawfi 110.

<sup>127</sup> MATUFI 1378/1999: 209.

<sup>128</sup> TAFAZZOLI 2000: 14.

<sup>129</sup> Dīnawarī, *Akhbār al-Tiwāl*, 101.

<sup>130</sup> *Sirat Anoushiroan*, 371-374.

<sup>131</sup> WHITBY 1994: 249-250.

<sup>132</sup> Proc. Bell. I 23. 14.

<sup>133</sup> WHITBY 1994: 258.

versus the *Šāhānšāh* in Ctesiphon.<sup>134</sup> It would seem that Xusrō addressed these challenges by establishing a new cavalry class from the “lesser nobles” known as the *Dehqāns*,<sup>135</sup> but the reform could not possibly have been directed against Parthian clans and one should rather say that in the light of considerations Maksymiuk's there was a tight co-operation between the crown and the Parthian Houses.<sup>136</sup> The term *Dehqān* is not attested in early Sasanian documents. As noted by Rubin the induction of the *Dehqāns* into the esteemed ranks of the cavalry meant that: “Instead of an army of retainers, bought to the field by powerful feudal lords over whom the king had little control, there was now an army directly recruited and remunerated by the king”.<sup>137</sup> Paid and equipped directly by the state, the *Dehqāns* would thus be directly beholden to Ctesiphon versus the various upper class nobles. Prior to these reforms, each cavalryman's quality of equipment (armor, swords, etc.) varied according to his noble rank and wealth. The creation of the *Dehqān* cavalry corps meant that the king was no longer exclusively beholden to the upper nobles for the provision of high quality cavalry.<sup>138</sup> In practice the reforms resulted in a hybrid of the old and new systems in which warriors of the “upper nobles” would rally alongside the newly formed professional corps of *Dehqāns* at wartime.

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<sup>134</sup> CHRISTENSEN 1944: 444.

<sup>135</sup> *Zand ī Wahman Yasn*, IV 7; IV 54; *Ardā Wirāz-Nāmag*, XV 10; TAFAZZOLI 1994: 225; TAFAZZOLI 2000: 38-59; GARIBOLDI 2006: 31-38; DARYAEE 2009: 147-148; BÖRM 2010: 179-180; OLBRYCHT 2010b: 243; MAKSYMIUK 2011: 66.

<sup>136</sup> MAKSYMIUK 2015b; MAKSYMIUK 2015c.

<sup>137</sup> RUBIN 1995: 228.

<sup>138</sup> On dependance of the kings on clan armies see: POUHARIATI 2008; MAKSYMIUK 2015b; MAKSYMIUK 2015c.

## Cavalry

The term *Aswārān* for the professional cavalry is also cited as *Savārān* in New Persian, with post-Islamic sources defining these by the Arabized “*Aswārān*”.<sup>139</sup> One of the most coveted military titles bestowed to the *Wuzurgān* was the *Aswārān-Sardār* (cavalry commander), the commander of the entire cavalry corps. Known also as *Framādār Savārān* in New Persian,<sup>140</sup> this post could sometimes be seconded into a regional *Spāhbed*. The warrior staffing of the *Aswārān* or *Savārān* corps were also appointed from the *Wuzurgān*. Jalali specifies that the *Aswārān* designate the professional cavalry versus other non-Sasanian auxiliaries (excepting perhaps Albanian and Armenian allies) much like French *Chevalier* designation.<sup>141</sup> Commanders of the *Savārān* corps could also be placed in command of non-cavalry units.<sup>142</sup> The *Aswārān*’s *Wuzurgān* status and wealth allowed them to subsidize for themselves the highest quality weaponry.<sup>143</sup> The Middle Persian term *Aswār* (sing. cavalryman)<sup>144</sup> underwent lexical changes with respect to its military functions such that by the later Sasanian era *Aswārān* had also come to mean “officers of the army”.<sup>145</sup>

The *Aswārān* or *Savārān* cavalry were to the *Spāh*’s primary strike arm with Bivar noting “The whole issue of the battle, once an opening appeared, depended on the single overwhelming cavalry charge”.<sup>146</sup> The function of the armored lance-bearing (*xystophoroi*) cavalry was to launch the primary battlefield strike, often preceded by the arrow barrages of foot archers.<sup>147</sup> Insotransev for example notes that cavalry was placed at the front of Sasanian armies before the

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<sup>139</sup> BOSWORTH 1987; SKJÆRVØ 1987.

<sup>140</sup> MASHKOOR 1345/1966: 162; NAFISI 1331/1952: 277.

<sup>141</sup> JALALI 1383/2004, 34.

<sup>142</sup> MOHAMMADI-MALAYERI 1372/1993: 321.

<sup>143</sup> BIVAR 1972: 279.

<sup>144</sup> TAFAZOLLI 2000: 13.

<sup>145</sup> Ya‘qūbi I 219.

<sup>146</sup> BIVAR 1972: 289.

<sup>147</sup> JALALI 1383/2004: 48.

battle commenced,<sup>148</sup> however other types of formations were possible such as an all-cavalry doctrine (somewhat similar to the former Parthians), as well as cavalry acting in concert with elephants and infantry as discussed later in this book.

### Early Sasanian cavalry (c. 224 – late 200s/early 300s CE)

The two-handed “bayonet” type wielding of the *Nēzak* (lance) appears consistently in reliefs of the early Sasanian era. The *Nēzak* was based on its 12-foot long Parthian lance (Gk. *kontos*) predecessor that had a sword-like blade of iron (23.2-37.5 cm) socketed onto the lance shaft. There was also the Sasanian *Aršt* (spear Gk. *aikhmē brakhéa*) that may have been a shorter version of the *Nēzak*, possibly used by Sasanian spear-wielding infantry contingents.<sup>149</sup> One of the earliest depictions of Sasanian cavalry is at the 3<sup>rd</sup> century site of Fīrūzābād (Fig. 5), Naqš-e Rostam (Fig. 6-11) and Tang-e Sarvak (Fig. 12) where lance warfare are prominently displayed. According to Bivar this was due to the armor having had “established its superiority over the missile”<sup>150</sup> at the time, protecting warriors against archery. Sasanian cavalymen at Fīrūzābād are seen with combination armor (lamellar, laminated, mail).<sup>151</sup> Notably, the cavalry at Fīrūzābād carry no shields.<sup>152</sup> Mail is (possibly) also displayed at Bišāpūr among early Sasanian cavalymen and certainly centuries after at Tāq-e Bostān in late Sasanian Times (Fig. 13-15).<sup>153</sup> According to the Iranian sources for the martial equipments of a heavily-armed Sasanian horseman very important was the horse armor (*zēn-abzār*).<sup>154</sup> Middle Persian texts named horse armor as: *tiḡfāf*, *bargustuvān* and *silī*.<sup>155</sup> Findings at Dura Europos provide reveal late Parthian and early Sasanian *Bargostvān*,<sup>156</sup> covering

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<sup>148</sup> INSOTRANSEV 1348/1969: 42.

<sup>149</sup> Iran Bastan Museum inv. no. 295-299; TAFAZZOLI 1993: 187; LITVINSKY 2010; *contra* KHORASANI 2006: 246.

<sup>150</sup> BIVAR 1972: 279.

<sup>151</sup> BIVAR 1972: 275; ALLAN 1986; SKUPNIEWICZ 2016a: (claims that these are cuirasses).

<sup>152</sup> SKUPNIEWICZ 2006b.

<sup>153</sup> SKUPNIEWICZ 2016a; SKUPNIEWICZ 2017a.

<sup>154</sup> SKUPNIEWICZ 2014; NICOLLE 2017.

<sup>155</sup> FARROKH 2005: 17-19; MELIKIAN-CHIRVANI 1988; SKUPNIEWICZ 2006a.

<sup>156</sup> MELIKIAN-CHIRVANI 1988.

the horse's torso with armor of metallic scales with an oval opening for the rider's seat in addition to armor for the horse's neck, head as well (Fig. 16-17).<sup>157</sup> As stirrups had not yet been invented, riders' stability was entrusted to a four-horn saddle (two at front and two at back) in order to brace the cavalryman in place.<sup>158</sup> It may appear that unlike armored cavalry of Parthians of Chinese Sui dynasty Sasanian *Aswārān* relayed more on maneuverability and dynamics than on mere weight of the battering hit.<sup>159</sup>

The mural painting from Dura-Europos displays a fully armored cavalryman (man and horse) of the Iranian type wielding a lance with his sword hilt projecting from his left side (Fig. 18). Dating of the Dura Europos painting is debated among scholars, with Brown,<sup>160</sup> Colledge,<sup>161</sup> Rostovtzeff,<sup>162</sup> Robinson<sup>163</sup> and Shahbazi<sup>164</sup> dating this to the later Parthian era (late 2<sup>nd</sup> century to early 3<sup>rd</sup> century CE), Symonenko<sup>165</sup> proposing the 2<sup>nd</sup> century CE, Mielczarek<sup>166</sup> suggesting the 3<sup>rd</sup> century CE with current scholarship setting this to 232/233-256 CE or the early Sasanian era.<sup>167</sup> The primacy of the lance is again seen at the site of Naqš-e Rostam that features this type of combat in four panels. The first is a double-panel of Bahrām II (r. 276-293 CE): the top panel shows him in lance combat against an unidentified enemy (Fig. 6-7) with partial similarity to the Roman cavalryman depicted in the Vatican's "Sarcophagus of Helena".<sup>168</sup> The lower panel may represent Bahrām II against an unknown Sasanian prince or his rebellious brother Hormozd *Kušānšāh* (Fig. 8-9). The third lance combat panel at Naqš-e Rostam also displays

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<sup>157</sup> JAMES 2004: 49-72; GALL VON 1990: 62; SKUPNIEWICZ 2006a: 157, 162.

<sup>158</sup> HERRMANN 1989.

<sup>159</sup> SKUPNIEWICZ 2014: 39.

<sup>160</sup> BROWN 1936: 195.

<sup>161</sup> COLLEDGE 1977: 117, Fig. 44B.

<sup>162</sup> ROSTOVTZEFF 1933: 207-209.

<sup>163</sup> ROBINSON 1967: 186.

<sup>164</sup> SHAHBAZI 1986.

<sup>165</sup> SYMONENKO 2009: 119.

<sup>166</sup> MIELCZAREK 1993: 36.

<sup>167</sup> NIKONOROV 2005, Note 12; WÓJCIKOWSKI 2013, 233-234.

<sup>168</sup> Pio Clementine Museum in the Vatican Museums, Cat. 238.

a Sasanian king (Bahrām II?, Hormozd II?) engaged in lance combat against a Roman opponent with broken lance (Fig. 10-11). The site of Panj-e Ali (Koohdasht in Lorestan, Western Iran) discovered in 2015, also shows a mounted lancer (Fig. 19-20) dated to the late Parthian or early Sasanian periods (c. 200s-220s CE).<sup>169</sup>

Known early Sasanian helmets include the ridge helmet discovered and depicted at Dura Europos (see infantry) and conical helmet (with rows of riveted metallic plates) as seen at the wall mural at Dura Europos.<sup>170</sup> Panj-e Ali headgear is also pointed but centuries of weathering upon the panel prevents analysis as to its exact construction. Analyses of headgear in Sasanian iconographic depictions (esp. 3<sup>rd</sup>-4<sup>th</sup> centuries CE) at Fīrūzābād, Naqš-e Rostam, Bišāpūr and Naqš-e Rajab fail to ascertain if the displayed headgear are strictly military (i.e. one piece, multi-segment segments, or *cross-band* fashion, etc.), ceremonial or a combination of the two. For this reason research in Sasanian helmets is mainly focused on archaeological finds of actual helmets dated to the 5<sup>th</sup>-7<sup>th</sup> centuries (Fig. 21-22, Fig. 44).<sup>171</sup>

The Sasanian sword was approximately 1-1.11 cm in length with the blade's width ranging between 5-8.5 cm. (Fig. 23-24) These were slung in the traditional scabbard slide suspended from the belt resulting in the weapon standing vertical in relation to the ground when the cavalryman was at Rest (Fig. 25-28). The *Savārān* suspended their swords on the left side, a martial tradition prevalent among the Parthians.<sup>172</sup> Šāpūr I at Naqš-e Rostam is seen pressing his hand on the hilt of his sword (in scabbard), pushing it 45 degrees to the right (Fig. 29-30). Early to middle Sasanian era swords were built with long and broad blades, wide (sword) guards and broad pommels.

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<sup>169</sup> FARROKH, KARAMIAN, DELFAN, ASTARAKI 2016: 31-40.

<sup>170</sup> ROSTOVITZ 1933: 216, plate XXXIII/2; GHIRSHMAN 1962: figs. 62, 100, 165; GALL VON 1990: 69; INVERNIZZI 1999: 22-24, fig. 6, pl. A.

<sup>171</sup> AHMAD 2015; KUBIK 2017.

<sup>172</sup> WINKELMANN 2009: 240.

Already an elite force within the Sasanian army, the *Aswārān* corps in turn apparently had select prestige units bearing high quality arms and armor. Distinguished by their exceptional martial performance, these units appear to have been often designated as the king's (or *Šāhānšāh's*) royal guard units or armies (i.e. *Gund Šāhānšāh*)<sup>173</sup>, a tradition attributed by Farzin to the Achaemenid era.<sup>174</sup> The Sasanian Pahlavi term for the *Šāhānšāh's* guards was *Hām-Harzan* (singular: *Hām-Harz*; same in Armenian), derived from Parthian-Pahlavi *Hmhrz*, signifying the possibility that such elite royal units may be traced to the Parthian era. Note that *Hmhrz* variously means guard with spear, guardian and spear-bearer. An early Sasanian prestige unit, the *Jāvidān* (Immortals),<sup>175</sup> led by a commander designated as *Varhragh-Nighan Xwaday*,<sup>176</sup> may have been founded by Ardašīr I.<sup>177</sup> This unit appears to have remained in service centuries after Ardašīr I, as reported the sources.<sup>178</sup>

Another prestige unit of the *Savārān* that may be traced to early Sasanian times was the *Jan-separan*.<sup>179</sup> The term *Jan-separ* is cited in reference to the *Savārān* cavalry of Ardašīr I in the *Kār-Nāmag ī Ardašīr ī Pābagān*<sup>180</sup> and the *Mēnōg ī xrad*.<sup>181</sup> The unit may have been in place as late as the 7<sup>th</sup> century CE, as the *Šāhnāme* for example cites the *Janvespar* as having been in service during the reign of Xusrō II.<sup>182</sup> The unit may have recruited Greco-Roman (deserters, mercenaries or volunteers) and other non-Iranian recruits.<sup>183</sup> One of the unit's leaders for example is cited as *Jālinus* (Iranian for Julius, Julian, etc.)<sup>184</sup> suggesting

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<sup>173</sup> SIVRIOĞLU 2013: 679.

<sup>174</sup> FARZIN 1387/2008: 103.

<sup>175</sup> MEHREEN 1349/1971: 77.

<sup>176</sup> FARROKH 2005: 6.

<sup>177</sup> MEHREEN 1349/1971: 77.

<sup>178</sup> Malalas XIV 23; Socrates Scholasticus VIII 20; Proc. Bell. I 14. 44.

<sup>179</sup> OSHEIDARI 1371/1992: 231.

<sup>180</sup> *Kār-Nāmag ī Ardašīr ī Pābagān*, VI 16 61; VIII 7 81; IX 19 87.

<sup>181</sup> *Mēnōg ī xrad*, I 64.

<sup>182</sup> FARZIN 1387/2008: 107.

<sup>183</sup> PIRNIA, 1369/1990: 244.

<sup>184</sup> NAFISI 1331/1952: 22.

that he may have been of Greco-Roman origins. Farzin's analysis of the unit reports its commander as having been a personal guard of the *Šāhānšāh* who was even allowed to occupy a "lesser throne" in the Sasanian court.<sup>185</sup>

### **Cavalry development in the early 300s - c. 490s CE**

This early phase of cavalry development appears to span to Sasanian defeats in Armenia (298 CE) by Maximianus Galerius<sup>186</sup> after which a number of changes to the cavalry's weaponry, armour and helmets were apparently introduced during the reign of Šāpūr II. A possible doctrinal shift towards a more heavily armed and armored cavalry lancer, Heliodorus describes Sasanian cavalryman of the 350s CE as having been selected for "chosen for his bodily strength... lifted up by others [onto his saddle] because of his weight".<sup>187</sup> Libanius describes the array of weaponry of these cavalrymen as having included "darts, sabres (scimitars?), spears, swords and every warlike implement ... carried a lance which needed both hands".<sup>188</sup> Heliodorus describes these "bronze men" and their horses as having been covered entirely in "unbreakable" armor that was "proof against any missiles, and is a sure defense against all wounds".<sup>189</sup> Describing Sasanian cavalry at the time of Julian's invasion of Persia in 363 CE Ammianus Marcellinus describes them as having been "all the companies were clad in iron, and all parts of their bodies were covered with thick plates, so fitted that the stiff joints conformed with those of their limbs; and the forms of human faces were so skilfully fitted to their heads, that, since their entire bodies were plated with metal, arrows that fell upon them could lodge only where they could see a little through tiny openings fitted to the circle of the eye, or where through the tips of their noses they were able to get a little breath. Of these some, who were armed with pikes, stood so

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<sup>185</sup> FARZIN 1387/2008: 107.

<sup>186</sup> P'awstos Buzand's III 21; LEADBETTER 2002; MOSIG-WALBURG 2009: 91-121.

<sup>187</sup> Heliodorus IX 15. 1; IX 15. 5.

<sup>188</sup> Libanius LIX 70.

<sup>189</sup> Heliodorus IX 15. 3.

motionless that you would think them held fast by clamps of bronze.”<sup>190</sup> Interestingly, Tafazzoli cites a Pahlavi quote *Zēnagēn Ištēd pad čafār handām* (he is with armour on his four limbs),<sup>191</sup> but it is not possible to reference this specifically to the 4<sup>th</sup> century CE or other Sasanian eras.

Heliodorus<sup>192</sup> and Ammianus<sup>193</sup> describe Sasanian helmets of the 4<sup>th</sup> century as having been fitted with iron facemasks. The earliest known Sasanian depiction of four-segment (*Spangenhelm* types)<sup>194</sup> helmets have been discovered at Tappeh Yahya (c. 300s CE),<sup>195</sup> however this does not preclude the earlier existence of such helmets in Iran. The application of colors and motifs upon helmets may explain Ammianus’ description “Glittering helmets and bristling armor”<sup>196</sup> in reference to Šāpūr II’s armored cavalry lancers. Sasanian helmets were apparently functional (battlefield purpose) as well as possibly conveying rank and/or heraldry.

The scabbard slide sword continues to appear at least up the late 4<sup>th</sup> century with this depicted in the alcove relief of Šāpūr II and Ardašīr II (r. 379-383)<sup>197</sup> at Tāq-e Bostān (Fig. 31). Armenian historian Tiratsian,<sup>198</sup> cites the swords of mid 5<sup>th</sup> century CE Sasanian cavalrymen as having used three types of blade weapons: (1) *Tour* (Armenian: Sasanian short sword) (2) *Sousser* (Armenian: Sasanian long sword) often portrayed in Sasanian metalworks and rock reliefs<sup>199</sup> and (3) *Nran* (Armenian: Iranian dagger attached to the warrior’s thigh). A notable style of sword-combat technique known as the “Italian grip” seen in four Sasanian metalwork plates [*Kušānšāh* Bahrām II on

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<sup>190</sup> Amm. Marc. XXV 1. 12-13.

<sup>191</sup> TAFAZZOLI 1993: 193.

<sup>192</sup> Heliodorus IX 15. 1.

<sup>193</sup> Amm. Marc. XXV 1. 12.

<sup>194</sup> GRANCSAY 1963.

<sup>195</sup> FARROKH 2005: 10.

<sup>196</sup> Amm. Marc. XIX 2. 5.

<sup>197</sup> OVERLAET 2011.

<sup>198</sup> TIRATSIAN 1960.

<sup>199</sup> KHORASANI 2006: 87; MASIA 2000: 205.

horseback slaying a boar; Fig. 32) 4<sup>th</sup> CE portrayal of Šāpūr I slaying a deer (Fig. 33); 5<sup>th</sup>-7<sup>th</sup> century CE depiction of an unknown king [Bahrām Gōr? (r. 420-439 CE)] slaying a Lion (Fig. 34); 4<sup>th</sup> century CE portrayal of Šāpūr III on foot slaying a leopard<sup>200</sup> entailed wielding the sword entailed with the forefinger around the sword's quillons resulting in increased efficiency in fencing and thrust. There were also two-handed swords as indicated by the sample housed at Tehran's Museum of Iran<sup>201</sup> measuring at 116.5 cm (sword blade with its reinforcement on forte, handle at 31 cm).<sup>202</sup>

One of the assault tactics deployed during the Sasanian era is the three-wave attack implemented at the Battle of Nisibis in 350 CE (Fig. 53).<sup>203</sup> Julian reports the first wave as having been lance-bearing armored cavalry followed by archers who would be (the third wave) of another contingent of armored cavalry lancers.<sup>204</sup> The "archers" were presumably mounted to keep pace with the armored cavalry. The primary advantage of this tactic was that it forced defending infantry to rapidly "switch" their tactics in order to adapt to each type of (lance or missile) assault. Cavalry forces were also deployed in siege operations, notably at Amida in 359 CE.<sup>205</sup> In this operation, Albanian cavalry was stationed to the north of Amida, the Sakas of Sakastān/Sistān to the city's West, and the Chionites to the east. Šāpūr II and his "royal escort" of elite cavalry situated to the south of the city are reported as having made several assaults towards Amida's gates.<sup>206</sup> Šāpūr II's "royal escort" may have been prestige unit known as the *Puštigbān* (Pahlavi: life guardians) led by *Puštigbān-Sardār*<sup>207</sup> and who was

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<sup>200</sup> Hermitage Museum, St. Petersburg inv. no. S-42.

<sup>201</sup> Iran Bastan Museum inv. no. 1574/7999.

<sup>202</sup> KHORASANI 2006: 98.

<sup>203</sup> MAROTH 1979; LIGHTFOOT 1988.

<sup>204</sup> Julian, *Orationes* III 11-13.

<sup>205</sup> LIGHTFOOT 1989; WÓJCIKOWSKI 2015: 221-226.

<sup>206</sup> Amm. Marc. XIX 1.

<sup>207</sup> FARZIN 1387/2008: 104.

considered as one of the honored intimates of the *Šāhānšāh*'s entourage.<sup>208</sup> Foss proposes that officers of this unit were identified as *Puštigbān-Sālār*.<sup>209</sup> The commander of this unit may have also been known as the *Hazārbed* (commander of one thousand) cited previously and possibly escorted the king during battles.<sup>210</sup>

It is possible that Ammianus Marcellinus' report of the "Royal Escort" escorting Šāpūr II during his attacks towards the gates of Amida in 359 CE may have been the *Puštigbān*. While it is not clear however when exactly this unit had been formed, one possibility may be traced to Šāpūr II's campaign which expelled Arab nomads invading southern Iran to the Arabian Peninsula.<sup>211</sup> In reference to that campaign Ṭabarī describes Šāpūr II as having "he selected one thousand cavalrymen from among the stoutest and most heroic of the troops".<sup>212</sup> The middle era of Sasanian cavalry development appears to have gradually ended with the *Spāh*'s defeat and death of king Pērōz against the Hephthalites in 484 CE.<sup>213</sup>

#### **Late Sasanian cavalry (c. 490s/early 500s - 651 CE)**

The final phase of Sasanian cavalry development may be broadly traced from the late 5<sup>th</sup>-6<sup>th</sup> century CE (i.e. reigns of Kawād, Xusrō I) during which Sasanian weaponry underwent changes, with notable Central Asian Turco-Hun influences to the time of the Arab conquests in 636-651 CE. The military reforms of the 6<sup>th</sup> century CE ascribed to Xusrō I appear to have resulted in changes to military equipment. Another possible influence with respect to changes in military equipment may have been the result of the *Spāh*'s military experiences against nomadic Central Asian warriors, notably the Hephthalites in the 480s CE.<sup>214</sup> Changes to military equipment are evident in the phasing out

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<sup>208</sup> TFAZZOLI 2000: 12.

<sup>209</sup> FOSS 2002: 170.

<sup>210</sup> MATUFI 1378/1999: 203.

<sup>211</sup> DARYAEE 2009: 16-17.

<sup>212</sup> Ṭabarī 838.

<sup>213</sup> Ṭabarī 873.

<sup>214</sup> MICHALAK 1987: 83.

of the scabbard slide system for swords in favor of lappet suspension technology. This new method entailed the use of straps suspended from the belt and fastened to the sword sheath allowing the warrior to adjust the suspension angle of his weapon instead of having it hang perpendicularly to the ground. Examples of late Sasanian swords featuring this technology include the discovery of late Sasanian swords (6<sup>th</sup> or early 7<sup>th</sup> centuries CE) featuring P-mounts for lappet suspension systems (Fig. 35-38).<sup>215</sup>

The Tāq-e Bostān warrior with his new equipment was essentially the late type of cavalryman often cited as the “composite” type entering service by the 6<sup>th</sup> century CE.<sup>216</sup> This composite cavalryman was combined several combat functions by being trained in the use of lances, archery equipment, and swords, axes and maces for close quarter combat (Fig. 39-41).<sup>217</sup> Other changes to cavalry military equipment include a new type of composite helmet (i.e. mail coif, helmet with ocular visor, metal facemask replaced with mail suspended from ocular areas, spherical spangen/segmented design, etc.) as seen at Tāq-e Bostān with respect to the seated “mage of Xusrō” (Fig. 42-43) and the armored cavalryman within the vault or *ayvān*.<sup>218</sup> Late Sasanian *spangenhelm* (segmented construction) helmets dated to the late 6<sup>th</sup>-early 7<sup>th</sup> century CE display a distinct “feather/scale” decorative motif (Fig. 44).<sup>219</sup>

It would appear that military equipment of various units in the northeast and south could vary in accordance with local technological variations. For example, military units of the *kust ī nēmrōz* (Southern, Southeast district facing the Persian Gulf) most likely had segmented, *Spangenhelm* and ridge helmets also

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<sup>215</sup> Louvre Museum, Paris inv. no. MAO. 423 and inv. no. AO. 25534; Romano-Germanic Central Museum, Mainz inv. no. 037985 and inv. no. 379386; Royal Museums of Art and History, Brussels inv. no. 1315.

<sup>216</sup> BIVAR 1972: 290; COULSTON 1986: 63; FARROKH, KHORASANI 2009: 39.

<sup>217</sup> FARROKH, KHORASANI 2010: 36-41.

<sup>218</sup> FARROKH, KARAMIAN, KUBIK, TAHERI OSHTERINANI 2017.

<sup>219</sup> Royal Museum of Art and History, Brussels inv. no. 1315; Romano-Germanic Central Museum, Mainz inv. no. 38823; Los Angeles County Museum of Art, LACMA M.76.174.149.

seen at the *kust ī xwarbārān* (Western districts) and the *kust ī Ādurbādagān* (North/Northwest and/or Azerbaijan district), alongside a possible local “southern” variation of the one-piece helmet type. Units of the *kust ī xwarāsān* (northeast district facing Central Asia) were most likely equipped with helmets bearing Soghdian and Central Asian influences resulting in local *spangenhelm*, segmented type variations.

The contrast between early and late/post-Sasanian military gear is evident when comparing the plates of Šāpūr II from the 4<sup>th</sup> century CE (Fig. 45) and the early post-Sasanian plate (late 7-early 8<sup>th</sup> centuries CE) of Pur-i Vahman (Fig. 46). At first glance the plates appear to similar as both plates depict riders engaged in the Parthian shot against a pursuing lion. Despite this apparent parallel between the plates, the two items diverge markedly with respect to weapons suspension, archery techniques and equestrian equipment. Both Šāpūr II and Pur-i Vahman have their swords suspended on their left sides, however their systems of suspension are markedly different. Šāpūr II’s sword is suspended with the scabbard slide in contrast to Pur-i Vahman’s sword which is suspended with the more efficient Central Asian style lappet system. Pur-i Vahman’s quiver is suspended along his right side and most likely utilizes the lappet system. The quiver of the late Sasanian armored cavalryman inside the vault at Tāq-e Bostān vault for example, employs the lappet suspension system. The contrast between the plates with respect to equestrian technology and archery styles are discussed later in this book.

Another visual source of late Sasanian heavy cavalry is provided by the *Spāhbedan* bullae where heavily armored warriors are depicted on mounts covered with the bardings (Fig. 2-4).<sup>220</sup> The exact types of their armament are difficult to define due to the small size of the depictions however it is possible to notice scale or chain-mail armor covering the bodies of the riders and probably lamellar protection of the mounts which corresponds with the sculpture of the rider

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<sup>220</sup> GYSELEN 2001b; GYSELEN 2007; SKUPNIEWICZ 2017b.

in Ṭāq-e Bostān. Two of the late Sasanian capitals exhibited in Ṭāq-e Bostān museum show the personages in armors consisting of mail and solid plate and wearing hemispherical helmets. Although they are not depicted on horseback, their rich armament and lavishly decorated clothing associate them with the elite warriors i.e. cavalry (Fig. 42-43).<sup>221</sup>

The Kulagysh plate (excavated in Perm province, Russia) dated to the 6<sup>th</sup>-8<sup>th</sup> century CE provides detailed depictions of Sogdian and/or northeast Iranian equipment such as swords, archery equipment, lances, mace, small shields, lamellar armor, mail “shirts” with long sleeves, as well as bronze or hard-leather armor (Fig. 47). Further information on Sogdian cavalry equipment is provided on the wall painting from the reception hall (VI-1 and VI-41) in the Palace of Panjikant (7<sup>th</sup>-8<sup>th</sup> centuries CE) such as framed helmets of segment construction with nasal pieces (Fig. 48), decorations and finials, mail for the neck and shoulders, face mail (like the Ṭāq-e Bostān warrior (Fig. 41).

The *Strategicon* military manual, most likely written in the late 6<sup>th</sup> century to early 7<sup>th</sup> century CE<sup>222</sup> (reports of *Spāh*'s military formations as being composed of three sections, a left wing, center and right wing.<sup>223</sup> The *Uyūn al-Akhbār* reports of specific battle rules for troops placed in the right, center and left positions of the *Spāh*, commencement of battles, numerical factors, assessment of troops' experience, climate-geography and water supply.<sup>224</sup> Pigulevskaya's analysis of the *Uyūn al-Akhbār* provides a four-point summary of Sasanian tactics:<sup>225</sup> (1) cavalry would be stationed ahead of the infantry prior to the attack (2) cavalry would either initiate the attack or part to the left and right for the combat infantry to being the assault (3) the center or “heart” (preferably placed in an elevated

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<sup>221</sup> SKUPNIEWICZ 2017a.

<sup>222</sup> DIGNAS, WINTER 2007: 66.

<sup>223</sup> *Strategicon*, XI 1.

<sup>224</sup> Dinawarī, *Uyūn al-Akhbār*, 191-192.

<sup>225</sup> PIGULEVSKAYA 1354/1975: 127.

position)<sup>226</sup> and right wing would join the cavalry in the attack but would then return to their original positions (4) the left wing (cited as “the direction of the shield” in the *Chronicon Anonymum*)<sup>227</sup> was primarily defensive,<sup>228</sup> especially against flanking attacks, entering battle only when under extreme circumstances (Fig. 54). The *Strategicon* reports of 400-500 “selected men” (elite cavalymen?) placed in the center with the *Spāh* generally lining up the cavalry in each unit in the first and second lines.<sup>229</sup> As the rear of the formation was considered essential to the force’s integrity, experienced troops would also placed in this position.<sup>230</sup> Procopius notes that the Sasanians preferred to attack around mid-day or slightly after, despite having drafted their battle plans earlier in the dawn.<sup>231</sup> A portion of the forces were apparently kept in reserve during the battle, to be committed as the commander deemed necessary as occurred for example during the Battle of Dārā (530 CE) when the elite immortal cavalry contingent was committed to the engagement.

Like the aforementioned Immortals and *Janvespar*, elite cavalry units continue to be cited into the late Sasanian era, notably the *Khosroēgetai* and *Perozitai* during Xusrō II’s wars against Byzantium.<sup>232</sup> The *Gund Šāhānšāh* (army of the king of kings) may have appeared by the late 6<sup>th</sup> century CE, however the term may also be a generic one in reference to all elite royal units designated for defending the throne. Interestingly a 4000-man unit of Deylamites infantry (see below) is cited as the bodyguard of Xusrō II, but prior to this such a unit would most likely have traditionally been elite cavalry, such as the 12,000 man force led by Bahrām Čōbīn against a Turkish invasion in 588-589 CE.

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<sup>226</sup> Dīnawarī, *Uyūn al-Akhbār*, 112.

<sup>227</sup> *Chronicon Anonymum*, XXII.

<sup>228</sup> INOSTRANCEV 1926: 13.

<sup>229</sup> *Strategicon*, XI 1.

<sup>230</sup> FARZIN 1387/2008: 21.

<sup>231</sup> Proc. *Bell.* I 14; II 18.

<sup>232</sup> Theophanes A.M. 6115.

## Infantry

The Parthian predecessors of the Sasanians did not rely in infantry as a primary battlefield support for their cavalry.<sup>233</sup> In contrast to the Parthian *Ispāδ* (army), the Sasanian *Spāh* maintained a professional infantry force. The *Paygān-Sālār* would be the commander of the Sasanian infantry unit,<sup>234</sup> with Kolesnikoff highlighting the importance of such units for the *Spāh*.<sup>235</sup> The *Paygān-Sālār* (commander of the infantry) is commonly identified as having been ranked second in status by the *Spāh* in comparison to the *Framādār Savārān* (commander of *Savārān* cavalry).<sup>236</sup> Inducing from primary sources, Jalali categorizes Sasanian infantry forces into three general classifications:<sup>237</sup> (1) the heavily armed and armored *Paygān*, with a subdivision of *Nēzak-Dārān* (spearmen) (2) lightly armed infantry or peasant levies and (3) foot archers. Another category of infantry forces whose military role became significant, especially from the 6<sup>th</sup> century CE were the Deylamites of Northern Iran. *Paygān* unit(s) were stationed in each of the empire's provinces under the authority of local regional commanders. The *Paygān-Sālār's* infantry corps' primary duty during peacetime was the provision of internal security (somewhat like policing) for cities, towns and rural regions.<sup>238</sup> These could act as "gendarmes" or security forces on behalf of the regional commander for maintaining law and order.<sup>239</sup> Descriptions dated to late Sasanian times with respect to the prison of Dastegerd suggest that the *Paygān-Sālār's* office was also entrusted to act as warden of prisons.<sup>240</sup>

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<sup>233</sup> MIELCZAREK 1993: 55.

<sup>234</sup> FOSS 2002: 170.

<sup>235</sup> KOLESNIKOFF 1357/1978: 122.

<sup>236</sup> NAFISI 1331/1952: 277.

<sup>237</sup> JALALI 1382/2003: 15.

<sup>238</sup> JALALI 1383/2004: 113.

<sup>239</sup> SAMI 1342/1964: 70.

<sup>240</sup> *Die mittelpersischen Papyri* no. 12; FOSS 2002: 170; SÄNGER 2011.

Excepting the Deylamites in general, classical sources such as Procopius<sup>241</sup> have often provided negative assessments of Sasanian infantry combat performance. These assessments have been challenged by Howard-Johnston<sup>242</sup> who cautions against overreliance on primary sources such as Ammianus Marcellinus' dismissal of the 4<sup>th</sup> century CE Sasanian infantryman as a poorly equipped serf.<sup>243</sup> However, as discussed below there are also descriptions of *hoplite* and even "gladiator" type infantry. While Roman infantry forces were often able to prevail against their Sasanian counterparts.<sup>244</sup> Ward notes that Sasanian infantry were nevertheless a professional and well-trained force.<sup>245</sup>

### *Paygān*

The term *Payg* (foot-soldier; Arm. *Payik*)<sup>246</sup> has been challenging to discern as this fails to definitively ascertain if this is specifically describing the poorly trained and lightly armed peasant levies recruited at wartime in contrast to the heavily armed, armored and professionally trained combat infantry troops. This may explain the divergences in interpretation among researcher with respect to *Paygān*. Penrose<sup>247</sup> for example avers that Roman sources often confused professional Sasanian infantry and the poorly armed and trained peasant levies as one single force, when in practice they were separate services.

Iranian historians also diverge with respect to the role (battlefield combat vs. support levies) and equipment (weapons, armor) of the *Paygān*. Sasanologist Daryaee describes the *Paygān* as being lightly armed with spear only and (for battlefield protection) having a shield but no armor.<sup>248</sup> Diverging from Daryaee's

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<sup>241</sup> Proc. Bell. II 14.

<sup>242</sup> HOWARD-JOHNSTON 1995: 75.

<sup>243</sup> Amm. Marc. XXXIII 6. 8.

<sup>244</sup> SIDNELL 2006: 73.

<sup>245</sup> WARD 2009: 31.

<sup>246</sup> TAFAZOLLI 2000: 13.

<sup>247</sup> PENROSE 2008: 258.

<sup>248</sup> DARYAEE 2009: 46.

analysis, Sasanian military historians Jalali<sup>249</sup> and Sami<sup>250</sup> define the *Paygān* as having been the *Spāh*'s standard professional heavy infantry until the recruitment of the Deylamites in the later Sasanian era (discussed below). An indication of the *Paygān*'s professional status is provided by their registration on the state's rolls allowing them to be paid (like the *Aswārān* cavalry) for their military services to the empire.<sup>251</sup>

The *Paygān*'s tasks on the battlefield were to support the cavalry and elephants corps as well as protecting the lightly armored and armed foot archers and light infantry (often peasant levies).<sup>252</sup> Heavy professional infantry of this type was evidently in the *Spāh*'s service from the earliest times of the empire, especially during Šāpūr I's campaigns against Roman-held regions of the Middle East.<sup>253</sup> Archaeological expeditions at Dura Europos, notably the excavations by a French-American team that discovered remains of a fallen Sasanian trooper at the site's Tower 19 allows for a reconstruction of the equipment of early Sasanian soldiers (probably infantry too) as they would have appeared the 3<sup>rd</sup> century CE. The trooper's equipment are summarized as follows: (1) a short sleeved "T-shirt" of mail reaching to the trooper's hips (2) a wickerwork shield (Achaemenid-style construction) and (3) a two piece ridge helmet which were possibly also used by cavalry. The *Paygān*'s typical close quarters combat gear, are described by Zoka<sup>254</sup> and Hekmat<sup>255</sup> as sword, dagger and mace (Mid. Pers. *warz*<sup>256</sup>). Ziapour has also proposed that the *Paygān* wore leg armor of the metal (or hardened) lamellar type that would have been worn over leather

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<sup>249</sup> JALALI 1382/2003: 15.

<sup>250</sup> SAMI 1342/1964: 62.

<sup>251</sup> HOWARD-JOHNSTON 1995: 219.

<sup>252</sup> JALALI 1383/2004: 37.

<sup>253</sup> KETTENHOFEN 1982.

<sup>254</sup> ZOKA 1349/1970: 140.

<sup>255</sup> HEKMAT 1342/1964: 1089.

<sup>256</sup> DOOSTKHAH 2002.

trousers.<sup>257</sup> The Romans held the overall advantage over the Sasanians in infantry warfare, however as noted by Lee the *Spāh* was often able to counterbalance this by deploying their highly effective *Savārān* cavalry lancers as well as their proficiency in siege warfare.<sup>258</sup>

### *Hoplites, Murmillos or Paygān?*

By the time of Šāpūr II, notably by the years prior and during Emperor Julian's (reign as sole Augustus, 361-363 CE) invasion of the Sasanian Empire in 363 CE, the *Spāh* was reportedly fielding a new type of infantry described as "*hoplites*" notably at the siege of Nisibis in 350 CE.<sup>259</sup> Ammianus reports of a similar reference to Sasanian infantry during Julian's invasion being: "armed like *Murmillos* [a type of Roman armored gladiator]".<sup>260</sup> No other details are however provided with respect to these "Sasanian gladiators" in terms of their armor, shields or weaponry. One possibility is that these were a contemporary version of the earlier Dura Europos type infantry, but this assumption requires corroboration by the excavation of archaeological data. Another possible and related hypothesis is that the Sasanians may have been developing a "heavier" version of infantry in tandem with the heavier cavalry forces, notably with respect to the requirement that the trooper have exceptional physical strength. This would be consistent with the *murmillos* or "*hoplite*" concept that the warrior needing to have powerful arms, shoulders, torso and legs enabling to wield a heavy shield and powerful sword. Ammianus however does not provide specific details on the Sasanian *murmillo*, which leads to the question of whether the armaments and armor of the Sasanian *murmillos* were Roman or Sasanian? The Roman *murmillo* had his right arm protected with manica of tied linen with his left leg protected by a short grave.<sup>261</sup> This type of partial protection

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<sup>257</sup> ZIAPOUR 1349/1970: 286.

<sup>258</sup> LEE 2009: 4.

<sup>259</sup> Julian, *Orationes* III 11.

<sup>260</sup> Amm. Marc. XXIII 6. 83.

<sup>261</sup> WIEDEMANN 1992: 41.

would have left the Sasanian *murmillo* highly vulnerable to the Roman infantryman (most likely aware of gladiatorial combat techniques)<sup>262</sup> who could exploit the (unprotected) left arm and right leg of his opponent. It would appear more likely that the *Spāh* would have equipped their infantry *murmillos* with armor, conceivably a mixture of mail worn over lamellar for protection of the torso, with the arms and hands possibly shielded with ring armor or gauntlet respectively. The legs in turn may have also been possibly shielded by ring armor or greaves. For shielding the Roman *murmillo* was equipped with the standard *Scutum* shield, however it is improbable that the Sasanian *murmillo* would have used this given its heavy weight (approximately 10 kilograms)<sup>263</sup> in comparison to the lighter but stout wickerwork shield of the Dura Europos type also adopted by Europe's Germanic tribes.<sup>264</sup> It is also more likely that the Sasanian *murmillos* would have been using the standard Sasanian scabbard slide swords of the 4<sup>th</sup> century CE that were on average 1-1.11 m in length in comparison to the Roman trooper's *Spatha* featuring an average length of 64-81 cm.<sup>265</sup>

The *Paygān* were often positioned to the rear of the *Aswārān* cavalry,<sup>266</sup> with available sources reporting on two types of combined infantry-cavalry battlefield tactics. One of these is the account of the Battle of Singara (348?) by the *Chronicon Anonymum*,<sup>267</sup> (1) the *Aswārān* would charge towards enemy lines followed closely behind by the infantry (or *murmillos*, *hoplites*?), however (2) as the *Aswārān* approached closer to the enemy appearing as if they were about to engage they would instead part in two groups, one moving to the left and the other to the right in order to (3) allow the infantry following from behind to now approach and engage the enemy front lines (Fig. 55). The intention of this technique was to confuse the enemy as to the types of countermeasures to use as just as they braced

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<sup>262</sup> COULSTON 1998.

<sup>263</sup> SABIN, VAN WEES, WHITBY 2007: 196.

<sup>264</sup> BOSS 1993: 25, 56, 66, Fig. 14-18; BOSS 1994: 20-25.

<sup>265</sup> Vegetius II 15.

<sup>266</sup> SAMI 1342/1964: 62.

<sup>267</sup> *Chronicon Anonymum*, XXXVI.

themselves for the anticipated armored mounted lancers they would be forced to confront an infantry assault instead.

### Deylamites

By the 6<sup>th</sup> century, notably during the reign of Xusrō I, the *murmillos* or *hoplite* infantry had been replaced with the Deylamites from northern Iran. Possibly the most effective close-quarters combat Sasanian infantry force,<sup>268</sup> Deylamite combat equipment included swords, shield, the *Tabarzin* (battle-axe),<sup>269</sup> slings, daggers, pikes<sup>270</sup>, as well as two-pronged *Zhūpīn* javelins used for “thrusting and hurling”.<sup>271</sup> Overlaet’s comprehensive survey of archaeological excavations in northern Iran reveal Deylamites equipment as identical to prestige cavalry units with respect to *Spangenhelm* helmets, archer fingercaps and late-Sasanian swords<sup>272</sup> of the lappet-suspension type which in comparison to earlier (scabbard-slide) swords, would not drag on the ground during foot marches. Overlaet also reports of regalia such as gold ornaments, belt decorations, strap mountings etc. virtually identical to that of the *Aswārān* /cavalry corps and Sasanian nobility,<sup>273</sup> perhaps indicative of the higher level of military prestige of the Deylamites in comparison to their earlier infantry predecessors. Xusrō II for example reportedly had a detachment of Deylamites serving as his personal bodyguard.<sup>274</sup> Deylamite units militarily distinguished themselves against Romano-Byzantine forces in the Caucasus at Lazica (522 CE),<sup>275</sup> the Yemen campaign of Wahriz (c.570s CE),<sup>276</sup> and battles against the forces of Justin II (r. 565-578 CE)<sup>277</sup> and against the Muslims at the Battle of Qadissiyah (637 CE) with

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<sup>268</sup> MOBBAYEN 1386/2007: 109-112, 115.

<sup>269</sup> MATUFI 1378/1999: 439.

<sup>270</sup> Agathias III 17.

<sup>271</sup> OVERLAET 1998: 268.

<sup>272</sup> OVERLAET 1998: 278-297.

<sup>273</sup> OVERLAET 1998: 267-277.

<sup>274</sup> Balādhurī 282.

<sup>275</sup> Proc. Bell. VIII 14. 9-16.

<sup>276</sup> Ṭabarī 958; NÖLDEKE, 1352/1973: 167; SKUPNIEWICZ 2016b.

<sup>277</sup> Photius, *Bibliotheca* 64.

4000 of these then joining the Muslims following the Sasanian defeat.<sup>278</sup>  
The Deylamites however resisted the invasions of the Caliphates into their territories in northern Iran, remaining unconquered until at least the 8<sup>th</sup> century CE.<sup>279</sup>

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<sup>278</sup> FARROKH 2007: 269.

<sup>279</sup> Isfandiyār 99, 106-107, 132, 149, 164, 166-167, 169, 171-172, 177, 179, 181-185, 187-188, 190, 196, 205, 207, 213, 219, 223, 226, 229-230, 233, 238, 246, ; MATUFI 1378/1999: 303.

## Archery

The skill of Parthian and Sasanian archery has been acknowledged by a number of Classical sources, such as Strabo,<sup>280</sup> Herodian,<sup>281</sup> Ammianus Marcellinus,<sup>282</sup> Procopius<sup>283</sup> and the *Strategicon*.<sup>284</sup> Sasanian archery served four functions for the *Spāh*: (1) support of *Savārān* lance thrusts (2) repelling enemy infantry and/or cavalry assaults (3) support of siege operations against enemy fortresses and cities and (4) support of counter-siege operations against enemy besiegers attempting capture Sasanian (and/or Sasanian-held) cities and fortresses. Discussed in this section is the role of foot archers, horse archery as well as different missile (arrow and dart) and propulsion (bow, *Panjagān*, *nawak*) systems utilized by the Sasanians.

### Foot archers

The *Tirbad* (arrow commander) was the leader of a contingent of archers, with the term also signifying a regional command term as *Tirbad* units often acted as government security forces in the empire's villages. Foot archer units were integral to Sasanian battle doctrine, often bombarding enemy formations from a static position<sup>285</sup> with massive missile salvos in set-piece battles.<sup>286</sup> Expert archers could form elite units and were evidently accorded a high status in the *Spāh*. In set-piece battles, foot archers would deliver missile barrages into the enemy ranks to weaken them prior to the attacks of armored cavalry lancers. Foot archers were also entrusted with the suppression of enemy archery as well as defending the main army against enemy cavalry and infantry attacks. Depending on the commander's tactical choices, foot archers could also advance forward to bombard the enemy with

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<sup>280</sup> Strabo XV 3. 18.

<sup>281</sup> Herodian VI 5. 1-6.

<sup>282</sup> Amm. Marc. XXV 1. 13.

<sup>283</sup> Proc. *Bell.* I 18.

<sup>284</sup> *Strategicon*, XI 1.

<sup>285</sup> HEKMAT 1342/1964: 1088.

<sup>286</sup> ZAKERI 1995: 51.

massive missile volleys.<sup>287</sup> For shielding against enemy counter-archery, foot archers often placed large palisades to their front.<sup>288</sup>

Siege operations often relied heavily on foot archers with Ammianus noting of a “shower of missiles from the archers” during the siege of Amida (359 CE).<sup>289</sup> Expert archers could also be used for the infiltration of besieged fortresses and cities. This occurred also at Amida when seventy royal archers infiltrated one of the city’s towers.<sup>290</sup> The archers then directed their arrows into the city with accurate fire into the city’s interior in coordination with Šāpūr II’s general assaults outside of Amida. The besieged Roman forces however eliminated the small infiltration force once their arrow supplies were exhausted.

There were a number of different methods for shooting arrows<sup>291</sup> with the most common technique apparently having been the traditional Sasanian draw as seen with the metalwork plate at the Hermitage museum depicting Pērōz (r. 459-484 CE).<sup>292</sup> This entailed pointing the index finger in the forward position parallel to the arrow with the little finger parallel to the index finger (or pointing at an angle downwards). It is possible that the thumb was placed next to the index finger on the inside of the bow. By late Sasanian times there was the Mongolian draw having the thumb locked around the bowstring that is blocked by the index finger. This was most likely introduced to the Sasanians by their military encounters with the Hephthalites and Turkic peoples of Central Asia.

The foot archer suspended a buckler from his shoulder for the protection of his head and neck.<sup>293</sup> Nevertheless foot archers were very vulnerable if caught at

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<sup>287</sup> ZAKERI 1995: 51.

<sup>288</sup> JANDORA 2010: 107.

<sup>289</sup> Amm. Marc. XIX 5. 1; XXIII 6. 83; XXIV 6. 18.

<sup>290</sup> Amm. Marc. XIX 5. 5.

<sup>291</sup> MATUFI 1378/1999: 443.

<sup>292</sup> Hermitage Museum, St. Petersburg inv. no. S-216.

<sup>293</sup> INOSTRANCEV 1926: 25, note 3.

close quarters after exhausting their supplies of arrows, as they lacked the countermeasures necessary to repel enemy infantry attacking their positions. For this reason, combat infantry would often be placed to the rear of the archers at the onset of the battle.<sup>294</sup> The (arrow-less) archers would relocate to the rear of the combat infantry, who having moved to the front, would now be engaging the attacking enemy troops.<sup>295</sup>

### Archery equipment

The (foot and horse) archer's equipment consisted of the bow and bowcase (Mid. Pers. *kamām*), a wide variety of arrows, quiver and finger guards (to reduce pressure on the fingers when drawing the heavy compound bow). The composite bow's ability to efficiently convert potential (stored) energy to kinetic (propulsion) energy facilitated the *Spāh*'s doctrine of firing missiles towards the enemy from a safe distance. The power of the compound bow was the result of its construction with different combinations of wood (i.e. cornus, mulberry, etc. at the bow's core), various types of horn, sinew and glue.<sup>296</sup> Bows were conventionally held by the left hand with the right used to fire the arrows. Left-handed and ambidextrous archers were also highly valued for their efficacy in firing in both left (especially against flanking attacks) and right directions.<sup>297</sup> Following the reforms of the 6<sup>th</sup> century CE, Sasanian bows acquired more Hun-Avar type features such as shorter ears, longer and (possibly) wider limbs.<sup>298</sup> In practice the Sasanians appear to have built different bow types to meet different (battlefield) requirements.<sup>299</sup> Bow construction also varied in accordance with raw materials available from different geographical regions.<sup>300</sup>

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<sup>294</sup> HEKMAT 1342/1964: 1088.

<sup>295</sup> PENROSE 2008: 258.

<sup>296</sup> PATERSON 1966: 70.

<sup>297</sup> INOSTRANCEV 1926: 13, 25; INOSTRANCEV 1348/1969: 42-43.

<sup>298</sup> KHORASANI 2006: 291.

<sup>299</sup> MATUFI 1378/1999: 219, 443-447.

<sup>300</sup> KHORASANI 2006: 293.

Sasanian arrows (approx. 80-85 cm) generally had tanged arrowheads (in reference to finds at Dura Europos) as well as socketed arrowheads. Various arrows/arrowheads were designed for different battlefield tasks,<sup>301</sup> with the *Mehr-Yašt* reporting on a variety of these (e.g. iron-bladed, lead-poisoned, etc.).<sup>302</sup> An example of these is seen in the 7<sup>th</sup> Century CE Sasanian metalwork plate at the Hermitage Museum <sup>303</sup> depicting a camel-mounted Bahrām Gōr firing an arrow with a U-shaped head for locking the limbs of his hunted prey. There were maybe also *naphtha*-tipped incendiary arrows for sieges.<sup>304</sup> In general, heavier arrows for penetrating the armor of opponents were fired at shorter ranges with lighter arrows discharged over longer distances for harassment and disruptions of enemy formations, massive barrages, etc.<sup>305</sup> The total number of arrows carried in the quiver (*Tirdan*) was thirty, a tradition also reported in the *Avesta* texts.<sup>306</sup> Reforms implemented in the 6<sup>th</sup> century CE resulted in the adoption of the Central Asian lappet system discussed previously for sword suspension, for bows and quivers. The late Sasanian armored warrior at the *ayvān* at Tāq-e Bostān for example is depicted with his quiver suspended with lappets at his right side Bows could also be carried on the rider's shoulders as depicted at the stag hunt scene at Tāq-e Bostān (Fig. 49).

### Other missile systems

In addition to the traditional (compound) bow and arrow, the *Spāh* also deployed a number of other missile systems such as Libanius' reference to dart-type weapons<sup>307</sup> used by infantry. The *Savārān* cavalry used the *nawak* for launching darts (10-40 cm length), which as noted by Nicolle, was an "arrow-

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<sup>301</sup> TAFAZZOLI 1993: 193.

<sup>302</sup> *Mehr-Yašt*, X 129.

<sup>303</sup> Hermitage Museum, St. Petersburg inv. no. S-252.

<sup>304</sup> The Iranian defenders of Petra used burning oil to destroy the battering-rams of the Roman besiegers. Proc. *Bell.* VIII 11.36.

<sup>305</sup> MILLER, MCEWEN, BERGMAN 1986: 189.

<sup>306</sup> *Vendīdād*, XIV 9.

<sup>307</sup> Libanius LIX 69.

guide held against the bow to form a temporary crossbow".<sup>308</sup> Advantages afforded by the nawak-dart were greater range than regular arrows, difficulty to detect by the enemy when nawak-propelled dart was in flight, more effective penetration and the enemy's inability to fire back the dart with regular archery. There was also a device described by the *Ā'in-nāmeḥ* as being capable of firing five arrows simultaneously,<sup>309</sup> however its' exact characteristics are challenging to decipher. The term for this weapon in Arabo-Muslim sources such as Ṭabarī,<sup>310</sup> Jāḥiẓ,<sup>311</sup> and Maqdisī<sup>312</sup> is derived from the Persian word *panjagān*. Tafazzoli's analysis of Middle Persian military terminology leads him to conclude that the *Panjagān* was "a kind of arbalist"<sup>313</sup> for firing five arrows, raising the possibility that this may have been a cross-bow type weapon as opposed to Boss' suggestion that this was an archery technique for rapidly firing five arrows in succession.<sup>314</sup>

### Horse Archery

Professional Sasanian cavalry, notably of the late composite type, were adept at firing missiles at full gallop from either their left or right sides, enabling them to direct their arrows against enemies pursuing them and even when retreating (see Parthian Shot further below).<sup>315</sup> Archery was certainly critical to the *Savārān* who are reported by Ṭabarī as having had two spare bowstrings as part of their standard equipment.<sup>316</sup> Like the preceding Parthian dynasty, horse archery was one of the *Spāh*'s vital military assets from the outset of the Sasanian dynasty. Herodian for example attributes the destruction of Emperor Alexander Severus' invasion forces at the Battle of Ctesiphon (233 CE) to the effective horse

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<sup>308</sup> NICOLLE 1996: 24.

<sup>309</sup> INOSTRANSEV 1926: 51.

<sup>310</sup> Ṭabarī 955.

<sup>311</sup> Jāḥiẓ III 18.

<sup>312</sup> Maqdisī III, 193.

<sup>313</sup> TAFAZZOLI 1993: 191.

<sup>314</sup> BOSS 1993: 56.

<sup>315</sup> MICHALAK 1987: 81.

<sup>316</sup> BIVAR 1972: 276.

archery forces of Ardašīr I.<sup>317</sup> The pivotal role of horse archery in the *Spāh* may partly explain why a large proportion of excavated Sasanian metalworks to date frequently exhibit this martial form. The classification of Sasanian horse archery falls into four broad categories: forward shot, Parthian shot, horse archery with stirrups, and shooting arrows while riding backwards.

The first category (horse archery shooting forward) is depicted by at least ten officially recognized Sasanian metalwork plates currently housed in the Freer and Sackler Galleries of the Smithsonian Institution, Washington, D.C., Hermitage Museum in St. Petersburg, Arthur M. Sackler Gallery Exhibit in Washington, D.C., the Metropolitan Museum of Art in New York, the Arthur M. Sackler Gallery Exhibit in Washington, D.C., Bibliotheque Nationale in Paris, with another recently exhibited in a Sotheby's Antiquities Auction and on the Sasanian relief at Ragi Bibi.<sup>318</sup> All of these pictures feature a royal figure drawing a bow against prey with his quiver suspended to his right side. As noted previously swords were suspended to the left side with (possibly) seven of these plates showing a partly visible sword (note that two out of the five plates, Arthur M. Sackler Gallery Exhibit and Sotheby's, may be depicting partly visible swords however the artistic depictions in the plates are indistinct).<sup>319</sup>

The ability to deliver a large number of missiles within a short period of time from horseback was notable among the Sasanians.<sup>320</sup> This martial skill was inherited from the Parthians with Heath's studies having calculated the 10,000 Parthian horse archers at the battle of Carrhae (53 BCE) having delivered 1.6-2,000,000 in 20 minutes based on each horse archer's ability to fire an average of 8-10 arrows per minute (approx. 160-200 in twenty minutes).<sup>321</sup> These rates of fire are not unlike that of foot archers in general; Miller, McEwan and Bergman have

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<sup>317</sup> Herodian VI 5. 5-10.

<sup>318</sup> GRENET 2005.

<sup>319</sup> SKUPNIEWICZ 2015.

<sup>320</sup> Amm. Marc. XXV 1. 13.

<sup>321</sup> HEATH 1980: 44.

calculated the pre-Islamic West Asian/Near Eastern foot archer's average rate of fire of thirty arrows within three minutes.<sup>322</sup> Basing his analysis on the post-Islamic Amaj unit (approximating one eighth of a mile, or 220 yards) Houtum-Schindler defines the distance of a Persian shot as having been 150 meters.<sup>323</sup> Studies by the Royal Ordinance Small Arms Division in Enfield, United Kingdom calculate the average velocity of reed-shaft arrows fired from composite bows as ranging between 45-50 meters per second,<sup>324</sup> resulting in the average arrow travelling 3-3.3 seconds along a distance of 150 meters. The battle of the battle of Angl in Armenia (542 CE) is perhaps is the best known case of a Sasanian victory attributed to archery in which a 4000 man Sasanian force destroyed 30,000 Romano-Byzantine troops.<sup>325</sup> The Romano-Byzantine defeat in Angl is attributed to them having been caught a close quarters in an ambush by Sasanian archery.<sup>326</sup> The Sasanians had drawn the Romano-Byzantines into Angl's narrow streets<sup>327</sup> maximizing the speed and penetrating power of their archery at relatively close range.

The second category of horse archery is the Parthian shot in which the rider turns his torso backwards to shoot at opponents, as he rides away from them. The Parthian shot was often combined with the feigned retreat tactic from the Parthians. This tactic (Parthian-feigned retreat) was of utility in scenarios of impending defeat and the need to retreat. In this scenario the enemy could be lured into pursuit who would then be subjected to the Parthian shot. If this stratagem] succeeded in dislocating pursuing enemy troops, the *Savārān* would have the option of engaging in lance attacks or to close in with their close quarter combat weaponry (swords, axes, maces, etc.).<sup>328</sup> Six known depictions of the Parthian shot are depicted in Sasanian metalwork plates at the Hermitage Museum in

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<sup>322</sup> MILLER, MCEWAN, BERGMAN 1986: 188.

<sup>323</sup> HOUTUM-SCHINDLER 1888: 587.

<sup>324</sup> MILLER, MCEWAN, BERGMAN 1986: 179.

<sup>325</sup> MAKSYMUK 2015a: 68-71.

<sup>326</sup> STEIN 1949: 500.

<sup>327</sup> Proc. *Bell.* I 25. 1-35.

<sup>328</sup> MATUFI 1378/1999: 152.

St. Petersburg, the Cleveland Museum of Art, with displayed in a Sotheby's Antiquities Auction (another plate depicting the Parthian shot with stirrups is discussed further below). All six plates display a regal figure engaged in the Parthian shot on horseback. The scabbard slide sword (suspended on the rider's left side) is now fully visible (complete hilt and scabbard) as the rider is being displayed from his fully exposed left side as he pivots backwards to discharge his arrow (Parthian shot). This combat form was to endure for the entire tenure of the Sasanian dynasty.<sup>329</sup>

The contrast between the early Sasanian and the later Mongolian draw with respect to the Parthian draw is demonstrated in the aforementioned metalwork plates of Šāpūr II and Pur-i Vahman. At first glance the archery of Šāpūr II and Pur-i Vahman appear similar as both use their right hands to draw their bows and "point" with their index fingers towards the target. The two however diverge in how they draw their bows: Pur-i Vahman appears to use the Mongolian draw with Šāpūr II drawing his bow with the earlier Sasanian technique.

The third category of horse archery (and in this case cavalry in general) pertains to the question of stirrups. Stirrups significantly enhance rider stability, facilitating his delivery of more effective (horseback) arrow launches, lance charges and close-quarter combat (swords, maces, axes, etc.). Karantabias states that Sasanians cavalry did not employ stirrups based on his observation that the feet of rider (Xusrō II) inside the vault at Ṭāq-e Bostān do not rest on stirrups.<sup>330</sup> This observation cannot be verified as the rider's feet have broken off over time. In contrast, Michalak avers that despite partial damage to the Ṭāq-e Bostān warrior's feet, his leg position and settling in the saddle would suggest the existence of stirrups.<sup>331</sup> Herrmann observes that (1) the rider's lack of back

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<sup>329</sup> ALOFS 2015.

<sup>330</sup> KARANTABIAS 2005-2006: 30.

<sup>331</sup> MICHALAK 1987: 82.

support in his saddle support the possibility of stirrups and that (2) the hunting scene panels along the vault's ingress shows a cavalryman (Xusrō II?), whose riders' feet are positioned in a way that can only be consistent with the use of stirrups.<sup>332</sup> Non-stirrup riders seen in Sasanian rock reliefs such as Naqš-e Rostam and metalworks cited in this paper show riders with their feet pointed downwards (like a ballerina). There is also a Sunni Hadith citing the Prophet Muhammad's observations of the Persian usage of stirrups<sup>333</sup> that is significant given its chronological context, roughly corresponding with the protracted Sasanian-Byzantine war (603-628 CE). Pertinently, the discovery of iron stirrups dated to the late 6<sup>th</sup>-early 7<sup>th</sup> centuries CE in Iran's Marlik region <sup>334</sup> would suggest that the Sasanians had adopted stirrups at the time of Xusrō II or possibly earlier. Also of relevance is the late 6<sup>th</sup> or early 7<sup>th</sup> century CE silver-gilt plate discovered in Russia's Perm region which has a section depicting a regal cavalryman engaged in the Parthian shot whose foot rests perpendicularly on a slight bar resembling a stirrup.<sup>335</sup> The Pur-i Vahman metalwork plate provides a clear representation of stirrups much like a cavalryman displayed in a wall painting of a combat scene in a Sogdian palace (reception hall VI-41) at Panjikant (7<sup>th</sup>-8<sup>th</sup> centuries CE). Recall Šāpūr II's earlier plate whose horse lacks stirrups while has this technology, resulting in lesser equestrian stability than his later counterpart, Pur-i Vahman. Most recently an 8<sup>th</sup> century CE silver-gilt metalwork plate displayed at Sotheby's illustrates a nobleman with his feet positioned in a stirrup-like posture.

The fourth category of horse archery (firing arrows while riding backwards) is depicted in two Sasanian metalwork plates (dated c. 5<sup>th</sup> century CE) housed in the Iran Bastan Museum of Tehran<sup>336</sup> and the Azerbaijan Museum of Tabriz respectively and are believed (Fig. 50). This would appear counterintuitive, as riding

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<sup>332</sup> HERRMANN 1989: 771.

<sup>333</sup> NICOLLE 2005: 21.

<sup>334</sup> Romano-Germanic Central Museum, Mainz inv. no. 037985 and inv. no. 037986.

<sup>335</sup> Hermitage Museum, St. Petersburg inv. no. S-13.

<sup>336</sup> Iran Bastan Museum inv. no. 5108.

horses backwards is believed to have held a deleterious implication in Sasanian military culture. Procopius for example reports of General Pērōz Mehrān being forced to ride his horse backwards in front of Sasanian nobles and officers in a “humiliation” ceremony due to his poor military performance at the battle of Dārā (530 CE).<sup>337</sup> If riding horses backwards was a punishment, then why would this be depicted in metalwork plates? One hypothesis requiring further research is that the riding backwards punishment ceremony may have evolved later in the history of the Sasanian military, perhaps from the 6<sup>th</sup> century CE as reported by Procopius.

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<sup>337</sup> WHITBY 1994: 241.

## Elephant Corps

Battle elephants were utilized in set-piece battles, siege operations, and for logistic purposes (e.g. transport supplies).<sup>338</sup> In battlefield arenas, elephants were generally placed to the rear of front line troops, although this was not always the case.<sup>339</sup> In practice it would appear that a variety of tactical infantry-elephant formations did exist. Battle elephants' elevated platform allowed archers to more effectively fire arrows against enemy cavalry, infantry and troops in besieged fortresses.<sup>340</sup> In the latter case, elephants could also be used as a form of "living mobile tower" for firing arrows in conjunction with siege engines. In addition, elephants provided psychological support for the infantry with these also used to psychologically intimidate enemy troops inexperienced in elephant warfare.<sup>341</sup> The battle elephant also had two major liabilities. First, the battle elephant could rampage within Sasanian lines if stricken with panic, which led to the howdah being equipped with a dagger to sever the vertebrae of the beast with a knife in case it went out of control. Second, the eyes of the elephant could be targeted by enemy spearmen.

Western historians such as Charles have questioned the use of elephants in the early Sasanian armies of Ardašīr I and Šāpūr I.<sup>342</sup> Post-Sasanian sources such as the *Šāhnāmeḥ* of Firdawsī however, describe the armies of Ardašīr I as having deployed battle elephants that were placed at the front lines.<sup>343</sup> Battle elephants were certainly in operation in the armies of Šāpūr II (r.309-379 CE).<sup>344</sup> Julian also describes *hoplites* being deployed in tandem with Sasanian battle elephants following the defeat of the *Savārān*'s attacks during during Šāpūr II's siege

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<sup>338</sup> NAFISI 1331/1952: 22; ZOKA 1350/1971: 144; JALALI 1382/2003: 17; DMITRIEV 2014a; DMITRIEV 2014b; DARYAEE 2016b.

<sup>339</sup> *contra* RANCE 2003.

<sup>340</sup> ZOKA 1350/1971: 144.

<sup>341</sup> NAFISI 1331/1952: 22; JALALI 1382/2003: 17, 39.

<sup>342</sup> CHARLES 2007: 305-306.

<sup>343</sup> *Šāhnāmeḥ*, C. 1405.

<sup>344</sup> Theodoret I 11.

of Nisibis in 350 CE.<sup>345</sup> Sasanian infantry are reported as having been placed between the *Savārān* (at the front line) and the elephants (situated to the rear); this type of tactical formation failed to repel the advance of Julian during his initial stages of the (ultimately unsuccessful) invasion of the Sasanian empire.<sup>346</sup> Šāpūr II's elephants are described as having had iron towers manned with archers.<sup>347</sup> Possibly armored in reference to Ammianus' description of "gleaming elephants"<sup>348</sup> during Julian's invasion of Persia, Sasanian elephants reportedly operated in concert with the *Savārān*'s cavalry raids against Roman forces.<sup>349</sup> While battle depictions of Sasanian elephants are scant at this time, there is a metalwork plate housed at the Los Angeles County Museum of Art that displays Šāpūr II atop an elephant engaged in archery during the hunt (Fig. 51).<sup>350</sup> According to Socrates Scholasticus "the king of the Persians was leading a multitude of elephants against them [the Romans]"<sup>351</sup> who besieged Nisibis during the war in 421-422. Another (combat) display of Sasanian elephants is provided by the medieval Armenian painting of the battle of Avarayr (451 CE)<sup>352</sup> that shows the pachyderms being ridden by archers and sword armed warriors. Sasanian battle elephants continued service to the late Sasanian era, notably at the successful battle of the Bridges (636 CE)<sup>353</sup> and the comprehensive Sasanian defeat at Qaddisiyah (637 CE).<sup>354</sup>

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<sup>345</sup> Julian, *Orationes* III 11-13.

<sup>346</sup> Amm. Marc. XXIV 6. 12.

<sup>347</sup> Julian, *Orationes* III 12.

<sup>348</sup> Amm. Marc. XXV 1. 14.

<sup>349</sup> Amm. Marc. XXV 3. 2.

<sup>350</sup> The authenticity of the plate is questionable SKUPNIEWICZ (private correspondence with Maksymiuk).

<sup>351</sup> Socrates Scholasticus VII 18.

<sup>352</sup> MS 1620, 295b-296a; HEWSEN 1987.

<sup>353</sup> Mas'ūdī I: 665.

<sup>354</sup> Ṭabari 2267.

## Auxiliary Forces

Like the Roman and later Romano-Byzantines, the *Spāh* deployed various types of auxiliary and allied forces recruited from within the Sasanian provinces and outside the frontiers. Auxiliaries provided three benefits for the *Spāh*. The first was that these provided critical battlefield support in domains where the *Spāh* lacked sufficient personnel (light cavalry for skirmishing, slingers, etc.). Second, warriors who could otherwise join enemy armies (especially Romano-Byzantines) would instead be encouraged to enter Sasanian service.<sup>355</sup> The strategy of channeling tribal warriors' marital ardor (within and outside of Iran) for the benefit of Iranian armies continues into the Islamic era as attested to in the *Siyāsat-nāmeḥ*.<sup>356</sup> The third benefit of auxiliaries was in the arrival of new recruits, who by introducing new tactics and equipment could potentially enhance the *Spāh*'s overall military performance.

## Central Asia

As a major crossroads between Persia, China, and India Central Asia was an important region with respect to developments in military technology (i.e. equestrian equipment, lappet suspension systems, etc.) and cavalry warfare (esp. horse archery) tactics.<sup>357</sup> This made the region a valuable asset from early Sasanian times for the recruitment of high quality cavalry auxiliaries, especially light cavalry. The primary role of auxiliary light cavalry was to support the professional Sasanian armored lancers by attacking enemy lines at their flanks and exploitation, harassment and skirmishing raids behind enemy lines.<sup>358</sup> These types of light auxiliary cavalry were somewhat alike the horse archers of the previous Parthian dynasty who were lightly armored and armed by highly proficient in horse archery.

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<sup>355</sup> JALALI 1383/2004: 58-59.

<sup>356</sup> *Siyāsat-nāmeḥ*, 119.

<sup>357</sup> ALOFS 2015.

<sup>358</sup> JALALI 1383/2004: 36.

Auxiliary light cavalry could also utilize their horse archery to disrupt and scatter the enemy's light cavalry.<sup>359</sup>

Central Asian auxiliary recruits included the Iranic Kušans, and Hsiang-Nou, Turkic, Chionite, Hephthalite, etc., all of whom fielded high quality light cavalry.<sup>360</sup> The armies of Ardašīr I had contingents of Kušans and even some Chionites<sup>361</sup> with the latter present during Šāpūr II's siege against the Romans at Amida in 359 CE and also in Yazdgerd II's campaigns during the early 440s CE.<sup>362</sup> Recruitment of Central Asian contingents however could also prove double-edged, as the same auxiliaries could turn against the Sasanians and invade their empire. Pērōz had secured the assistance of the Hephthalites to help him wrest the throne in 459 CE<sup>363</sup> and then recruited them to help defeat the Central Asian Kidarites in 466 CE;<sup>364</sup> Kurbanov proposing 468 CE.<sup>365</sup> Soon after, Pērōz had to face the rising territorial ambitions of his erstwhile Hephthalite allies. The Hephthalites invaded the Sasanian Empire's northeast, defeating Pērōz in 474-475 CE and 476-477 CE,<sup>366</sup> to finally slay him and destroy his army in 484 CE.<sup>367</sup> Hephthalite power in Central Asia was finally broken after the implementation of a coordinated Sasanian-Turkish military campaign in 557-558 CE.<sup>368</sup>

### The Caucasus

Armenian armored cavalry exhibited a significant Iranian influence with respect to equipment and fighting methods<sup>369</sup> and like their Sasanian counterparts, Armenian *Sparapets* (Mid. Pers. *Spāhbed*) maintained a consistent martial tradition of

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<sup>359</sup> COULSTON 1986: 62.

<sup>360</sup> JALALI 1383/2004: 36, 62.

<sup>361</sup> SAMI 1342/1964: 60.

<sup>362</sup> ZARRIN'KUB 1381/2002: 205.

<sup>363</sup> SIMS-WILLIAMS 2008: 93. contra JACKSON BONNER 2015: 106.

<sup>364</sup> GREATREX 1998: 46.

<sup>365</sup> KURBANOV 2010: 164.

<sup>366</sup> KURBANOV 2010: 104, 166.

<sup>367</sup> Proc. Bell. I 4.

<sup>368</sup> MAKSYMIUK 2018a.

<sup>369</sup> COSENTINO 2004: 253; MEKHAMADIEV 2014.

warfare.<sup>370</sup> Elite Armenian cavalry from the *Naxarar* nobility<sup>371</sup> and their retinues that joined the *Spāh* were the most esteemed allied units of the *Spāh* and were often reviewed by the *Šāhānšāh* upon arrival to Ctesiphon.<sup>372</sup> The cavalry of the *Naxarars* were equally formidable as infantrymen or mountain warfare.<sup>373</sup> Armenian cavalry for example were present during Kawād's campaign against the Romano-Byzantines in 502 CE<sup>374</sup> and were instrumental in defeating a Turks force invading the northwest in 619 CE.<sup>375</sup> The long casualty lists of Armenian armoured cavalry killed and wounded at the Battle of Qadissiya (636 CE)<sup>376</sup> is indicative of the importance of these auxiliary forces to the last years of the Sasanian empire fatal battle.

In addition to Armenian *Naxarar* cavalry, other regions of the Caucasus, notably Albania provided high quality cavalry auxiliaries (armored cavalry and light cavalry) for the *Spāh*. Part of the recruitment was made possible by the presence of a number of local Caucasian princes loyal to the Sasanians.<sup>377</sup> Albanian cavalry were present in the armies of Ardašīr I,<sup>378</sup> fought under Šāpūr II at Amida in 359 CE<sup>379</sup> with Albanian contingents offering stiff resistance Arabian invaders at the Battle of Qadissiya in 637 CE.<sup>380</sup> The *Spāh* also recruited other warriors from the Caucasus further to the north such as the Alans recruited

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<sup>370</sup> AYVAZYAN 2012: 79-80.

<sup>371</sup> GARSOIAN 2005.

<sup>372</sup> CHRISTENSEN 1944: 210.

<sup>373</sup> PASDERMAJIAN 1369/1990: 159.

<sup>374</sup> PIGULEVSKAYA 1354/1975: 101.

<sup>375</sup> Sebeos 28 (sic!) Hephthalite.

<sup>376</sup> WHITTOW 1996: 204.

<sup>377</sup> ADONTZ 1970: 8-24, 165-182.

<sup>378</sup> SAMI 1342/1964: 60.

<sup>379</sup> Amm. Marc. XVIII 6. 21.

<sup>380</sup> Movsēs Dasxuranc'i 110-113.

for the armies of Šāpūr II,<sup>381</sup> the Suani and Sabirs (who fought in Kawād's armies),<sup>382</sup> the (previously cited) and the Sunitae.<sup>383</sup>

### The Iranian realms

The *Spāh* often sought to recruit nomadic tribes and mountain warriors from Iran's north, west, interior and southeast into regular military service.<sup>384</sup> With war imminent, leaders of tribal clans such as those of the Pārizi of modern-day Kermān province often arrived with their respective cavalry and infantry forces to join the banner of the *Spāh*.<sup>385</sup> Another important region in the southeast was Sakastān. The Sakas of the region had seen military service in the armies of the Parthians, and were among the earliest contingents to join the campaigns of Ardašīr I.<sup>386</sup> Especially esteemed by the *Spāh* for their martial prowess as cavalrymen, the Sakas of Sakastān are cited by Ammianus Marcellinus as having been "the fiercest warriors of all"<sup>387</sup> during Šāpūr II's siege of Amida in 359 CE. Reza estimates up to twelve large contingents of these having been formed during the reign of Xusrō I.<sup>388</sup>

Northern Iran was an important source of warriors for the *Spāh*, as noted previously with respect to Deylamites infantry.<sup>389</sup> Another important group were the Gīls of modern-day Gīlān who provided light cavalry auxiliaries for the *Spāh* from the 3<sup>rd</sup> century CE. A prominent nomadic group identified by the Middle Persian term "Kurd" resided in the west to northwest regions of the Sasanian Empire. Daryaei has noted of prominent group of nomads identified by the Middle Persian term "Kurd". The term is often correlated as an ethnonym for the broad category of modern-day Kurds in the Middle east who speak West Iranian

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<sup>381</sup> ZARRIN'KUB 1381/2002: 196.

<sup>382</sup> PIGULEVSKAYA, 1372/1994: 203.

<sup>383</sup> WHITBY 1994: 255.

<sup>384</sup> JALALI 1383/2004: 67.

<sup>385</sup> NAFISI 1331/1952: 2-3.

<sup>386</sup> SAMI 1342/1964: 60.

<sup>387</sup> Amm. Marc. XIX 2. 3.

<sup>388</sup> REZA 1374/1995: 88.

<sup>389</sup> Agathias III 17. 6-9.

languages with Daryae noting that the term “Kurd” in Middle Persian designated nomads in a larger context.<sup>390</sup> The Kurds were recruited into the *Spāh*, proving effective as slingers and javelin men (discussed below).<sup>391</sup>

### Slingers

The Parthians are believed to have recruited slingers<sup>392</sup> for propelling stones or pellets against enemy troops, with these types of auxiliaries having served in Iranian armies since Achaemenid times or possibly earlier.<sup>393</sup> The Sasanians are believed to have recruited their slingers primarily from the Median highlands of western Iran.<sup>394</sup> Sasanian slingers were utilized against Roman forces, notably at the battle of Singara (343 or 344 CE).<sup>395</sup> Skilled slingers, especially with slingshots, were capable of inflicting fatal wounds with their high velocity pellets against enemy troops equipped with helmets and armor, and were also capable of disrupting cavalry attacks.<sup>396</sup> In a sense, slingers could act as a “light artillery” arm and were useful in supporting the massed barrages of archers. The slinger-archer combination is reported at the siege of Amida for example whose combined barrages reportedly “never ceased for a moment”.<sup>397</sup>

The Middle Persian term for sling, *Pilakxān* has entered the Georgian and Armenian military lexicons but not specifically as “sling”. In Georgian *Pilagani* or *Pilak’vani* means “catapult”<sup>398</sup> and in Armenian *P’ilikwan*, *P’iliwan*, *P’ilikon* signifies an arbalist or large crossbow. It is very unlikely that the sling may have acquired

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<sup>390</sup> DARYAEE 2009: 40.

<sup>391</sup> DARYAEE 2009: 41.

<sup>392</sup> MCDOWALL 1999: 9.

<sup>393</sup> MATUFI 1378/1999: 221.

<sup>394</sup> BAMBAN 1998: 117; PENROSE 2008: 258.

<sup>395</sup> Libanius LIX 103.

<sup>396</sup> WILCOX 1999: 46.

<sup>397</sup> Amm. Marc. XIX 5. 1.

<sup>398</sup> TAFAZZOLLI 1993: 191.

a high status among late Sasanian cavalry as the post-Sasanian *Ayyārān* considered this as one of their preferred weapons.<sup>399</sup>

### **Foot javeliners**

In addition to the later Deylamites, the *Spāh* also recruited Kurdish mountaineers as foot javeliners.<sup>400</sup> The Kurdish javeliners did not specifically hurl their javelins (like the Deylamites) but would use thongs to hurl and spin these in flight, resulting in increased accuracy and penetration against enemy troops.<sup>401</sup> These types of foot javeliners could prove effective in supporting professional infantry in blunting enemy cavalry or infantry assaults.

### **Arab auxiliaries and the Naṣrids**

The importance of the Arabs to the Sasanians is perhaps indicated in their depiction in Relief IV at Bišāpūr. Arab auxiliary forces were strategically vital role for the *Spāh* in two ways.<sup>402</sup> First, they provided critical protection for the empire's vital trade routes and urban centers situated in the empire's southwest (roughly modern southern Iraq), notably those territories vulnerable to Arab raiders emanating from the Arabian Peninsula. The second role of Arab auxiliaries was to prevent fellow Arabs from the Arabian from invading southern Iran in order to raid the empire's Persian Gulf coastal trading ports.<sup>403</sup> Arab auxiliary forces also provided two critical assets of military importance.<sup>404</sup> First, was their expert knowledge of the deserts. This made them valuable assets as guides and trackers for Sasanian armies during campaigns along or across the empire's southwestern regions. The second military asset of Arab auxiliaries was their proficiency as light cavalry, notably in launching rapid raids and pull back just as rapidly before

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<sup>399</sup> This is suggested by KHORASANI 2010: 158.

<sup>400</sup> PENROSE 2008: 258.

<sup>401</sup> WILCOX 1999: 47.

<sup>402</sup> JALALI 1383/2004: 64.

<sup>403</sup> PASDERMAJIAN 1369/1990: 64.

<sup>404</sup> JALALI 1383/2004: 64-65.

the enemy was able to organize effective counterstrikes.<sup>405</sup> The Arabs would often engage in securing plunder before making good their escape,<sup>406</sup> an important asset when fighting on behalf of the Sasanians against Romano-Byzantine forces.

Naşrid<sup>407</sup> Arab cavalry based in Hīra (in modern Iraq) were considered as “the privileged ally of the Persians”.<sup>408</sup> Like the Sasanians, the Naşrids fielded a well-organized army and a mercenary elite guard based.<sup>409</sup> Naşrid cavalry are believed to have been equipped with armor, mail, long swords, narrow-blade spears, horse armor (*Bargostvān*) and helmets of riveted construction of the Sasanian type and trained much like the regular *Savārān*. There was also a unit known as the *Wada'i*, who were 1000 *Savārān* sent by the Sasanians on a rotational basis to support the Naşrids at Hīra.<sup>410</sup> The Naşrids proved instrumental in the ascension of Bahrām Gōr to the Sasanian throne<sup>411</sup> and demonstrated their military efficacy, notably during raids against neighboring Roman territories in the 520s CE<sup>412</sup> and were instrumental to the Sasanian victory at the battle of Callinicum (531 CE).

Perhaps one of the empire’s greatest blunders was Xusrō II’s deposing of Naşrid king No‘mān III in 602 CE.<sup>413</sup> This led to a military vacuum in the empire’s critical southwest region facing potential attacks from Arabian raiders emerging from the Arabian Peninsula. Ironically, the Arab-Muslim invasion thrusting into the Sasanian Empire faced its first resistance from various Arab tribes, notably the Banū Ḥanīfa.<sup>414</sup> The empire would have greatly benefited from recruiting auxiliary light Arab cavalry whose mode of combat was more effective than the Sasanian

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<sup>405</sup> PIGULEVSKAYA 1372/1994: 253.

<sup>406</sup> JALALI 1383/2004: 65.

<sup>407</sup> FISHER 2011: 245-267; FISHER, WOOD 2016: 247-290; MAKSYMIIUK 2017a: 91.

<sup>408</sup> GREATREX 2005: 498.

<sup>409</sup> NICOLLE 1996: 58.

<sup>410</sup> NICOLLE 1996: 58, 60.

<sup>411</sup> MATUFI 1378/1999: 172; FRYE 1984: 319; SYVÄNNE 2015.

<sup>412</sup> GREATREX 2005: 499.

<sup>413</sup> FRYE 1984: 337.

<sup>414</sup> NICOLLE 1996: 61.

cavalry's methodical armored lance warfare that proved less effective against the Arabo-Muslims' agile loose harassment and raid tactics.<sup>415</sup>

### Other Miscellaneous units

Chariots may have existed as a ceremonial vehicle,<sup>416</sup> but it is highly unlikely that this would have served an adaptable military function for the Sasanians on contemporary battlefields, irrespective of Alexander Severus' "victory" speech to the Roman senate, claiming the alleged destruction of "1800 scythed chariots" of the *Spāh*.<sup>417</sup> Information on Sasanian camel corps are also relatively scant, with some units of these possibly having existed, at least in the mid-6<sup>th</sup> century CE in reference to a rebel named Anōšazād supported by the "Imperial Camel Corps"<sup>418</sup> against Xusrō I. Camels afforded their riders an elevated archery platform, as seen on Sasanian metalwork plates showing Bahrām V Gōr firing arrows as he rides atop a Camel (Fig. 52).<sup>419</sup> In practice the camel corps do not appear to have been a primary combat unit in the *Spāh* as they are not described by Classical or Arabo-Islamic sources as having fought alongside the *Savārān*, battle elephants, infantry, etc. The Parthian experience with camel cataphracts against Roman forces at the 3-day battle of Nisibis in 217 CE had demonstrated the vulnerability of the camel's soft and spongy feet to injury by caltrops.<sup>420</sup>

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<sup>415</sup> SHAHBAZI 1986: 499.

<sup>416</sup> MASHKOOR 1366/1987: Vol. II 1140.

<sup>417</sup> HA *Sev. Alex.* 55. 2.

<sup>418</sup> FIGULEVSKAYA 1377/1998: 447.

<sup>419</sup> Metropolitan Museum of Art of New York inv. no. 1994.402; Hermitage Museum, St. Petersburg inv. no. S-252.

<sup>420</sup> Dio Cassius LXXIX 26; Herodian IV 14; SYVÄNNE 2017: 52.

## Overview of Siege Warfare

The Sasanians were highly proficient in sieges. Maurice's *Strategicon* of the later 6<sup>th</sup> century CE reports that the Sasanians "are awesome when they lay siege, and even more awesome when they are besieged".<sup>421</sup> The *Ā'in-nāmeḥ* provides some interesting details of Sasanian siege warfare,<sup>422</sup> such as the importance of detailed reconnaissance to identify a targeted fortress's strong and weak points before placing it under siege. Pazoki summarizes Sasanian siege warfare for capturing cities into four distinct combative methods.<sup>423</sup> The first was attempting to lure the enemy forces in a set-piece battle outside of the fortified city, defeating it to then capture the city. The second and often most frequent scenario (especially against the Romans) was the use of siege engines and tactics to force the submission of an enemy fortified city. Lukonin summarizes Sasanian siege tactics of this second scenario as (a) Encirclement of the enemy installation or city (b) deployment of siege equipment and (c) infantry, archery and *Savārān* assaults.<sup>424</sup> The Sasanians had a very large variety of siege equipment at their disposal such as a variety (of varying sizes and power) of ballistic weapons, large bows constructed with metallic materials, a variety of engines (of varying sizes and power) for launching "stone bullets" (presumably shaped like cannon-balls).<sup>425</sup> The third method for capturing the city or fortress was by mining operations and digging of tunnels underneath the enemy's fortified foundations to then create an opening into the interior of the fortifications. The fourth method was the use of pyro-techniques and setting of fires to the enemy's walls to weaken and then collapse these, leading to structural gaps allowing the *Spāh's* warriors to break into the interior of the enemy fortress. Pazoki also cites of "non-combative" methods for capture of a city or fortress such as intrigue and subterfuge as well

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<sup>421</sup> *Strategicon*, XI 1.

<sup>422</sup> INOSTRANCEV 1926: 16.

<sup>423</sup> PAZOKI 1374/1995: 42-55.

<sup>424</sup> LUKONIN 1372/1993: 94.

<sup>425</sup> MATUFI 1378/1999: 221, 444; KHORASANI 2010: 137, 225.

as negotiation, compromise and offers of friendship to the party about to be besieged.<sup>426</sup> The Sasanians were equally proficient in defending their fortifications against besiegers by utilizing methods such as the pouring of hot liquids upon attackers, stone hurling catapults and pyro devices.<sup>427</sup>

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<sup>426</sup> PAZOKI 1374/1995: 43.

<sup>427</sup> Amm. Marc. XX 6-7. 11.

## Conclusion

Modern scholarship in the domain of classical military studies increasingly acknowledges the efficacy and professional nature of the Sasanian military machine, or *Spāh* in antiquity. More specifically, scholars now acknowledge that the Sasanians matched the Romans (later Romano-Byzantines) in military sophistication. Howard-Johnston for example states that “the Sassanian Empire was, from the first, the military equal of the Roman Empire, and second that, after a delay for mental adjustment, its parity was recognized and accepted by the Romans.”<sup>428</sup> As expostulated in this book and in a 2017 text,<sup>429</sup> the Sasanian army was (like its Roman counterpart) a professional organization composed primarily of armored cavalry, infantry, foot and horse archers as well as elephant corps. The *Spāh* was often supported by auxiliary troops (esp. slingers and javeliners) as well as highly effective allied forces notably Albanian, Armenian and Naşrids cavalry.

Western scholarship and Iranian military historians have significantly enhanced the breadth of research and academic maturity of the field of Sasanian military studies. This has resulted in a paradigm shift with respect to a previous generation of Western academics who have tended to minimize, downplay or even ignore the Sasanian military machine (especially the *Savārān*) with respect to influence on the Roman and Western military traditions. An example of this type of bias can be seen with Keegan, who in reference to the possibility of Iranian influence on western European cavalry asserted “True, the Persians ... had fielded squadrons of armored horsemen and even armored horses at an earlier date [than the western Europeans]...to ascribe the origin of heavy cavalry warfare to them is risky.”<sup>430</sup> The notion that the Sasanian military machine, especially its *Savārān* cavalry corps, had no influence upon the military traditions of the Romans and Europe in general is now questioned by a new generation of Western scholars.

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<sup>428</sup> HOWARD-JOHNSTON 1995: 165.

<sup>429</sup> FARROKH 2017.

<sup>430</sup> KEEGAN 1993: 286.

As noted by Mitterauer and Chapple “clibanarii under the late Roman emperors were all mercenaries, which cannot be said of...the Sasanid armored cavalry”.<sup>431</sup>

More specifically, the Roman army did recruit non-Roman cavalry, notably Sasanians, into their professional ranks. The *Notitia Dignitatum* in particular cites a certain *Equites Persae Clibanarii* which was a *Vexillatio Palatina* commanded by the *Magister Equitum Praesentalis* of Constantinople.<sup>432</sup> Macdowall cites the *Scola Scutariorum Clibanariorum* in the 350s CE, during the reign of Constantius II (r. 324-361 CE) as having been composed of armored cavalymen of Iranian origins whose equipment were also of Iranian [or Sasanian] origin.<sup>433</sup> Julian’s description of the armor of the “Roman” cavalry of Constantius II<sup>434</sup> is virtually identical to that of Ammianus Marcellinus’s description of the armored *Savārān* elites of Šāpūr II.<sup>435</sup> Cedrenus reports that after the defeat and capture of Emperor Valerian (r. 253–260 CE) by the Sasanians, the Romans under his son Gallienus “established the first cavalry cohorts for the majority of the Roman soldiers till then were infantry”.<sup>436</sup> Cedrenus makes clear that Sasanian military performance, notably by the *Savārān*, made a profound impression on the Roman military. The Romans appear to have also adopted aspects of Sasanian-type military equipment, especially by the late 200s and/or early 300s CE. Another Roman military unit of Iranian origins was the *Numerus Persoiustiniani* of the 6<sup>th</sup> century CE. A number of these may have been *Savārān* units who had capitulated to the Romans after the capture of Sisauranon fortress in 541 CE.<sup>437</sup> Procopius describes these troops as “Persians” who were sent to Italy to assist the Roman war effort in against the invading Goths.<sup>438</sup> Boss notes that these troops would have equipment standard to *Savārān*

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<sup>431</sup> MITTERAUER 2010: 108.

<sup>432</sup> Polemius Silvius, *Notitia Dignitatum, Partibus Orientis*, VI 32.

<sup>433</sup> MACDOWALL 1995: 19.

<sup>434</sup> Julian, *Orationes* I 37C-38A.

<sup>435</sup> Amm. Marc. XXV 1. 12.

<sup>436</sup> Cedrenus, I: 454.

<sup>437</sup> COSENTINO 2004: 252.

<sup>438</sup> Proc. *Bell.* II 19.

warriors at the time, such as a 3.5 meter lance, small shield, two-piece helmets with mail protecting the face, mail shirt with lamellar possibly worn underneath, and a Sasanian-type *Kamandan* (bowcase).<sup>439</sup>

The Sasanians also matched the Romans in another domain of militaria: intelligence warfare. More specifically, as noted by Lee, the Sasanians, like their Roman counterparts, had a highly developed system of intelligence gathering by way of dedicated spies, diplomatic envoys, fifth column personnel and subterfuge.<sup>440</sup> A high level of regard was accorded into attempting to recruit important and influential enemy officials as pro-Sasanian spies.<sup>441</sup> Spies were of critical importance for intelligence gathering before and during sieges of enemy towns, cities and fortresses.<sup>442</sup>

Sasanian military influences are of course seen in Central Asia and in the later Arabo-Islamic military tradition. The Sasanian military legacy reverberated significantly in the succeeding Islamic Caliphates,<sup>443</sup> notably with respect to Sasanian military theory and terminology, tactics, logistics and (military) organization.<sup>444</sup> As noted by Newark “Sasanid Persian weaponry and armour influenced steppe warriors such as the Huns and Turks, and later influenced the Arabs”.<sup>445</sup> One example of Sasanian martial influence in Central Asia can be seen with the Hephthalite bowl in the British Museum of a Hephthalite rider engaged in the Parthian shot (d. 460-479 CE).<sup>446</sup> The posture of the rider’s feet pointing downwards, the Sasanian-like “regal-ribbons” tied to the feet, manner of Parthian shot and even the coiffure of the horse’s mane is strikingly parallel to Parthian shot depictions on Sasanian metalworks. Central Asian and Steppe traditions strongly

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<sup>439</sup> FARROKH 2017: 344-350.

<sup>440</sup> LEE 1986: 455-461.

<sup>441</sup> PAZOKI (1374/1995) 48.

<sup>442</sup> SYVÄNNE 2016; DMITRIEV 2017a; FARROKH, GRACIA-SANCHEZ 2018.

<sup>443</sup> INOSTRANSEV 1926: 11.

<sup>444</sup> HAMBLIN 1986: 99-106; ZAKERI 1995.

<sup>445</sup> NEWARK 1985: 87.

<sup>446</sup> British Museum inv. no. 1963,1210.1.

influenced the Sasanians in turn notably with respect to lappet-suspension systems for swords and archery gear and possibly stirrups.<sup>447</sup> By the post-Sasanian era, a combined Turco-Iranian type of military had emerged with one prominent being in horse archery.<sup>448</sup>

Finally it is noted that the naval arm is a key aspect that is has been rarely addressed in the academic sense with respect to the Sasanian military. During the Sasanian period the Persians controlled the shores and strands of the Persian Gulf.<sup>449</sup> Primary sources allow for the confirmation of the existence of a significant Iranian navy during the Sasanian era, a force that provided combat support for the *Spāh*'s land forces.<sup>450</sup> The most dynamic phase of the Persian navy's activities occurred during the reign of Xusrō I Anōšīrvān.<sup>451</sup> The necessity for further studies on the case of the Sasanian naval arm highlights a greater requirement of research into the history, equipment, tactics, military culture and legacy of the Sasanian military.

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<sup>447</sup> FARROKH 2005: 12, 18; FARROKH 2007: 218; FARROKH 2017: 100-103, 107-109, 209-211.

<sup>448</sup> LATHAM, PATTERSON 1970: xxiii.

<sup>449</sup> DARYAEE 2016c: 42.

<sup>450</sup> DMITRIEV 2017b:38-39.

<sup>451</sup> Proc. *Bell.* II 15. 27.

## Appendix Select passages from sources

*The Parallel Lives* by Plutarch, Vol. III with an English translation by B. PERRIN, Cambridge, MA, 1916, *The Life of Crassus* 23-25:

It is said that on that day Crassus did not make his appearance in a purple robe, as is the custom with Roman generals, but in a black one, and that he changed it as soon as he noticed his mistake; also that some of the standard-bearers had great difficulty in raising their standards, which seemed to be imbedded, as it were, in the earth. Crassus made light of these things and hurried on the march, compelling the men-at-arms to keep up with the cavalry, until a few of those who had been sent out as scouts came riding up and announced that the rest of their number had been slain by the enemy, that they themselves had with difficulty escaped, and that their foes were coming up to fight with a large force and great confidence. All were greatly disturbed, of course, but Crassus was altogether frightened out of his senses, and began to draw up his forces in haste and with no great consistency. At first, as Cassius recommended, he extended the line of his men-at-arms as far as possible along the plain, with little depth, to prevent the enemy from surrounding them, and divided all his cavalry between the two wings. Then he changed his mind and concentrated his men, forming them in a hollow square of four fronts, with twelve cohorts on each side. With each cohort he placed a squadron of horse, that no part of the line might lack cavalry support, but that the whole body might advance to the attack with equal protection everywhere. He gave one of the wings to Cassius, and one to the young Crassus, and took his own position in the centre.

Advancing in this formation, they came to a stream called Balissus, which was not large, to be sure, nor plentiful, but by this time the soldiers were delighted to see it in the midst of the drought and heat and after their previous toilsome march without water. Most of the officers, accordingly, thought they

ought to bivouac and spend the night there, and after learning as much as they could of the number and disposition of the enemy, to advance against them at day-break. But Crassus was carried away by the eagerness of his son and the cavalry with him, who urged him to advance and give battle, and he therefore ordered that the men who needed it should eat and drink as they stood in the ranks. And before they were all well done with this, he led them on, not slowly, nor halting from time to time, as is usual on the way to battle, but with a quick and sustained pace until the enemy came in sight, who, to the surprise of the Romans, appeared to be neither numerous nor formidable. For Surena had veiled his main force behind his advance guard, and concealed the gleam of their armour by ordering them to cover themselves with robes and skins. But when they were near the Romans and the signal was raised by their commander, first of all they filled the plain with the sound of a deep and terrifying roar. For the Parthians do not incite themselves to battle with horns or trumpets, but they have hollow drums of distended hide, covered with bronze bells, and on these they beat all at once in many quarters, and the instruments give forth a low and dismal tone, a blend of wild beast's roar and harsh thunder peal. They had rightly judged that, of all the senses, hearing is the one most apt to confound the soul, soonest rouses its emotions, and most effectively unseats the judgment.

While the Romans were in consternation at this din, suddenly their enemies dropped the coverings of their armour, and were seen to be themselves blazing in helmets and breastplates, their Margianian steel glittering keen and bright, and their horses clad in plates of bronze and steel. Surena himself, however, was the tallest and fairest of them all, although his effeminate beauty did not well correspond to his reputation for valour, but he was dressed more in the Median fashion, with painted face and parted hair, while the rest of the Parthians still wore their hair long and bunched over their foreheads, in Scythian fashion, to make themselves look formidable. And at first they

purposed to charge upon the Romans with their long spears, and throw their front ranks into confusion; but when they saw the depth of their formation, where shield was locked with shield, and the firmness and composure of the men, they drew back, and while seeming to break their ranks and disperse, they surrounded the hollow square in which their enemy stood before he was aware of the manoeuvre. And when Crassus ordered his light-armed troops to make a charge, they did not advance far, but encountering a multitude of arrows, abandoned their undertaking and ran back for shelter among the men-at-arms, among whom they caused the beginning of disorder and fear, for these now saw the velocity and force of the arrows, which fractured armour, and tore their way through every covering alike, whether hard or soft.

But the Parthians now stood at long intervals from one another and began to shoot their arrows from all sides at once, not with any accurate aim (for the dense formation of the Romans would not suffer an archer to miss even if he wished it), but making vigorous and powerful shots from bows which were large and mighty and curved so as to discharge their missiles with great force. At once, then, the plight of the Romans was a grievous one; for if they kept their ranks, they were wounded in great numbers, and if they tried to come to close quarters with the enemy, they were just as far from effecting anything and suffered just as much. For the Parthians shot as they fled, and next to the Scythians, they do this most effectively; and it is a very clever thing to seek safety while still fighting, and to take away the shame of flight.

Now as long as they had hopes that the enemy would exhaust their missiles and desist from battle or fight at close quarters, the Romans held out; but when they perceived that many camels laden with arrows were at hand, from which the Parthians who first encircled them took a fresh supply, then Crassus, seeing no end to this, began to lose heart, and sent messengers to his son with orders to force an engagement with the enemy before he was

surrounded; for it was his wing especially which the enemy were attacking and surrounding with their cavalry, in the hope of getting in his rear. Accordingly, the young man took thirteen hundred horsemen, of whom a thousand had come from Caesar, five hundred archers, and eight cohorts of the men-at-arms who were nearest him, and led them all to the charge. But the Parthians who were trying to envelop him, either because, as some say, they encountered marshes, or because they were manoeuvring to attack Publius as far as possible from his father, wheeled about and made off. Then Publius, shouting that the men did not stand their ground, rode after them, and with him Censorinus and Megabacchus, the latter distinguished for his courage and strength, Censorinus a man of senatorial dignity and a powerful speaker, and both of them comrades of Publius and nearly of the same age. The cavalry followed after Publius, and even the infantry kept pace with them in the zeal and joy which their hopes inspired; for they thought they were victorious and in pursuit of the enemy, until, after they had gone forward a long distance, they perceived the ruse. For the seeming fugitives wheeled about and were joined at the same time by others more numerous still. Then the Romans halted, supposing that the enemy would come to close quarters with them, since they were so few in number. But the Parthians stationed their mail-clad horsemen in front of the Romans, and then with the rest of their cavalry in loose array rode round them, tearing up the surface of the ground, and raising from the depths great heaps of sand which fell in limitless showers of dust, so that the Romans could neither see clearly nor speak plainly, but, being crowded into a narrow compass and falling upon one another, were shot, and died no easy nor even speedy death. For, in the agonies of convulsive pain, and writhing about the arrows, they would break them off in their wounds, and then in trying to pull out by force the barbed heads which had pierced their veins and sinews, they tore and disfigured themselves the more.

Thus many died, and the survivors also were incapacitated for fighting. And when Publius urged them to charge the enemy's mail-clad horsemen, they showed him that their hands were riveted to their shields and their feet nailed through and through to the ground, so that they were helpless either for flight or for self-defence. Publius himself, accordingly, cheered on his cavalry, made a vigorous charge with them, and closed with the enemy. But his struggle was an unequal one both offensively and defensively, for his thrusting was done with small and feeble spears against breastplates of raw hide and steel, whereas the thrusts of the enemy were made with pikes against the lightly equipped and unprotected bodies of the Gauls, since it was upon these that Publius chiefly relied, and with these he did indeed work wonders. For they laid hold of the long spears of the Parthians, and grappling with the men, pushed them from their horses, hard as it was to move them owing to the weight of their armour; and many of the Gauls forsook their own horses, and crawling under those of the enemy, stabbed them in the belly. These would rear up in their anguish, and die trampling on riders and foemen indiscriminately mingled. But the Gauls were distressed above all things by the heat and their thirst, to both of which they were unused; and most of their horses had perished by being driven against the long spears. They were therefore compelled to retire upon the men-at-arms, taking with them Publius, who was severely wounded. And seeing a sandy hillock near by, they all retired to it, and fastened their horses in the centre; then locking their shields together on the outside, they thought they could more easily defend themselves against the Barbarians. But it turned out just the other way. For on level ground, the front ranks do, to some extent, afford relief to those who are behind them. But here, where the inequality of the ground raised one man above another, and lifted every man who was behind another into greater prominence, there was no such thing as escape, but they were all alike hit with arrows, bewailing their inglorious and ineffectual death.

Now there were with Publius two Greeks, of those who dwelt near by in Carrhae, Hieronymus and Nicomachus. These joined in trying to persuade him to slip away with them and make their escape to Ichnae, a city which had espoused the Roman cause and was not far off. But Publius, declaring that no death could have such terrors for him as to make him desert those who were perishing on his account, ordered them to save their own lives, bade them farewell, and dismissed them. Then he himself, being unable to use his hand, which had been pierced through with an arrow, presented his side to his shield-bearer and ordered him to strike home with his sword. In like manner also Censorinus is said to have died; but Megabacchus took his own life, and so did the other most notable men. The survivors fought on until the Parthians mounted the hill and transfixed them with their long spears, and they say that not more than five hundred were taken alive. Then the Parthians cut off the head of Publius, and rode off at once to attack Crassus.

**Ammianus Marcellinus, with an English translation by John C. ROLFE, Cambridge, MA 1935: XXV 12-18:**

Moreover, all the companies were clad in iron, and all parts of their bodies were covered with thick plates, so fitted that the stiff joints conformed with those of their limbs; and the forms of human faces were so skilfully fitted to their heads, that, since their entire bodies were plated with metal, arrows that fell upon them could lodge only where they could see a little through tiny openings fitted to the circle of the eye, or where through the tips of their noses they were able to get a little breath. Of these some, who were armed with pikes, stood so motionless that you would think them held fast by clamps of bronze. Hard by, the archers (for that nation has especially trusted in this art from the very cradle) were bending their flexible bows with such wide-stretched arms that the strings touched their right breasts, while the arrow-points were close to their left hands;

and by a highly skilful stroke of the fingers the arrows flew hissing forth and brought with them deadly wounds. Behind them the gleaming elephants, with their awful figures and savage, gaping mouths could scarcely be endured by the faint-hearted; and their trumpeting, their odour, and their strange aspect alarmed the horses still more. Seated upon these, their drivers carried knives with handles bound to their right hands, remembering the disaster suffered at Nisibis; and if the strength of the driver proved no match for the excited brute, that he might not turn upon his own people (as happened then) and crush masses of them to the ground, he would with a mighty stroke cut through the vertebra which separates the head from the neck. For long ago Hasdrubal, brother of Hannibal, discovered that in that way brutes of this kind could quickly be killed. Although these sights caused no little fear, the emperor, guarded by troops of armed men and with his trustworthy generals, full of confidence, as the great and dangerous power of the enemy demanded, drew up his soldiers in the form of a crescent with curving wings to meet the enemy. And in order that the onset of the bowmen might not throw our ranks into confusion, he advanced at a swift pace, and so ruined the effectiveness of the arrows. Then the usual signal for battle was given, and the Roman infantry in close order with mighty effort drove the serried ranks of the enemy before them. And in the heat of the combat that followed, the clash of shields, the shouts of the men, and the doleful sound of the whirring arrows continued without intermission. The plains were covered with blood and dead bodies, but the Persian losses were greater; for they often lacked endurance in battle and could with difficulty maintain a close contest man to man, since they were accustomed to fight bravely at long range, but if they perceived that their forces were giving way, as they retreated they would shoot their arrows back like a shower of rain and keep the enemy from a bold pursuit. So by the weight of great strength the Parthians were driven back, and when the signal for retreat was given in the usual manner, our soldiers, long wearied

by the fiery course of the sun, returned to their tents, encouraged to dare greater deeds of valour in the future.

**Heliodorus, *An Aethiopian Romance*, translated by T. UNDERDOWNE (Anno 1587), revised and partly rewritten by F. A. WRIGHT, London-New York, pp. 272-273:**

By this time his army could be seen drawn up for battle, taking the eye with its Persian bravery and glistening in silver and gilt armour, as if all the place had been on fire. For the sun just rising shone upon the Persians and gave such a wonderful brightness to their panoplies that it rebounded upon those who were a great way off. On the right wing stood the native Persians and Medes, the men-at-arms in front and the archers who were lightly harnessed behind, that they might shoot the better being defended by them. On the left the Egyptians and Libyans were placed, and slingers and archers with them, and he bade them break out often and assail the side of their enemies' battle. He himself took the centre, sitting in a brave scythed chariot and for safety surrounded by troops of spearmen on either hand, while in front of him were posted the mailed horsemen, upon trust of whom he ventured to join issue with his enemies. For these men are the most valiant of all the Persian fighters and are set before the others as it were an invincible wall.

The manner of their armament is thus. A picked fellow of great strength putteth upon him a close helmet made in one piece fitting as tightly as a mask. This covereth his head down to his shoulders, saving that there be holes left for him to look out of. In his right hand is a great staff, bigger than a spear; with his left hand he holds the horse's reins; by his side hangeth a sword; and all his body is covered with a coat of mail. The mail is made thus. With pieces of brass and iron, as big as the palm of a man's hand, they make a coat, as it were, of scales, laying the end and sides of each piece upon another — so that the nether

part of one goeth over the top of the other – and then they sew them together, and this coat lieth upon every part of the body without any ado. It covers every limb, and gives this way and that easily at each movement; for it hath sleeves and reacheth from the neck down to the knees, saving that necessity compels it to be cut between the thighs, that the man may sit upon his horse. Such is their coat of mail, which beateth off all darts and keepeth off all manner of blows. Over their legs to their knees they pull on a boot which is tied to their jacket. They arm their horses also in the same fashion. About his legs they tie greaves and cover his head with a frontal of iron, while from his back down beneath his belly there hangeth a cloth with metal rings which doth both [p. 273] protect him and by reason of its looseness hindereth not his course at all. Being thus appointed and in a manner forced into his armour the man sitteth upon his horse: marry he leapeth not up himself, but others help him, so encumbered is he with the weight of his arms. When the time of battle comes, he gives his horse the reins and spurs him with his heels and rides upon his enemies at full speed like a man made of iron or a statue fashioned with hammers. His great staff at its pointed end is tied with a cord to the horse's neck and the hinder end is made fast to its buttocks, so that in the conflict it does not yield but helps the horseman's hand, who does but guide the same aright. Thus it gives the greater blow and runs through every man it hits, and often carries away two men together pierced by one stroke.

***History of the Wars. Procopius, with an English translation***  
**by H.B. DEWING, London-New York 1914, I XVIII:**

This man's suggestion at that time therefore pleased Cabades, and he chose out fifteen thousand men, putting in command of them Azarethes, a Persian, who was an exceptionally able warrior, and he bade Alamoundaras lead the expedition. So they crossed the River Euphrates in Assyria, and, after

passing over some uninhabited country, they suddenly and unexpectedly threw their forces into the land of the so-called Commagene. [...] Now the Roman army amounted to about twenty thousand foot and horse, and among them not less than two thousand were Isaurians. The commanders of cavalry were all the same ones who had previously fought the battle at Daras with Mirranes and the Persians, while the infantry were commanded by one of the body-guards of the Emperor Justinian, Peter by name. The Isaurians, however, were under the command of Longinus and Stephanacius. Arethas also came there to join them with the Saracen army. [...] Finally the Persians made their bivouac on the bank of the Euphrates just opposite the city of Callinicus. [...] He [Belisarius] then formed the phalanx with a single front, disposing his men as follows: on the left wing by the river he stationed all the infantry, while on the right where the ground rose sharply he placed Arethas and all his Saracens; he himself with the cavalry took his position in the centre. After Azarethes also had uttered these words of exhortation, he stationed the phalanx opposite his opponents, assigning the Persians the right wing and the Saracens the left. Straightway both sides began the fight, and the battle was exceedingly fierce. For the arrows, shot from either side in very great numbers, caused great loss of life in both armies, while some placed themselves in the interval between the armies and made a display of valorous deeds against each other, and especially among the Persians they were falling by the arrows in great numbers. For while their missiles were incomparably more frequent, since the Persians are almost all bowmen and they learn to make their shots much more rapidly than any other men, still the bows which sent the arrows were weak and not very tightly strung, so that their missiles, hitting a corselet, perhaps, or helmet or shield of a Roman warrior, were broken off and had no power to hurt the man who was hit. The Roman bowmen are always slower indeed, but inasmuch as their bows are extremely stiff and very tightly strung, and one might add that they are handled by stronger men, they easily slay much greater numbers of those they hit than

do the Persians, for no armour proves an obstacle to the force of their arrows. Now already two-thirds of the day had passed, and the battle was still even. Then by mutual agreement all the best of the Persian army advanced to attack the Roman right wing, where Arethas and the Saracens had been stationed. But they broke their formation and moved apart, so that they got the reputation of having betrayed the Romans to the Persians. For without awaiting the oncoming enemy they all straightway beat a hasty retreat. So the Persians in this way broke through the enemy's line and immediately got in the rear of the Roman cavalry. Thus the Romans, who were already exhausted both by the march and the labour of the battle,--and besides this they were all fasting so far on in the day,--now that they were assailed by the enemy on both sides, held out no longer, but the most of them in full flight made their way to the islands in the river which were close by, while some also remained there and performed deeds both amazing and remarkable against the enemy

Among these was Ascan who, after killing many of the notables among the Persians, was gradually hacked to pieces and finally fell, leaving to the enemy abundant reason to remember him. And with him eight hundred others perished after shewing themselves brave men in this struggle, and almost all the Isaurians fell with their leaders, without even daring to lift their weapons against the enemy. For they were thoroughly inexperienced in this business, since they had recently left off farming and entered into the perils of warfare, which before that time were unknown to them. And yet just before these very men had been most furious of all for battle because of their ignorance of warfare, and were then reproaching Belisarius with cowardice. They were not in fact all Isaurians but the majority of them were Lycaones.

Belisarius with some few men remained there, and as long as he saw Ascan and his men holding out, he also in company with those who were with him held back the enemy; but when some of Ascan's troops had fallen, and

the others had turned to flee wherever they could, then at length he too fled with his men and came to the phalanx of infantry, who with Peter were still fighting, although not many in number now, since the most of them too had fled. There he himself gave up his horse and commanded all his men to do the same thing and on foot with the others to fight off the oncoming enemy. And those of the Persians who were following the fugitives, after pursuing for only a short distance, straightway returned and rushed upon the infantry and Belisarius with all the others. Then the Romans turned their backs to the river so that no movement to surround them might be executed by the enemy, and as best they could under the circumstances were defending themselves against their assailants. And again the battle became fierce, although the two sides were not evenly matched in strength; for foot-soldiers, and a very few of them, were fighting against the whole Persian cavalry. Nevertheless the enemy were not able either to rout them or in any other way to overpower them. For standing shoulder to shoulder they kept themselves constantly massed in a small space, and they formed with their shields a rigid, unyielding barricade, so that they shot at the Persians more conveniently than they were shot at by them. Many a time after giving up, the Persians would advance against them determined to break up and destroy their line, but they always retired again from the assault unsuccessful. For their horses, annoyed by the clashing of the shields, reared up and made confusion for themselves and their riders. Thus both sides continued the struggle until it had become late in the day. And when night had already come on, the Persians withdrew to their camp, and Belisarius accompanied by some few men found a freight-boat and crossed over to the island in the river, while the other Romans reached the same place by swimming. On the following day many freight-boats were brought to the Romans from the city of Callinicus and they were conveyed thither in them, and the Persians, after despoiling the dead, all departed homeward. However they did not find their own dead less numerous than the enemy's.

*Vendīdād, Sacred Books of the East, vol. 4, translated by J. DARMESTETER, Oxford 1880, XIV 9:*

He shall godly and piously give to godly man a set of all the war implements of which the warriors make use, to redeem his own soul; The first being a javelin, the second a sword, the third a club, the fourth a bow, the fifth a saddle with a quiver and thirty brass-headed arows, the sixth a sling with arm-string and with thirty sling stones. The seventh a cuirass, the eighth a hauberk [going from the helm to the cuirass - J.D.], the ninth a tunic [under the cuirass - J.D.], the tenth a helmet, the eleventh a girdle, the twelfth a pair of greaves.



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## Figures



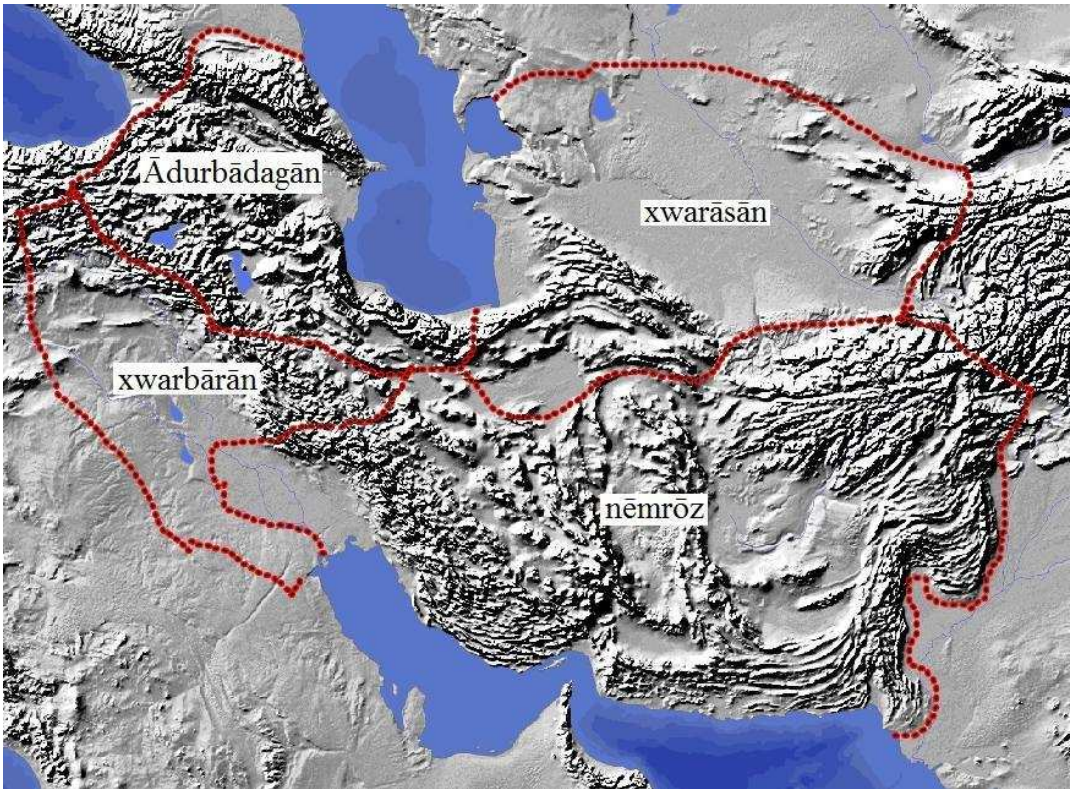


Fig. 1. The quadripartition based on DARYAEE 2002a, (drawing by K. Maksymiuk).



Fig. 2. A Bulla of the *Ērān-Spāhbed* of *Nēmrōz*, K. Safdari's collection, (photo courtesy T. Daryaeae).



**Fig. 3.** A Bulla of the Bahrām, the son of Ādurmāhān, The Barakat Collection, (photo courtesy T. Daryae).



**Fig. 4.** A Bulla of the Bahrām, the son of Ādurmāhān, The Barakat Collection, (drawing by K. Maksymiuk).

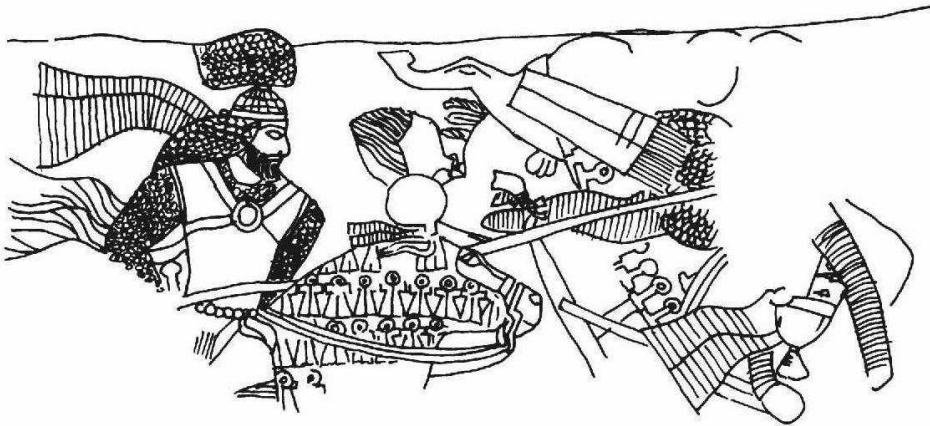
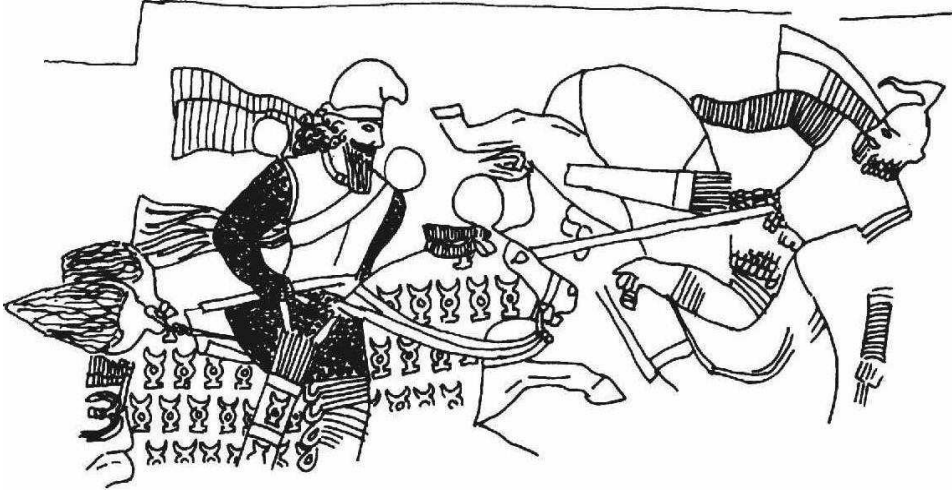


Fig. 5. Fīrūzābād, the relief of Ardašīr I (r. 224-242), (drawing by P. Skupniewicz).



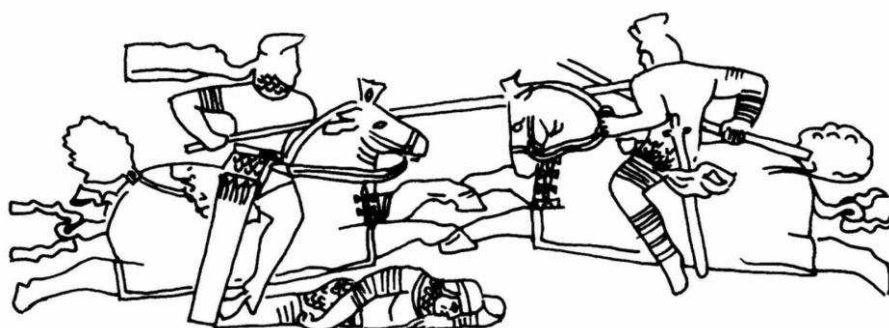
**Fig. 6.** Naqš-e Rostam, the relief of Bahrām II (r. 276-293), (photo by M. Moradi).



**Fig. 7.** Naqš-e Rostam, the relief of Bahrām II (r. 276-293), (drawing by P. Skupniewicz).



**Fig. 8.** Naqš-e Rostam, the relief of Bahrām II (r. 276-293), (photo by M. Moradi).



**Fig. 9.** Naqš-e Rostam, the relief of Bahrām II (r. 276-293), (drawing by P. Skupniewicz).

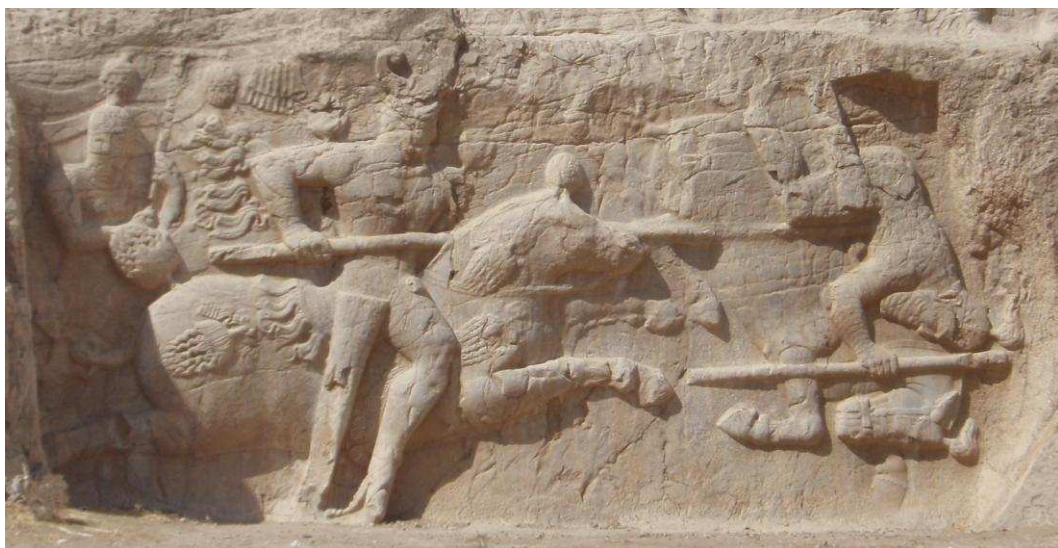


Fig. 10. Naqš-e Rostam, the relief of Hormozd II (r. 303-309), (photo by M. Moradi).



Fig. 11. Naqš-e Rostam, the relief of Hormozd II (r. 303-309), (drawing by P. Skupniewicz).

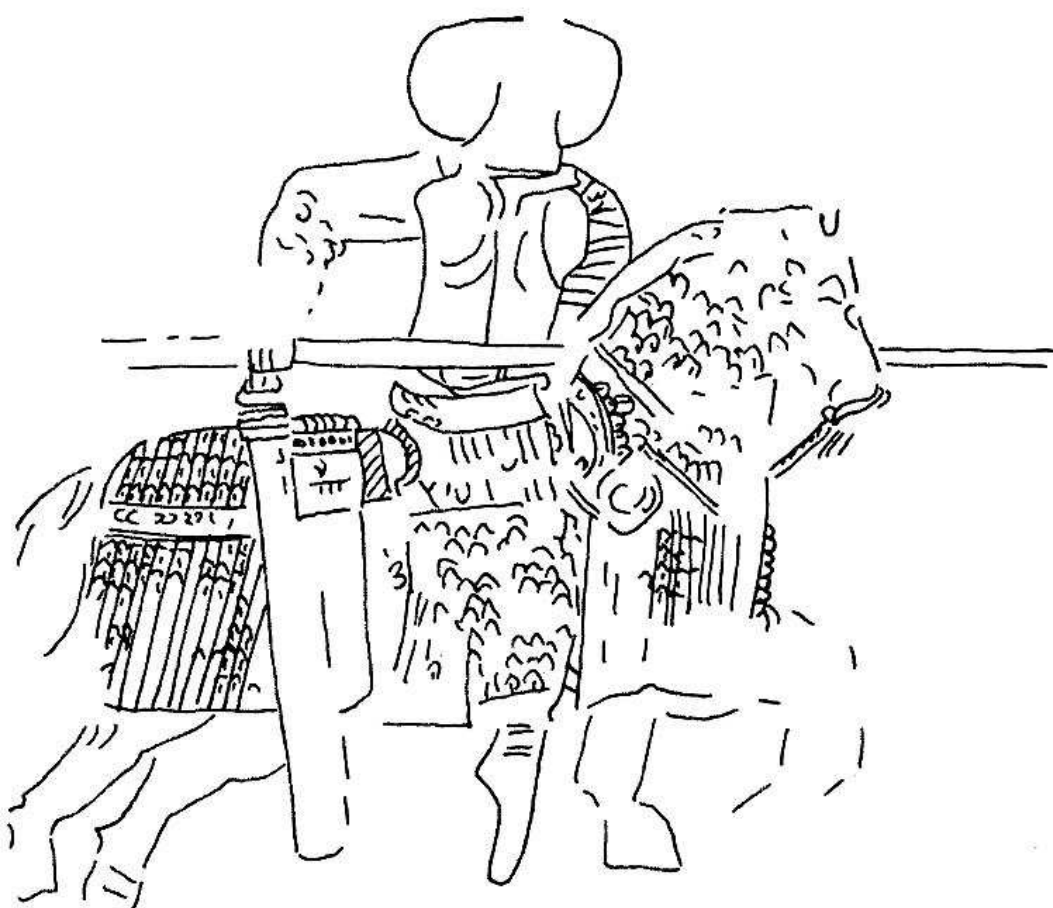
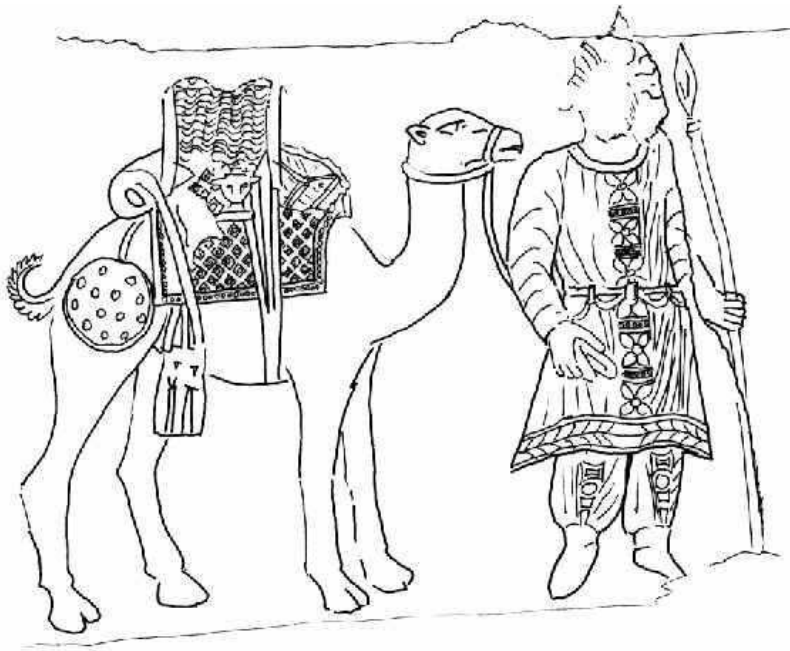


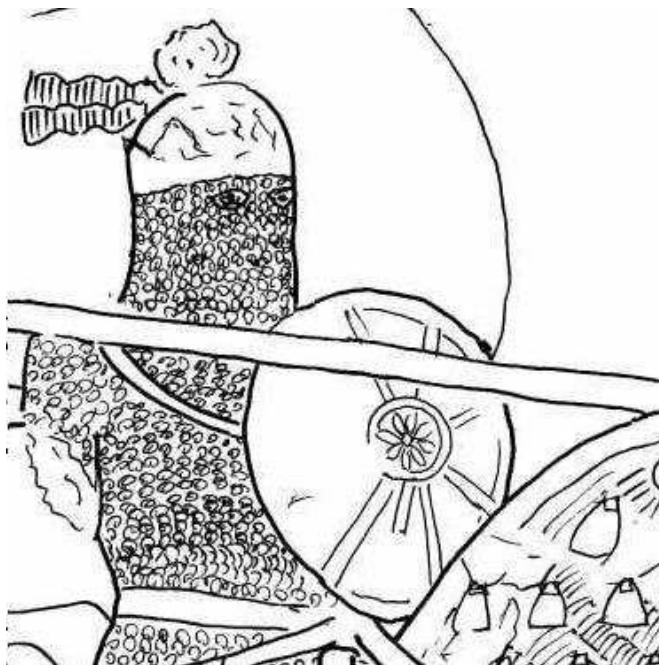
Fig. 12. Tang-e Sarvak frezie (the first quarter of the 3<sup>rd</sup> century), (drawing by D. Nicolle).



**Fig. 13.** Silver boss of Sasanian shield with lion's head, (4<sup>th</sup> centuries), British Museum inv. no. 134358, © The Trustees of the British Museum.



**Fig. 14.** Palmyra, funerary relief of a laden camel, from the Valley of the Tombs, (2<sup>nd</sup>-3<sup>rd</sup> centuries), (drawing by P. Skupniewicz).



**Fig. 15.** Late Sasanian armored horseman in the interior of the vault or *ayvān* at Ṭāq-e Bostān, (6<sup>th</sup> century), (drawing by P. Skupniewicz).



**Fig. 16.** Horse armour of bronze scales, Syro-Roman or Parthian, from Dura Europos, (3<sup>rd</sup> century) National Museum, Damascus, (photo by D. Nicolle).



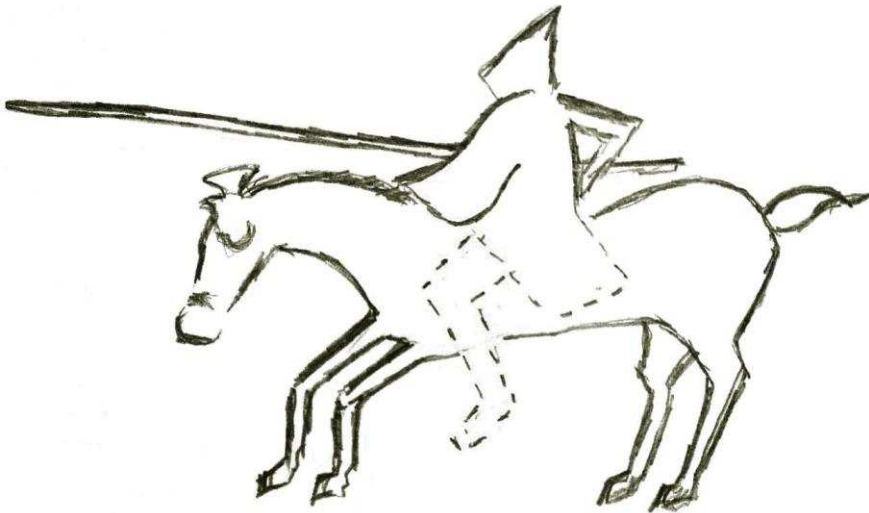
**Fig. 17.** Rawhide lamellar armour, either for a horse's neck or a rider's legs, Syro-Roman or Parthian, from Dura Europos, (3<sup>rd</sup> century) Yale University Art Gallery Store, New Haven, (photo by D. Nicolle).



Fig. 18. Graffito from Dura-Europos, (3<sup>rd</sup> century), (drawing by P. Skupniewicz).



**Fig. 19.** Relief in Panj-e Ali, (3<sup>rd</sup> century), (photo by G. Karamian).



**Fig. 20.** Relief in Panj-e Ali, (3<sup>rd</sup> century), (drawing by G. Karamian).



**Fig. 21.** Sasanian *cross-band* helmet, discovered in Iraq's Nineveh region, (6<sup>th</sup>-7<sup>th</sup> century), British Museum inv. no. 22497, © The Trustees of the British Museum.



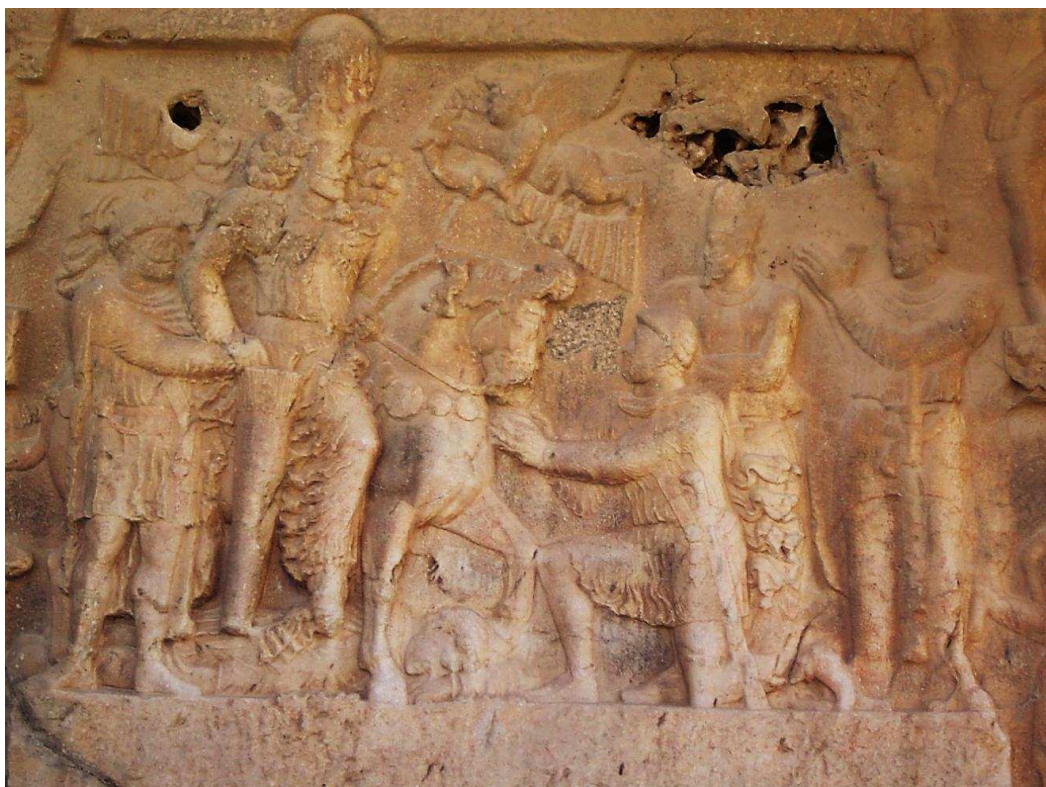
**Fig. 22.** Sasanian *cross-band* helmet, discovered in Iraq's Nineveh region, (6<sup>th</sup>-7<sup>th</sup> century), British Museum inv. no. 22498, © The Trustees of the British Museum.



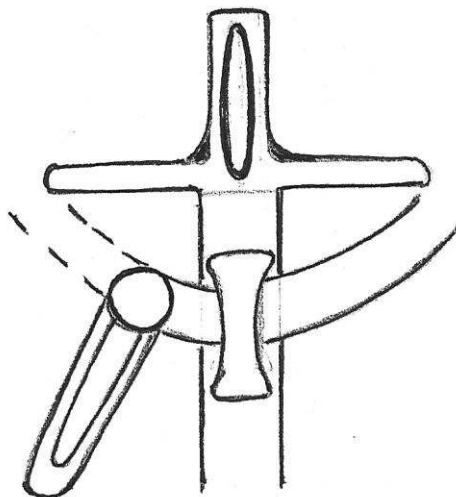
**Fig. 23.** Sword, (3<sup>rd</sup>-5<sup>th</sup> centuries), Iran Bastan Museum inv. no. 1603/18028, (photo by R. Karamian & R. Esfandiari).



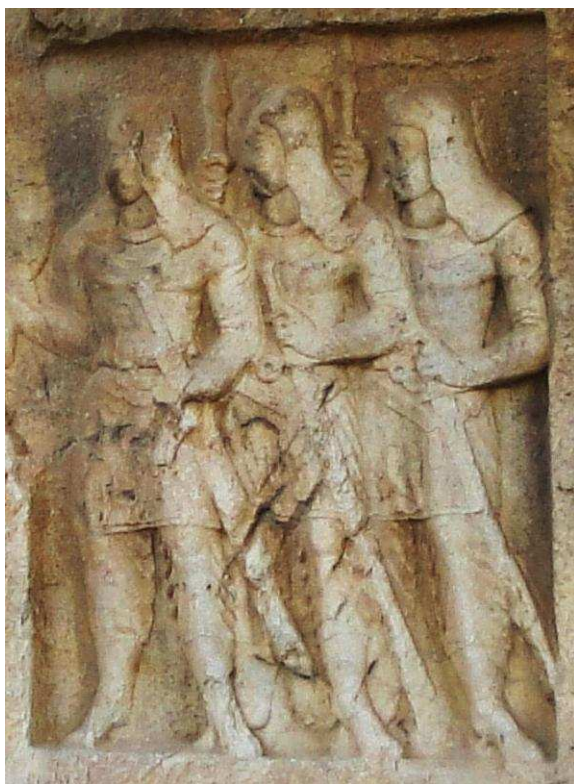
**Fig. 24.** Sword, (3<sup>rd</sup>-5<sup>th</sup> centuries), Iran Bastan Museum inv. no. 3628/19196, (photo by R. Karamian & R. Esfandiari).



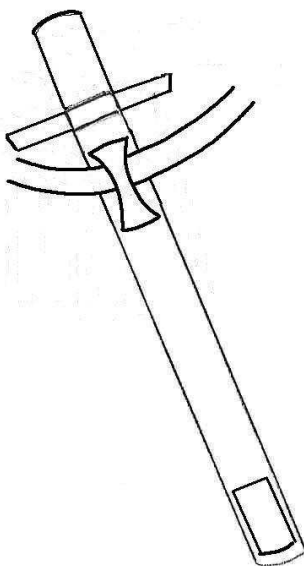
**Fig. 25.** Bišāpūr the relief of Šāpūr I (r. 242-272), (photo by E. Shavarebi).



**Fig. 26.** Scabbard-Slide Swords, Bišāpūr the relief of Šāpūr I (r. 242-272), (drawing by K. Farrokh).



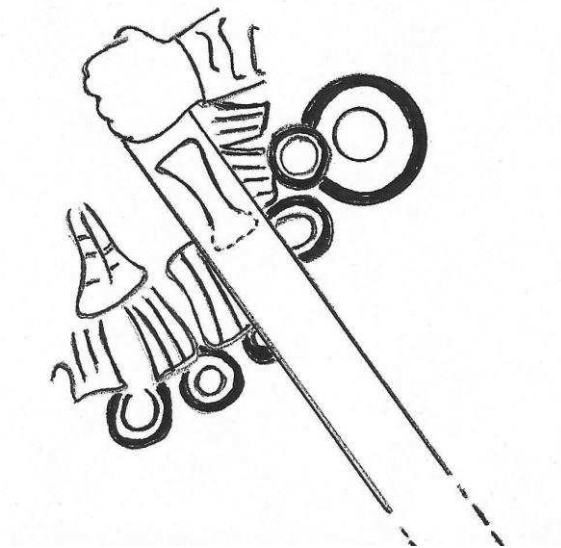
**Fig. 27.** Three Sasanian warriors, Bišāpūr the relief of Šāpūr I (r. 242-272), (photo by M. Moradi).



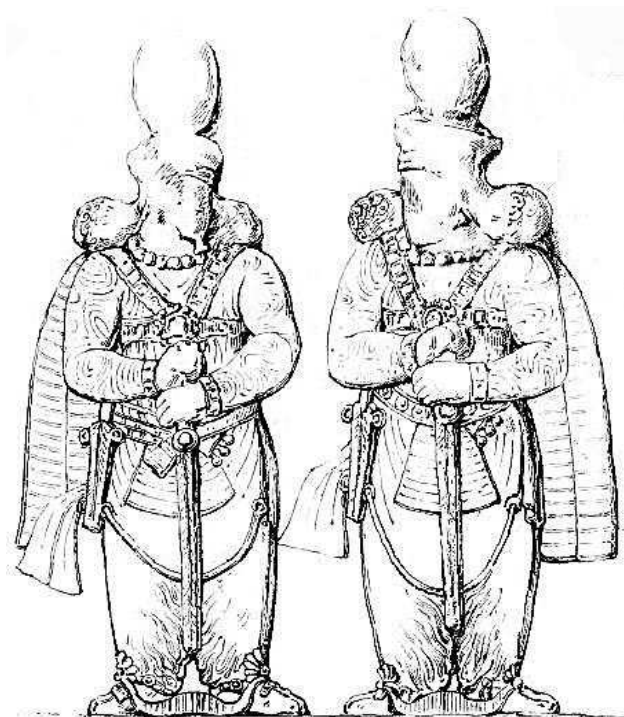
**Fig. 28.** Scabbard-Slide Swords, Bišāpūr the relief of Šāpūr I (r. 242-272), (drawing by K. Farrokh).



**Fig. 29.** Naqš-e Rostam the relief of Šāpūr I (r. 242-272), (photo by E. Shavarebi).



**Fig. 30.** Scabbard-Slide Swords, Naqš-e Rostam the relief of Šāpūr I (r. 242-272), (drawing by K. Farrokh).



**Fig. 31.** Tāq-e Bostān the relief of Šāpūr II (r. 309-379) and Ardašīr II (r. 379-383), (after: Ker Porter 1822: pl. LXV).



**Fig. 32.** Dish “Boar Hunt of Kušanšāh Bahrām II” (late 4<sup>th</sup>-early 5<sup>th</sup> centuries), Hermitage Museum, St. Petersburg inv. no. S-24, (drawing by P. Skupniewicz).



**Fig. 33.** Plate “Šāpūr I (r. 242-272) slaying a deer”, (4<sup>th</sup> CE), British Museum inv. no. 124091, © The Trustees of the British Museum.



**Fig. 34.** Plate “a king hunting lions” (5<sup>th</sup>-7<sup>th</sup> centuries), British Museum inv. no. 124092, © The Trustees of the British Museum.



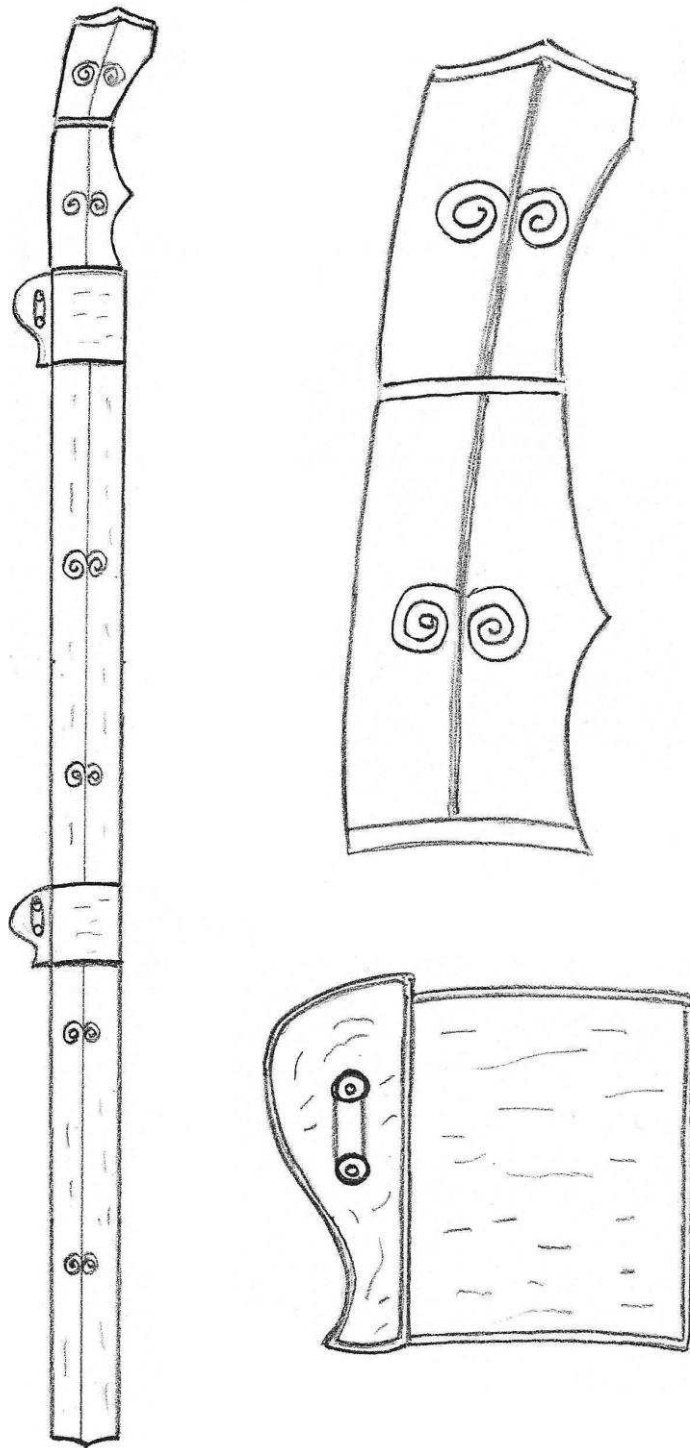


**Fig. 35.** Sasanian sword (6<sup>th</sup>-7<sup>th</sup> centuries), British Museum inv. no. 135158, © The Trustees of the British Museum.

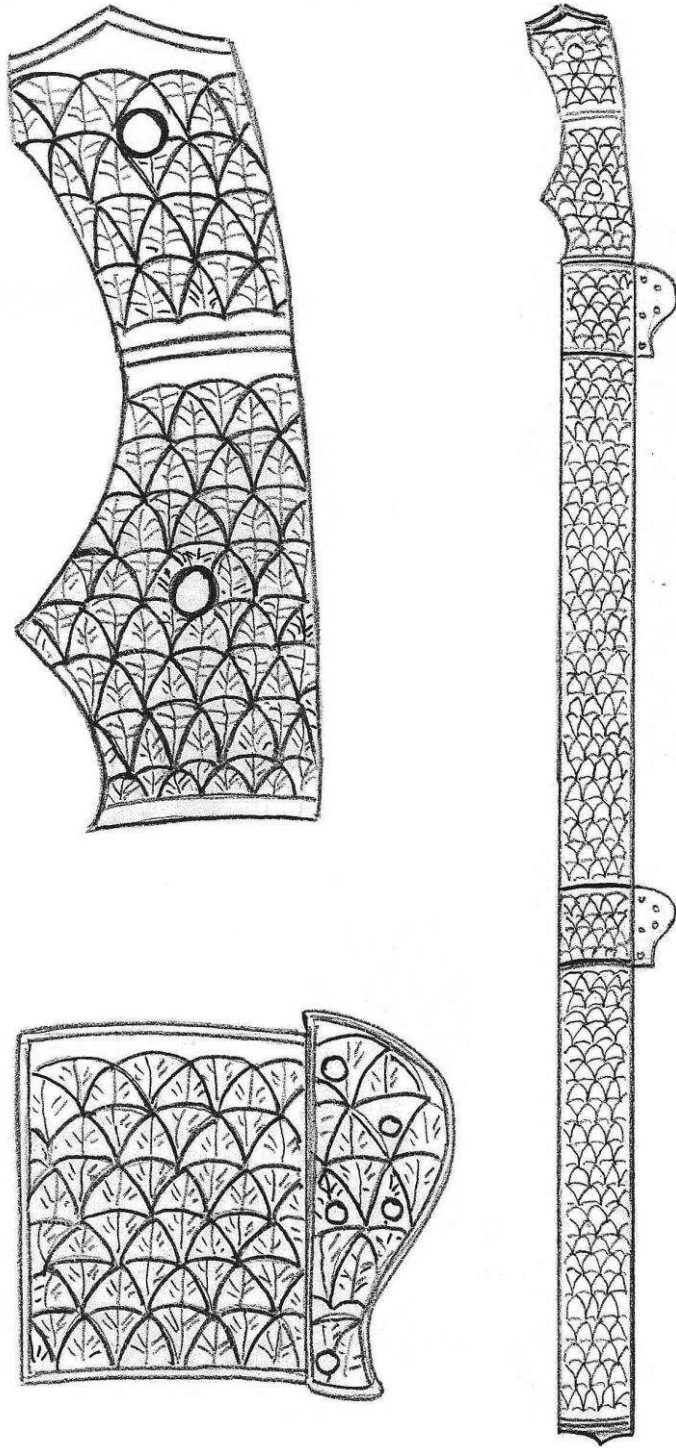




**Fig. 36.** Sasanian sword with gold hilt and scabbard; pair of P-shaped mounts on left side (6<sup>th</sup>-7<sup>th</sup> centuries), British Museum inv. no. 135738, © The Trustees of the British Museum.



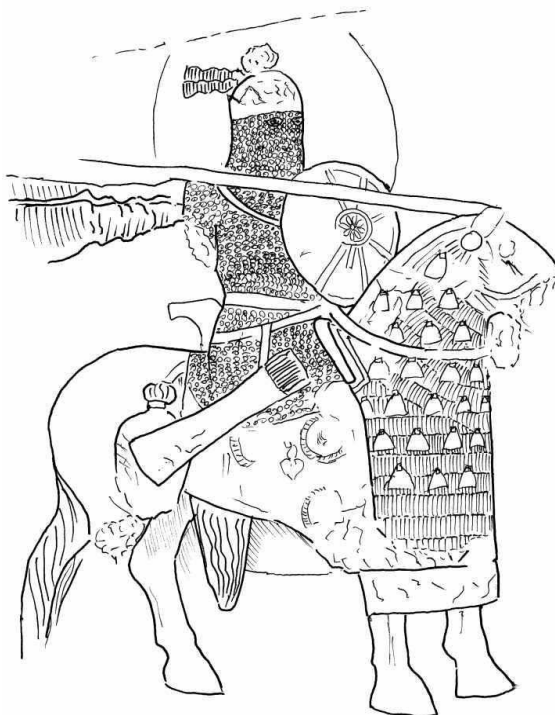
**Fig. 37.** Sasanian sword (6<sup>th</sup>-7<sup>th</sup> centuries), British Museum inv. no. 135158, (drawing by K. Farrokh).



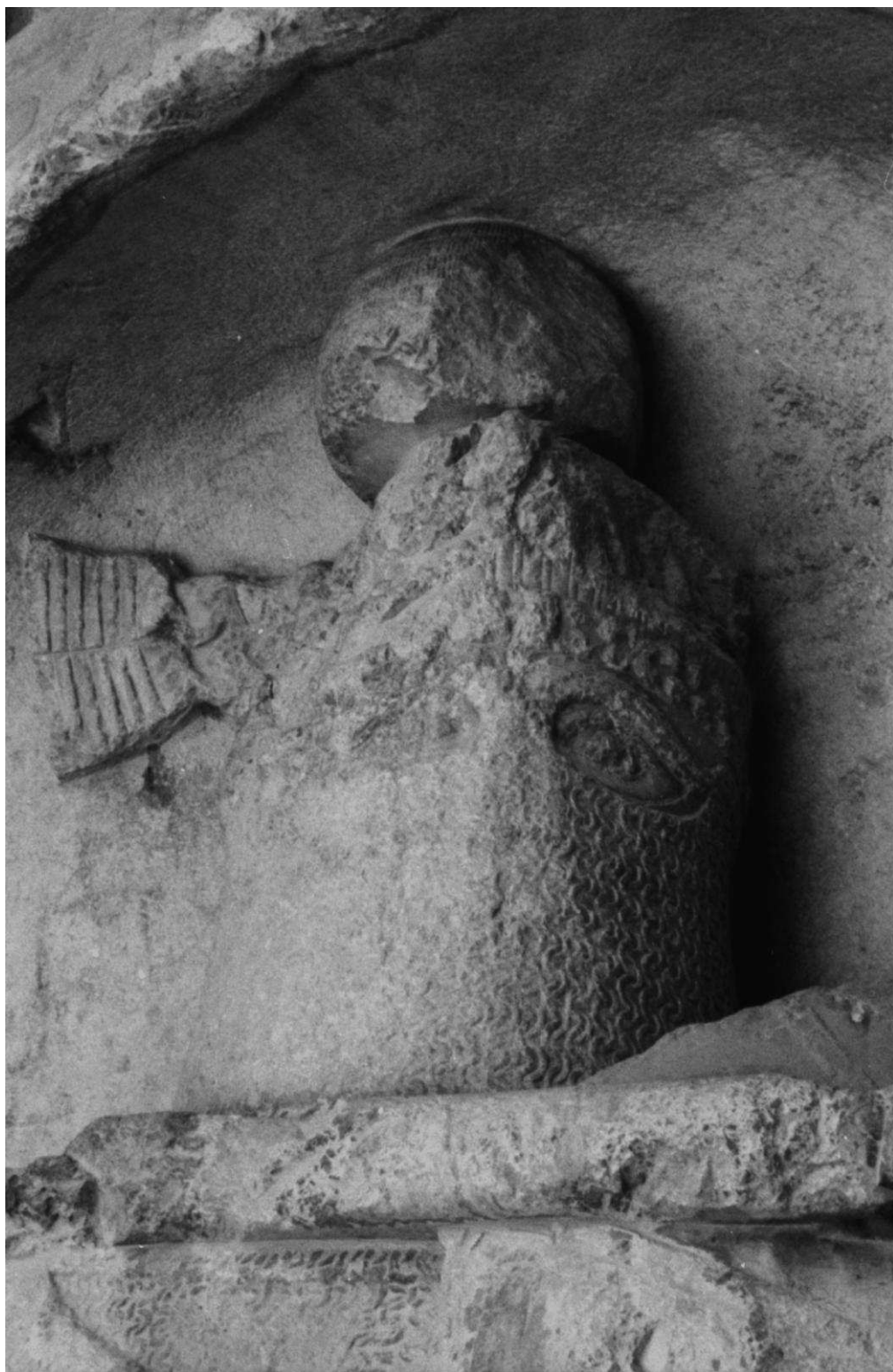
**Fig. 38.** Sasanian sword (6<sup>th</sup>-7<sup>th</sup> centuries), British Museum inv. no. 135738, (drawing by K. Farrokh).



**Fig. 39.** Late Sasanian armored horseman in the interior of the vault or *ayvān* at Tāq-e Bostān, (6<sup>th</sup> century), (photo by J. Yousefi).



**Fig. 40.** Late Sasanian armored horseman in the interior of the vault or *ayvān* at Tāq-e Bostān, (6<sup>th</sup> century), (drawing by P. Skupniewicz).



**Fig. 41.** Rock-cut statue of a late Sasanian ruler, (6<sup>th</sup> century), *In situ* Tāq-e Bostān, (photo by D. Nicolle).



**Fig. 42.** Carved Sasanian capital, originally from Bisetūn, (late 6<sup>th</sup> or early 7<sup>th</sup> century), Archaeological Park, Tāq-e Bostān, (photo by J. Yousefi).



**Fig. 43.** Carved Sasanian capital, originally from Bisetūn, (late 6<sup>th</sup> or early 7<sup>th</sup> century), Archaeological Park, Tāq-e Bostān, (drawing by P. Skupniewicz).



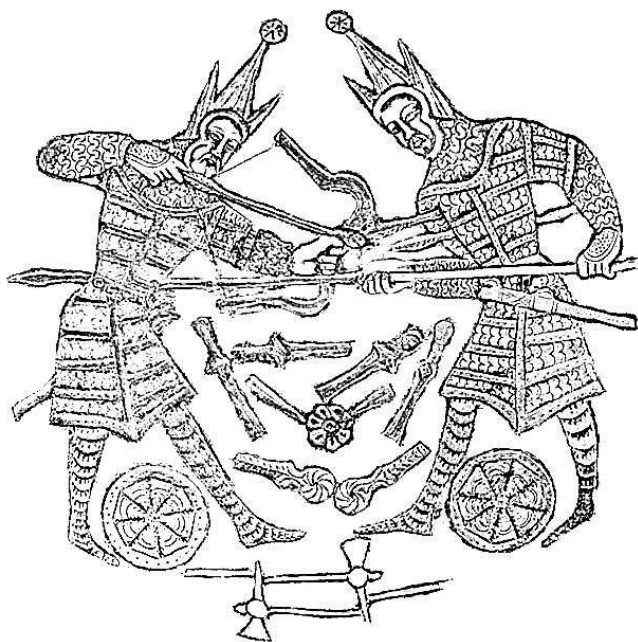
**Fig. 44.** Sasanian *cross-band* helmet, (6<sup>th</sup>-7<sup>th</sup> century), Romano-Germanic Central Museum, Mainz inv. no. 38823, (after: Kubik 2017: 117, Fig. 63).



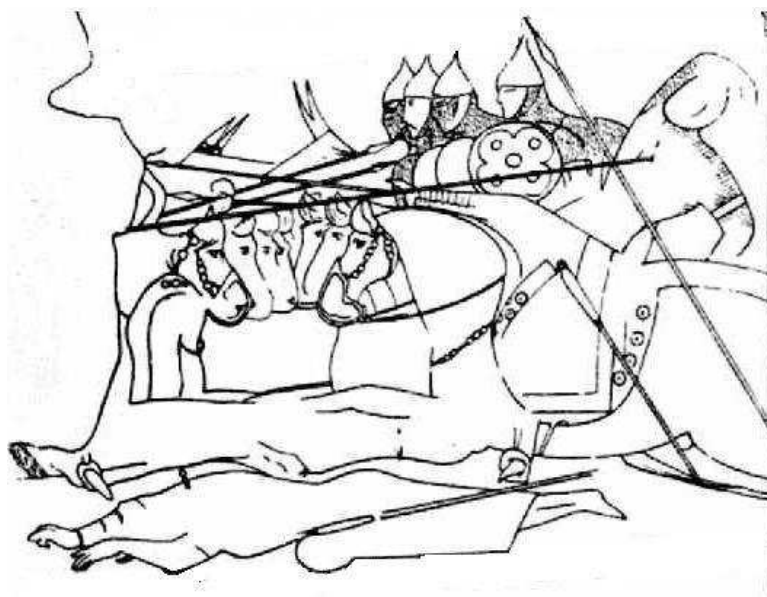
**Fig. 45.** Dish with Šāpūr II (r. 309-379) hunting lions, (4<sup>th</sup> centuries), Hermitage Museum, St. Petersburg inv. no. S-253, (drawing by K. Maksymiuk).



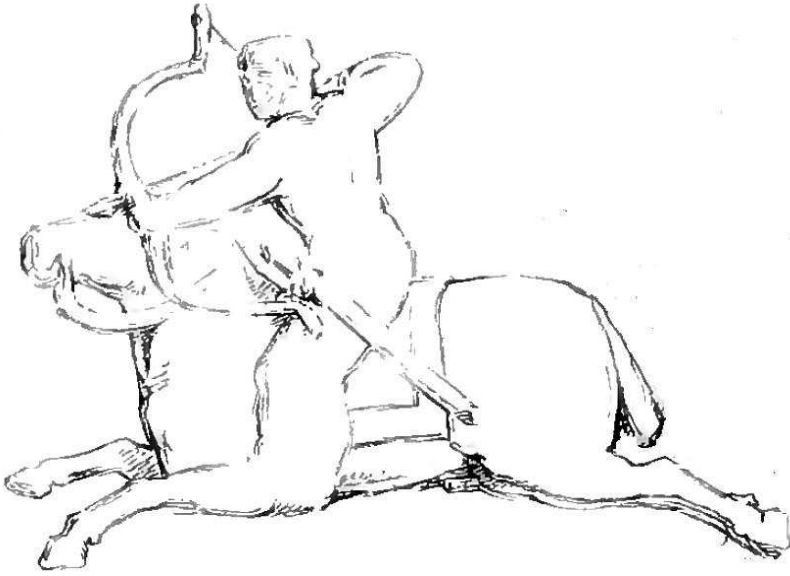
**Fig. 46.** Dish with hunting scene, (8<sup>th</sup> centuries), Hermitage Museum, St. Petersburg inv. no. S-247, (drawing by K. Maksymiuk).



**Fig. 47.** Plate from Kulagysh, (7<sup>th</sup> centuries), Hermitage Museum, St. Petersburg, Smirnov 1909: no. 50, (drawing by K. Maksymiuk).



**Fig. 48.** The hall (VI-41) in the Palace of Panjikant, (7<sup>th</sup>-8<sup>th</sup> centuries), (drawing by P. Skupniewicz).



**Fig. 49.** The rider's shoulders as depicted at the stag hunt scene at Tāq-e Bostān (after: Ker Porter 1822: pl. LXIV).



**Fig. 50.** Plate from the Azerbaijan Museum of Tabriz, (drawing by K. Maksymiuk).

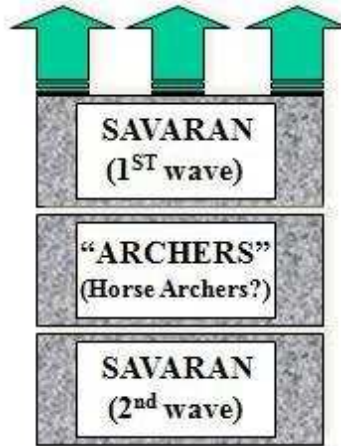


**Fig. 51.** Plate Šāpūr II (r. 309-379) atop an Elephant (4<sup>th</sup>-7<sup>th</sup> centuries), Los Angeles County Museum of Art inv. no. M.76.174.18, (drawing by K. Maksymiuk).



**Fig. 52.** Dish depicting Bahrām V Gōr (r. 420-439) atop a Camel (6<sup>th</sup>-7<sup>th</sup> centuries), Hermitage Museum, St. Petersburg inv. no. S-252, (drawing by K. Maksymiuk).

ROMAN LINES



ROMAN LINES



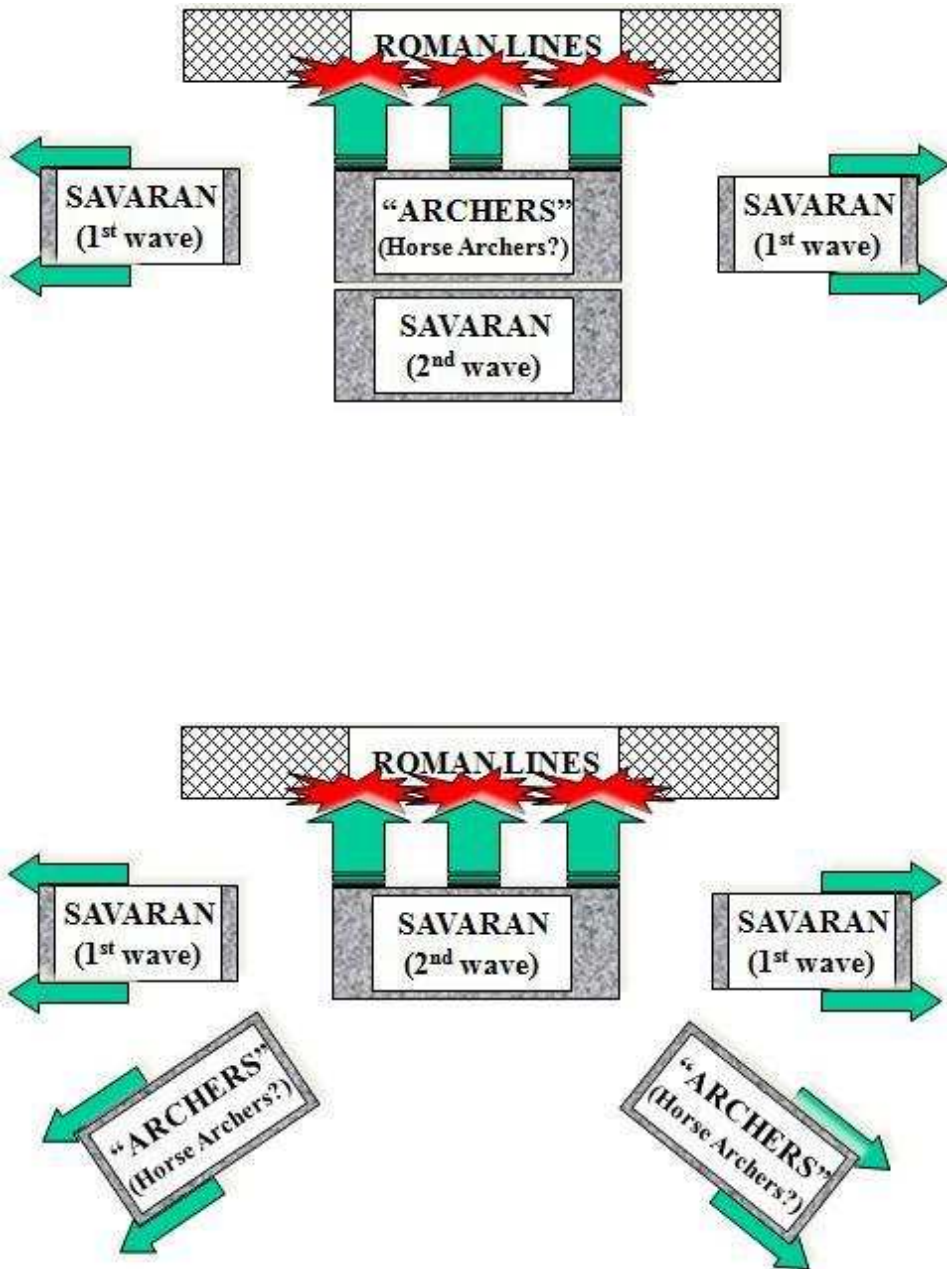


Fig. 53. The Battle of Nisibis in 350 CE based on Julian's, *Orationes*, III 11-13. 30, (drawing by K. Farrokh).

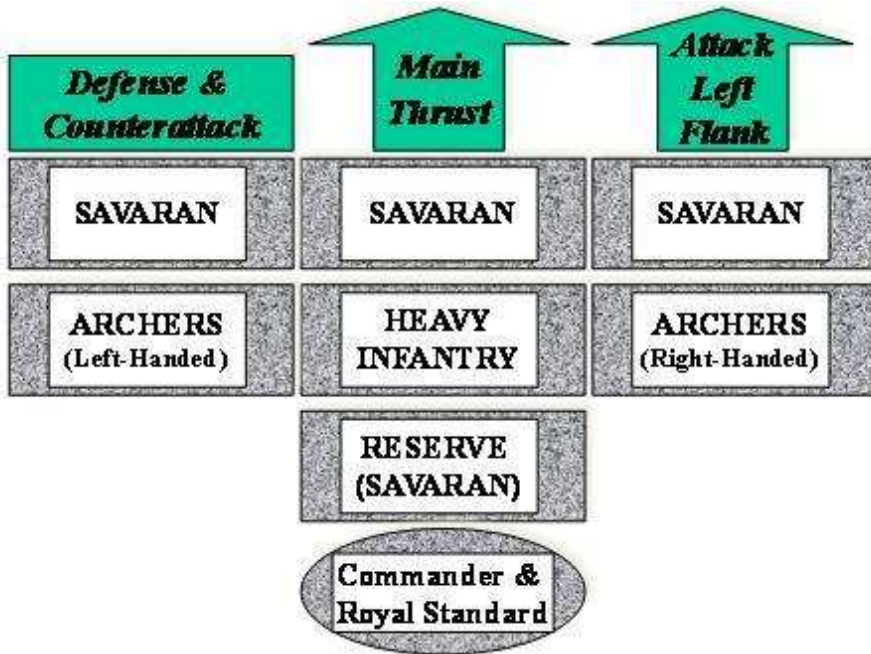


Fig. 54. One form of *Spāh* Battle Organization in the late Sasanian era, (drawing by K. Farrokh).

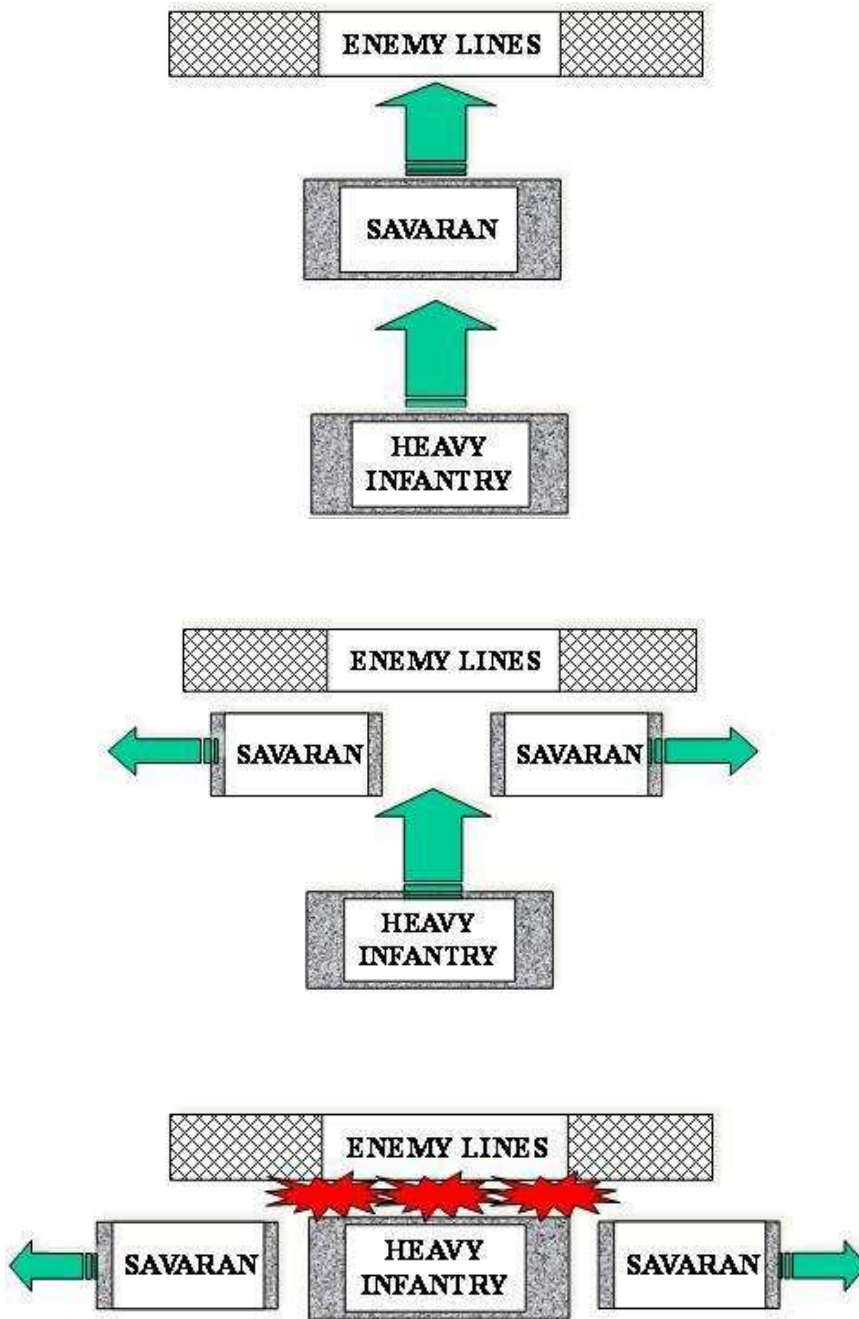


Fig. 55. The Battle of Singara (348?) by the *Chronicum Anonymum*, (drawing by K. Farrokh).



Sassanid Persian Savaran immortal - Ardeshir Radpour

**Fig. 56.** Dismounted *Savārān* officer with battle gear. Reconstructions by Ardashir Radpour (courtesy A. Radpour & H. Martin).



**Fig. 57.** *Savārān* warrior engaged in horse archery. Recreations by Ardashir Radpour (courtesy A. Radpour & H. Martin).



**Fig. 58.** Dismounted warrior engaged in archery. Recreations by Ardashir Radpour (courtesy A. Radpour & H. Martin).



**Fig. 59.** Dismounted *Savārān* officer with battle gear. Recreations by Ardashir Radpour (courtesy A. Radpour & H. Martin).

