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THE NATURE OF COMMAND IN THE MACEDONIAN SARISSA PHALANX*

Graham Wrightson

In his essay, “Hellenistic military leadership,” P. Beston reviews the successes of Hellenistic kings and generals who commanded their armies from the front, inspiring by example.¹ In all but one of his examples the individual in question commanded a cavalry squadron. This is hardly surprising. Horses by nature follow each other and so to direct an attack to where it is required the commander would be better served by leading from the front. The relative lack of structure in a cavalry squadron compared with an infantry battalion requires that the commander fight in the front rank. The speed of a cavalry charge would easily disrupt a formation so that maintaining contact within the unit would become increasingly difficult. The best way for a trooper to know where to go and what to do would be to keep his eyes on his commander ahead of him. This also explains why cavalry attacks could dissipate if the commander was killed. Nowhere does Beston comment on the leadership of generals among the infantry and, in his one reference to a general fighting on foot,² he simply says that he fought among the phalanx. Indeed the source does not say whether he led from the front, the middle, or the rear of the phalanx but merely that he inspired his men to final victory.

I propose that infantry officers in the Macedonian armies commanded their units from behind instead of from the front. This is an entirely new advancement in ancient armies. In all previous Greek warfare the general fought in the front ranks, inspiring his troops with personal leadership and direction. In the armies of Philip II and Alexander, however, infantry officers rarely fought in the front line and so rarely died in battle. Positioned behind his unit, the officer could direct the unwieldy phalanx to wherever it needed to go and was better able to communicate with his superior and fellow officers. For this purpose he employed aides, messengers and other signalmen to pass on orders. The need for maintaining formation outweighed the need for inspirational leadership in the front line. This allowed for tighter control of the infantry battalions and of the army as a whole.

* In this paper the following abbreviations will be used: Atkinson, *Comm.* – J. E. Atkinson, *A Commentary on Q. Curtius Rufius' Historiae Alexandri Magni Books 5 to 7,2* (Amsterdam, 1994); Bosworth, *HCA* – A. B. Bosworth, *A Historical Commentary on Arrian's History of Alexander*, vol. 1 (Oxford, 1980); vol. 2 (Oxford 1992); Walbank, *HCP.* – F. W. Walbank, *A Historical Commentary on Polybius*, vol. 2 (Oxford, 1967).

¹ In H. van Wees (ed.), *War and Violence in Ancient Greece* (London, 2000), 315-37. For other treatments of organization in the phalanx see: R. D. Milns, “Alexander’s Seventh Phalanx Battalion,” *GRBS* 7 (1966), 159-66 and “The Hypaspists of Alexander III – some problems,” *Historia* 20 (1971) 186-95.

² Polyb. 5.82-5. This is Ptolemy IV at Raphia in 217 but it is not clear he is leading the phalanx. He fights on foot having sought the safety of the phalanx but this does not mean he would necessarily assume command or lead from the front. In fact if he sought safety in the phalanx he would probably be stationed behind the front ranks. All dates *infra* are BCE unless otherwise stated.

Furthermore I shall propose that a senior infantry officer, such as a phalanx battalion commander, was on horseback in his command post behind his troops. This concept should not sound unusual since in the armies of 18th century Europe regimental commanders fought on horseback and left the direct command to the junior officers on the ground. Many of the infantry generals of Alexander and Philip went on to become cavalry commanders, notably Craterus, Perdikkas and Coenus. This fact alone suggests the aristocratic infantry generals would have been extremely experienced horsemen (see §4 below). Not only would being on horseback give the general a better view of the battle but it would also allow for ease of communication and movement. For the former the commander must have been accompanied by supernumeraries.

1. SUPERNUMERARIES

There is little direct information concerning supernumeraries in the army of Alexander. Hence we must use evidence from other Macedonian-style armies to attempt a reconstruction of Alexander's army. Egyptian documents concerning the Ptolemaic army and the tactical manual of Asclepiodotus are our two most detailed sources of information about later armies.³ Although changes must have occurred over the centuries that followed Alexander's death, the basic requirements of communication must have remained constant. Therefore, I shall use these two sources as the basis for my reconstruction to see how well their details coincide with the sparse evidence from the Alexander historians.

According to Asclepiodotus (*Tact.* 2.9), five supernumeraries accompanied each *taxis*. These constituted an army-herald (*stratokerux*), a signalmen (*semeiophoros*), a bugler (*salpingtes*), an aide (*hyperetes*) and a file closer (*ouragos*). Respectively they passed on orders by voice, by signal, by bugle, while the aide fetched whatever was required and the file closer brought up stragglers. Sekunda, in his analysis of the Ptolemaic army of the second century, concludes that there were only three—namely the *kerux*, *semeiophoros*, and *ouragos*—and that Asclepiodotus was wrong in naming five.⁴ If

³ Although Asclepiodotus is writing about a theoretical army structure it is possible that his description of the structure of a unit is an accurate reflection of the actual situation in Macedonian styled armies.

⁴ N. Sekunda, *Hellenistic Infantry Reform in the 160s BC*, (Gdansk 2006) 41. Using the names that survive in the papyri from Ptolemaic Egypt collected in the *Prosopographica Ptolemaica* he concludes that only three supernumeraries existed in the Ptolemaic army. Polybius has nine references to the *ouragos* and the *kerux* is commonly attested. The *semeiophoros* does not appear with any regularity but that is not a reason to discount the papyrological evidence for its existence in the Ptolemaic army at least and probably also in earlier armies. Sekunda uses the evidence of the Roman army and its three supernumeraries, the *signifer*, the *optio* and the *tesserarius*, as corroborative evidence equating the three that survive in the Ptolemaic papyri with these three Roman positions. But the lack of any instances of other supernumeraries in the papyri does not mean they did not exist. I do not want to propound an argument *ex silentio* but as Sekunda (*Hellenistic Infantry* 39) says "...the absence of them [heralds] in the records is perhaps a reflection of the sparsity of the evidence rather than of the non-existence of the rank before the 160's."

Sekunda can excuse the sparsity of the term *kerux* in the papyri, surely the same argument can be applied to the lack of references to the other two supernumeraries.⁵

The two extra supernumeraries that Asclepiodotus adds are thus the bugler (*salpingtes*) and the aide (*hyperetes*). *Kerux* usually signifies a herald who passes on orders by voice (see LSJ s.v. *kerux*: the word is also used of criers and auctioneers). In the chaos of battle the noise of the wounded and dying, and the general sounds of conflict, would prevent any message from a *kerux* being heard clearly by the soldiers. For this reason, armies in the ancient and medieval eras used buglers to relay messages, since the piercing sound of a bugle was more clearly discerned; although, as Curt. 5.2.7 notes, even this had its limitations (*tuba ... signum dabat, cuius sonus plerumque tumultuantium fremitu exoriente haud satis exaudiebatur*). The bugler was still being used in the gunpowder era, when the sounds of battle became even louder, and it was only the implementation of the radio that removed the necessity of a company bugler (although he was retained for ceremonial occasions).

There are numerous references in the Alexander historians to orders being given by the bugle (*salpinx*).⁶ On numerous occasions a bugler (*salpingtes*) is stated explicitly as giving orders to the different units in the army.⁷ Clearly buglers played an important role in dispensing instructions in Alexander's army.⁸ They may even have been children as they often were in British regiments in the 18th and 19th centuries.⁹

Aides (*hyperetai*) were used to convey messages between units and to do whatever was required by the commanding officer. They were the general help for the officer, as both the ancient and modern terms imply. An aide was indispensable to the commanding officer in doing the little things so that he could concentrate on the important task at hand of leading the unit. Wellington relied heavily on his aides during the Peninsular

⁵ Sekunda's assumption that since Ptolemaic Egypt was trying to mimic the army structure of the Romans they would have adopted every aspect is far from perfect. The size of the phalanx was reduced to match the Roman maniples because it was too cumbersome a unit but this reduction in size did not specifically require three supernumeraries only.

⁶ Diodorus has seven references to a bugle giving commands in book 17: 17.11.3; 17.25.1; 17.26.5; 17.45.7; 17.68.3; 17.89.1; 17.106.7. Arrian has seven: 1.14.7; 3.18.5; 3.18.7; 4.4.5; 5.24.3; 6.3.2; 7.3.6. Cf. the occurrence of *tuba* ("trumpet") in Curtius: 3.8.23 (Issus); 4.13.22 (Gaugamela); 5.2.7 (the trumpet cannot always be heard above the din); 5.4.17 (at the Persian Gates); 7.1.25 (on the role of the trumpet); 8.1.47 (Cleitus episode, to summon the troops); 8.11.11 (at Aornus); 8.14.10 (the Indians used drums in situations where Macedonians used the trumpet).

⁷ Arrian: 5.23.7 (x2); 5.24.2 (*salpingtai*: plu.). Diodorus: 17.86.5. There are many other references to buglers in historical works. Polybius for example provides 7 references and a further 17 concerning the use of the bugle. Diodorus has 37 other references to buglers and bugles.

⁸ It is very unlikely that a bugler was not used in the Ptolemaic army because of the necessity for the passage of clear orders. The lack of reference to one in the papyri occurs because the bugler was not important enough to be classed even as a junior or non-commissioned officer. The *kerux* may have taken over the role of the bugler in giving orders but the linguistic origin of the word must mean that originally there was a herald who used his voice to pass on orders and a bugler who used his bugle.

⁹ The Chigi Vase shows hoplites marching to flute players.

War and the failure of one aide to pass on instructions properly in the Crimean War had disastrous and infamous consequences.¹⁰ A general would certainly need aides and their existence lower down the command structure to facilitate better and faster communication between units is understandable.

There are many references to *hyperetai* in the ancient historians, although the word can refer to simple servants rather than aides specifically. Of the four references in Book 17 of Diodorus none refers specifically to aides in the army.¹¹ Polybius (11.22.4), when discussing Scipio's defeat of Hasdrubal at Ilipa, refers specifically to aides disseminating instructions to the tribunes and soldiers. Aides existed in the Roman army despite the lack of clear references to them. The same must have been true of Alexander's army. Alexander halted his pursuit at Gaugamela when he was told that the left wing of Parmenion was in difficulty (Arrian 3.14.4). Curtius (4.15.6-7) states that a certain Polydamas took the message to Alexander. Even though it is not explicitly mentioned, he must have served as a mounted aide to Parmenion.¹²

Ian Spence discusses the usage of the term *hyperetes* among authors in the classical era, in particular Xenophon, and concludes that the term referred to aides or attendants who were usually mounted. He adds that they were typically attached to the hipparch in order to convey orders and carry out all the other organizational tasks so as to leave the more pressing task of command to the officer himself.¹³ Undoubtedly there were aides in use in other units in the army and it is very likely that they were attached to infantry officers. The hipparchy was the main tactical unit in the cavalry and so it stands to reason that the main tactical unit in the infantry also had an attached aide. Spence also proposes that an aide was attached to a phylarch, the officer below the hipparch. This suggests that an aide may equally have been attached to a hekatontarch, just as

¹⁰ I refer of course to the Charge of the British Light Brigade at the battle of Balaclava where the hurried instructions given by an aide to the senior commander, Lord Lucan, to the Brigade commander, the Earl of Cardigan, caused the cavalry to charge directly at the Russian artillery at the foot of the valley instead of at the flanking positions on the hill to the right. Two thirds of the Brigade was killed and their exploits were immortalised in the famous poem by Alfred Lord Tennyson.

¹¹ Diod. 17.30.4 and 34.7 (attendants of Darius III); 17.107.3; 17.109.2.

¹² Waldemar Heckel argues that Polydamas was the commander of the Pharsalian cavalry who served as Parmenion's horse-guards (W. Heckel, *The Marshals of Alexander's Empire* (London & New York, 1992) 359-61; W. Heckel, *Who's Who in the Age of Alexander the Great* (Oxford, 2006) 225-6). If this is the case the news was disseminated by a subordinate officer, not an aide per se. However in most modern armies the staff officers who accompany the senior commander at brigade headquarters are often attached from other semi-independent commands. Polydamas was also sent by Alexander to take the order to kill Parmenion (Arr. 3.26.3; Diod. 17.80.3; Strabo 15.2.10 (724); Curt. 7.2.11-33) and was almost lynched by Parmenion's soldiers as a result (Curt. 7.2.29). He almost certainly functioned as a staff officer and aide-de-camp to Parmenion and probably continued this position under Alexander. See also H. Berve, *Das Alexanderreich auf prosopographischer Grundlage* 2 (Munich, 1926) 322-3 no. 648.

¹³ I. Spence, *The Cavalry of Classical Greece: A Social and Military History* (Oxford, 1993) 94-97

Asclepiodotus states. This would provide a structural mirror between the cavalry and the infantry regiments.¹⁴

Both the bugler and the aide are sensible and indispensable additions to the ranks of supernumeraries for a unit in battle. We have little evidence for the existence of aides in Alexander's army but buglers were certainly present. The fact that they do not appear in the papyri or stelae discussed by Sekunda is not a sufficiently strong argument on its own to discount this evidence and that given by Asclepiodotus for their existence in a later Hellenistic army. Nor is the fact that the tactical manuals of Aelian and Arrian also make no mention of these supernumeraries.¹⁵ Having all the supernumeraries at a lower level together does not preclude aides existing elsewhere. In most modern armies aides accompany all senior officers as well as individual units. The existence of a command corps or brigade headquarters is testament to the requirement of aides also working alongside generals and senior commanders.

The signalman, who is equated to the standard bearer in the Roman army by Sekunda, was probably used to give visual signals to other unit commanders or units in the rear. Visual signals given from the rear of the unit, where the signalman had to be in order to avoid disrupting the formation, would not be seen by the front line troops. In battle it is likely that most orders would have been conveyed by bugle, since the sharp noise of this instrument could be distinctly heard through the general din. But it is clear that one type of signal supplemented, or was substituted for, the other, depending on the circumstances (see Curt. 5.2.7). The herald and signalman would undoubtedly have been used along with the bugler when the unit was not fighting in a battle to convey orders on the march or while the army was encamped. Visual signals given by the signalman during a march would be the easiest way to convey a message back along the line. The herald was probably employed in a similar way to the *tesserarius* in the Roman army to organize passwords and guard duty while in camp, as Sekunda (*Hellenistic Infantry* 38) suggests. All three had their specific uses and were thus indispensable to the unit.

1.1 POSITION OF THE SUPERNUMERARIES

Since the role of the supernumeraries discussed above was primarily to pass on orders and to control the unit it is safe to conclude that they were stationed around the unit commander. In order to maintain a united and terrifying front of sarissas in the face of

¹⁴ Sekunda does conclude that *hyperetai* were present in the Ptolemaic infantry due to their prevalence in the papyrological evidence, but he places them at a higher regimental level. The only evidence he uses for this conclusion is that the term *hyperetes* does not appear regularly on the Lefebvre stele or on the other stelai he discusses. Sekunda concludes that the manipular *kerux* and *hyperetes* along with the hekatontarch fell out of use during the second century BCE but this does not preclude their existence in earlier times.

¹⁵ Sekunda's claim that Posidonius' aim was "to mention all under officers at the level of the manipule even though some, such as the *hyperetes*..., were found at a higher, regimental level" (*Hellenistic Infantry* 41) is not a sufficient explanation.

the enemy the supernumeraries would have had to be at the back or the side of the unit. Moreover, the fact that the file-closer (*ouragos*) collected stragglers suggests that he was at the rear. If the other supernumeraries were at the front of the formation they would disrupt the order of battle or interfere with maneuvers. If they were at the back any visual signals given by the signalman would not be seen unless the rear ranks turned round and passed the message forward. In the confusion and organized chaos of an ancient battle visual signals would have been difficult to see even if they were given from the front. The clouds of dust raised by armies on an ancient battlefield would have been significant (cf. Diodorus 17.60.4 on the dust at Gaugamela). The compact formation of the phalanx with protected flanks meant that these supernumeraries were safe behind the unit and could exert control without being disruptive to the formation.

For operations at the lowest level in the phalanx we have very little evidence in the Alexander historians. In this case we have no choice but to turn to Asclepiodotus for information. Asclepiodotus states that the supernumeraries used to be attached to the *taxis*, the name he uses to designate a formation of 128 men – 8 ranks by 16. Two *taxis* form a *syntagma*¹⁶ and he continues that it is at this level in the hierarchy that the supernumeraries now function. In Asclepiodotus' army the *syntagma* of 256 men¹⁷ is the main tactical unit in the infantry. In discussing the Ptolemaic reform of the infantry in the 160s Sekunda equates the Asclepiodotean *syntagma* with a Roman maniple.¹⁸ The army of Asclepiodotus does indeed perfectly echo the Roman manipular system, albeit in an ideal use of numbers.¹⁹ The Greek maniple is the *syntagma*, to which is attached the group of supernumeraries, and the lowest unit, the Greek century, is a *taxis*.²⁰

¹⁶ Asclepiodotus also terms it a *syntaxiarchia*.

¹⁷ This is translated by the Illinois Greek Club in the Loeb edition as “battalion.”

¹⁸ In his determination to prove the existence of a Ptolemaic maniple based on Roman evidence, Sekunda concludes that the former numbered anything between 128 and 256, but he thinks the latter “seems unlikely” (*Hellenistic Infantry* 36). It is not clear, however, whether Sekunda takes the number 128 to signify a maniple and assumes that Asclepiodotus has given the wrong name for the unit. He may simply think that Asclepiodotus' numbers are wrong and that the *syntagma* is indeed the Greek version of the maniple but the *taxis* of Asclepiodotus is something different. He proceeds to discuss supernumeraries linked to every maniple in the Ptolemaic army and discards Asclepiodotus. But if there were supernumeraries for every maniple, as there were in the Roman army, then we have to take Asclepiodotus' version that the manipular equivalent was the *syntagma* of 256. Sekunda confuses his argument by not setting out the numerical specifics of his interpretation of the Ptolemaic manipular reforms.

¹⁹ Sekunda states that “the Lefebvre Stele demonstrates that the *semeia* (Ptolemaic maniple) was divided into two centuries, presumably called *hekatontarchiae*, commanded by *hekatontarchoi* ‘commanders of a hundred’” (*Hellenistic Infantry* 31). This is exactly what Asclepiodotus states is the new name for the commander of the *taxis*. The evidence put forward by Sekunda matches perfectly with the tactical division given by Asclepiodotus despite Sekunda's claim that the theoretical nature of Asclepiodotus' system makes it unusable. Asclepiodotus is actually describing the ideal Hellenistic army after the manipular reforms sought by Sekunda, a fact that actually strengthens his argument for Hellenistic military reform in the 2nd century. Asclepiodotus' statement that the supernumeraries used to be attached to the level below shows that there was a change in the structure of the phalanx. The maniple is the tactical unit but the

Whether this organization existed in the army of Alexander is not clear. Since Asclepiodotus notes historical changes in the hierarchy of the phalanx then perhaps the previous practice was the one used by Alexander.²¹ Under Alexander the *lochagos* was the tactical commander of 128 men and there probably was no commander of 256 men just as there was no commander of 1024.²² If the *lochagos* references in the Alexander historians do refer to this command level then the supernumeraries were attached here, just as Asclepiodotus states. Whether or not the supernumeraries were attached to the unit of 128 in Alexander's phalanx their roles do suggest that they were stationed at the rear with the officer. The evidence from Asclepiodotus confirms that all of Alexander's phalanx officers did lead from the rear.

2. COMMAND FROM THE REAR

As I have demonstrated above it is likely that the supernumeraries and the commanding officer were at the back of the formation. So we see that the unit commander did not actually fight in the ranks with his soldiers but exercised command from behind. This is unusual in ancient warfare where infantry leaders usually inspired their troops from the front line as Alexander did among the cavalry.²³ If the lowest officer was stationed behind his unit accompanied by messengers then it is very likely that the more senior

lowest unit commanded by an officer is the century and this system was adapted by Egypt and is described by Asclepiodotus.

²⁰ This unit is commanded by a hekatontarch according to Asclepiodotus. He states it used to be commanded by a taxiarch. This is problematic because in the Alexander historians the taxiarch seems to be a very high ranking officer. Asclepiodotus may have decided against using the term *lochagos* for the commander of 128 since he uses it as the commander of a *lochos*, his base unit. In the army of Alexander the base unit was a *dekas*, as Asclepiodotus confirms. In the Alexander historians the *lochagos* is the lowest officer that is named in both the cavalry and the infantry. For our purposes Asclepiodotus' terms of taxiarch and hekatontarch should be understood as the equivalent to the use of the term *Lochagos* in the Alexander historians. See Appendix for a discussion of the *lochagos*.

²¹ This is further evidence that the Ptolemaic reform simply redefined the basic tactical unit. It used to be the *taxis* of 128 but was changed to the *syntagma* of 256. The reform simply moved the supernumeraries to the new tactical unit commander.

²² Numerically this would be a logical structure since the unit divisions would be organized by multiples of three: twelve *lochagoi*, three officers commanding units of 512 and one eponymous battalion commander of 1536. It is not clear what the title of the officer commanding 512 was in the army of Alexander. Pentakosiarch is not used very regularly in the Alexander historians and may have been instituted as a command in the hypaspists at the arrival of the reinforcements at Sittacene, as described by Curtius 5.2.3. Taxiarch may have been used to refer to this command level in the phalanx battalions as suggested by its position in the list of officers given in a passage of Arrian (3.9.6). But the term is often used as a general one for the commander of a unit and so we cannot be sure. See Appendix for a discussion of the *lochagos*.

²³ On the occasion at Sangala where Alexander personally led the infantry, he probably led the hypaspists, who were Macedonian hoplites, and so he led from the front as all previous and later hoplite commanders did Arrian 5.23.

commanders were also. Whether they too had their own buglers, heralds and signalers or simply stationed themselves with one of their subordinates is impossible to know. The overall commander of the battalion would have certainly required his own set of messengers to convey his orders to the subordinate officers and to keep in contact with the other parts of the army.

The casualty rate of Alexander's infantry officers sheds some light on their position in the battle line. The only battalion commander who is known to have been killed in a pitched battle is Ptolemy, son of Seleucus. The fate of the others is instructive. Coenus and Perdikkas were wounded by arrows at the battle of Gaugamela (Curtius, 4.16.32; Arrian, 3.15.2).²⁴ Curtius even states that they were almost killed. If they were leading their battalions in the front ranks then they would have been relatively safe from missiles.

All three Alexander historians state that Hephaistion was wounded at Gaugamela (Curtius, 4.16.32; Arrian, 3.15.2; Diodorus, 17.61.3). Curtius and Diodorus both add that he was injured by a spear thrust. Diodorus states that he commanded the *somatophylakes*, which probably refers to the Royal Hypaspists, as Heckel suggests.²⁵ This serves to highlight the difference in command between a sarissa phalanx and a hoplite phalanx, and consequently the difference in fighting styles. Hypaspists were armed in the traditional hoplite panoply and so their officers would have led from the front. In this capacity a wound from a spear thrust would be common.

Only one other battalion commander was killed during Alexander's campaign. Amyntas, son of Andromenes, was killed during the siege of a small town (Arrian 3.27.3). It is unlikely that phalangites used the sarissa during a siege as it would have been very difficult to take up a ladder.²⁶ Amyntas was probably leading his men from the front armed in the traditional, and more suitable, hoplite panoply.²⁷ Perdikkas was wounded at the siege of Thebes also showing the increased vulnerability of officers attacking a fortified position.²⁸ Alexander himself was severely wounded when leading

²⁴ Diodorus 17.61.3 does not mention them being wounded by an arrow. Arrian does not mention Perdikkas being wounded. This omission may have been by the anti-Perdiccan source Ptolemy (Heckel, *Who's Who* 328 n.535). Menidas is also stated to have been wounded by an arrow but he commanded the mercenary cavalry. See Heckel, *Who's Who* 165.

²⁵ Heckel, *Who's Who* 133.

²⁶ Ptolemy famously used a sarissa in defence to put out the eye of the leading elephant attacking the Fort of Camels (D.S. 18.33.3-34). There is no suggestion that the attackers were using sarissas or that defenders used them against anything other than the elephants. Ptolemy went on to throw other defenders from the ladders but there is no indication that he used the sarissa to do this.

²⁷ A. B. Bosworth (*The legacy of Alexander: Politics, Warfare, and Propaganda under the Successors* (Oxford, 2002) 83) argues that the people under Ptolemy at the Fort of Camels were not hypaspists as such but people going 'under shields'. This is an unlikely conclusion since the form *hyperaspizo* is used for such occasions.

²⁸ Arrian 1.8.3. He states he led his battalion to attack without orders but Diodorus 17.12.3 does not confirm this.

an attack on a city of the Mallians in India.²⁹ Clearly leading infantry from the front was a dangerous occupation for officers, whatever their abilities.³⁰

The relatively few instances of injury or death among Alexander's battalion commanders can best be explained if they were stationed in the rear. The circumstances of Ptolemy's death confirm this. He was killed at Issus (Arrian 2.10.7) when the Greek mercenaries of the Persians attacked a significant gap that had appeared in the Macedonian phalanx where they were struggling because of the difficulties of the terrain. Arrian adds that Ptolemy "showed himself a brave man" and that about 120 "notable" Macedonians also died. This would have been a significant loss for the Macedonian phalanx thus revealing the fragility of a broken phalanx formation and the difficulty of Ptolemy's task in filling the gap. The fact that Arrian describes them as 120 Macedonians of note suggests that significantly more rank and file also died. If Ptolemy was at the rear of the phalanx when this gap formed, then he must have personally intervened to close the breach and inspire his men. Or the Greeks were able to advance right through the gap and attack Ptolemy at his command post in the rear. Had the breach formed with Ptolemy fighting in the front ranks then he would have been powerless to counter the threat.

So we see that all the officers in the infantry probably fought behind the phalanx in order to maintain control over their men and to enable easy contact with other units and officers. The relatively low casualty rate of the officers of the phalanx battalions in the four main battles of Alexander proves that they were stationed in relatively safe positions. Significantly more officers were injured in various sieges because they were exposed as much as the common infantryman while inspirationally leading the attack from the front. Cavalry officers were injured or killed more often than infantry commanders in battles because they fought in the front ranks.³¹

3. RESERVE TROOPS

This raises the question of whether some troops were held in reserve of the front lines of the phalanx. If such a gap did appear in a phalanx during a battle the unwieldy nature of the sarissa would prevent the units on either side of the gap from turning to fill the void

²⁹ Arrian 6.9.5-13.4; Curtius 9.5. In order to spur on his troops in the siege Alexander led the scaling of the wall, accompanied by only a few other men. In the eagerness of others to follow the ladders collapsed and Alexander and those with him were forced to jump inside the wall at the mercy of all the Indians. Alexander was shot by an arrow in the chest and collapsed from the wound. Most of his army believed he was dead and so massacred every man, woman and child in the city in retaliation.

³⁰ The fate of many hoplite generals confirms this. Perhaps the most significant was the death of Epaminondas at Mantinea or of Agis III at Megalopolis.

³¹ For example Neoptolemos and Craterus, former infantry commanders in Alexander's army, were both killed leading cavalry in battle with Eumenes in 321 (Diodorus 18.30-33; Plutarch *Eumenes* 6-8; Justin 13.8). The number of injuries suffered by Alexander alone suggests the relative vulnerability of cavalry officers in a battle.

quickly. The only way of plugging the hole before the phalanx was defeated would be to bring up another unit from the rear and insert it into the gap. If all the troops were in line with no reserves such a relief force would be unavailable at short notice. It is likely that at least one unit was held in reserve in order to fill any gaps that may appear in the line. Also the benefits of a phalanx with a depth of sixteen ranks in close order when compared with a phalanx with a depth of eight ranks are minimal due to the length of the sarissa and the lack of need for weight of numbers to provide a greater forward impetus.

If each phalanx maintained a reserve it is possible that one formation of eight files by eight from each unit was stationed behind the other with the supernumeraries and the officer stationed in between. This would be a strong formation and would prevent any holes that may appear in the front lines from being too disastrous. It would however halve the total front of the whole phalanx, but in most battles this would not be a problem. At Gaugamela where the Macedonians needed to extend their line as far as possible the reserve unit was probably inserted into the front line to extend it sufficiently. This would explain why the Greek allies were placed behind the phalanx as a reserve force because the usual second line of reserve units was not present.³²

Asclepiodotus describes three formations of the phalanx: Open order, close order and locked shields. The first has an interval of four cubits between each man, the second has two cubits and the third one cubit.³³ He states that these distances have been adopted through historical usage and we have no reason to discount this evidence. So if a *lochos* had eight men across its front and sixteen behind in two parts,³⁴ its total frontage would have been 48 feet in open order, 24 feet in close order and 12 feet with locked shields. Every unit of 1536 would have a front of 576 feet, 288 feet and 144 feet. Finally the whole phalanx of 9216 would have a front of 3456 feet, 1728 feet and 864 feet. That is just over a kilometer for the whole phalanx in open order and 500 metres for the more usual close order. This would be an adequate frontage for the phalanx under most

³² Arr. 3.12.1-5; Curt. 4.13.26-36; Dio. 17.57.1-6. It is my belief that the Greek allied hoplites in Alexander's army were usually stationed on the left of the sarissa phalanx in order to protect the flank. In this position they would have mirrored the role of the hypaspists on the right flank in providing a link between cavalry and infantry in attack and defence. Arr. 2.9.3 states that the foreign mercenaries were drawn up in support of the whole line but no mention is made of the Greek allies specifically. The Greek allies are not mentioned in the battle descriptions of the Alexander historians until Gaugamela. In this case their positioning behind the battle line is noted because of its novelty. They must ordinarily have been stationed elsewhere and their armament suggests they were suited to protecting the flank of the phalanx while linking with the allied cavalry on the left of the line.

³³ A cubit is approximately 18 inches. There were two standard measurements of the cubit and it is not clear which Asclepiodotus is using. What we can suggest is that if the locked shields position required shields to overlap then the space between each man must be slightly less than the diameter of the shield. A phalangite's shield was just under two feet in diameter. This would fit well with a cubit of just over 18 inches as used by Asclepiodotus.

³⁴ See Figure 3 for the formation of a *lochos* and the supernumeraries.

circumstances. If greater length of the line was needed, such as at Gaugamela, the rear half of the *lochos* could be brought forward easily to double the frontage.

Polybius provides us with the frontage of the Macedonian and Persian lines at the battle of Issus when he criticizes Callisthenes' description (Polyb. 12.17-22 = *FGrH* 124 F35). He concludes that a phalanx drawn up sixteen deep would have 1600 men per stade allowing six feet for each man (Polyb. 12.19.7-9). A stade was approximately 182 metres or 600 feet.³⁵ This fits well with our calculation above that one *lochos* of 1536 men would have a frontage of 576 feet in open order, allowing roughly six feet for each man.³⁶ Polybius goes on to calculate that ten stadia would hold 16,000 men and twenty stadia 32,000.³⁷ He states that the distance in which the armies drew-up at Issus was less than ten stadia.³⁸ He rightly calculates that it would be impossible to accommodate Alexander's army of roughly 42,000 infantry drawn up in open order in such a small space.³⁹ But Polybius' calculations assume that all of these infantry were members of the phalanx. In fact only 9000 men served in the phalanx and would have needed six feet of distance for each man to march with their sarissa in open order. Using our calculations for unit frontage above Alexander's sarissa phalanx drawn up sixteen men deep would have occupied just over five and three quarter stadia in open order. The cavalry followed behind, as Callisthenes states (Polyb. 12.15.5). The other infantry would easily fill out the remaining stadia in whatever marching order the hypaspists, Greek allies and mercenaries would have used.

According to Polybius, Callisthenes states that the phalanx redeployed from 32 men deep at the outset, to sixteen men as space allowed. Finally it drew up 8 men deep on

³⁵ There are different measurements of the stade in Greece. All of them are around 600 feet with the variances in extra inches.

³⁶ Each battalion would have an approximate frontage of a stade in open order. Alexander's phalanx would then be approximately six stadia across. The hypaspists would have added approximately another 2 stadia. In close order the phalanx and the hypaspists together would have occupied roughly 4 stadia of frontage when 16 men deep.

³⁷ Polybius 12.21.7 states that the phalanx of 32,000 would need eleven stadia. But he incorrectly assumes each man needs a space of 6 feet. In fact the required space would be 3 feet per man and only 5 and a half stadia as Walbank (*HCP* 2.373-4) rightly concludes. Polybius states that the phalanx would have been in close order (12.21.3).

³⁸ Polybius 12.21.4-6. As Walbank discusses in his commentary on Polybius Callisthenes' distances are exaggerated and there is no space as small as fourteen stadia where the battle could have occurred. See Walbank, *HCP* 2.365-7. D. W. Engels (*Alexander the Great and the Logistics of the Macedonian Army* (London & LA, 1978) 133-4) argues that the distance of fourteen stadia given by Callisthenes fits best with the battle site of the Payas River. Although this is true Polybius' conclusion of ten stadia is far too small for any site in Cilicia.

³⁹ Walbank (*HCP* 2.371-4) discusses the discrepancies in the troop totals for Alexander. He concludes a total of just over 30,000 infantry as Arrian states 1.2.3.

approaching the enemy (Polyb. 12.18.6).⁴⁰ Callisthenes does not account for any change in order. Clearly if Alexander's phalanx was nearing the enemy it would not have been drawn up in open order. Polybius is right that even a phalanx of 9000 drawn up 8 men deep in open order would not fit into a space of ten stadia. However drawn up in close order its frontage would be the same as when drawn up in open order sixteen men deep. If the phalanx held a reserve force of half of each *lochos* even when marching eight deep in close order then the frontage would be half, around three stadia, and one and a half with shields locked.

Polybius concludes that Callisthenes' description is wrong and that Alexander's army must have been drawn up in a double or quadruple phalanx because of the terrain and the proximity to the enemy.⁴¹ What he means by this is not clear.⁴² If a double phalanx was two lines of men drawn up eight deep, then this is the formation described above with half a *lochos* held in reserve. Alexander held back the allied mercenaries behind his whole line as extra protection (Arr. 2.9.3). This allowed him the freedom to engage his phalanx fully without worrying about any attack from the rear.⁴³ When Callisthenes states that Alexander drew up his men eight deep on approaching the enemy he must be referring to a change in order, from open to close, rather than extending the line of the phalanx.⁴⁴

At Issus Alexander had no need to extend his phalanx from its usual organization and in fact was prevented from doing so by the terrain. The phalanx was presumably drawn up sixteen men deep with half of that depth held in reserve. At a distance of 40 stadia from the enemy Alexander drew up his phalanx in close order with the same depth allowing the cavalry to move into position in the extended battle line. Callisthenes says they then marched in this extended line until in direct opposition to the Persians (Polyb. 12.20.1). The confusion occurs because in close order with a reserve of half the

⁴⁰ Curt. 3.9.12 also states they were drawn up 32 men deep to begin but changed frontage as they marched. Arr. 2.8.2-4 describes the change from column into phalanx but does not provide any details about the depth of the ranks.

⁴¹ Polybius 12.20.7. As Walbank, *HCP* 2.373, points out, Callisthenes is wrong in the troop totals and distances not in the marching order that Alexander adopted.

⁴² Walbank (*HCP* 2.374) assumes that Polybius means a phalanx drawn up 16 and 32 men deep.

⁴³ The Greek mercenaries from the Persian side who broke through Alexander's phalanx and escaped to the foothills may have been allowed through by the reserve force of mercenaries. Perhaps this was because of Alexander's treatment of the Greek mercenaries at the Granicus or because of some feelings of kinship between the Greeks fighting for Alexander and those of the enemy. The mercenaries must have been stationed a fair distance behind the battle line since they did not join the fray when Ptolemy's phalanx battalion was hard-pressed. If they were designated as reinforcements for the front lines they would have been severely criticized for not coming to the assistance of the phalanx. They must have been intended as a rear guard to protect the baggage and Alexander's route to his rear and were stationed a significant distance from the battle itself. This is different from the positioning of the allied Greek hoplites at Gaugamela behind the front lines in order to defend against any flanking attacks from the Persian cavalry.

⁴⁴ Polybius of course could be correct that Callisthenes is just wrong on all counts.

lochos the front lines of the phalanx would only be eight men deep even though the overall depth was still sixteen.

Polybius' criticisms of Callisthenes reveal to us the marching order of Alexander's phalanx and consequently its frontage.⁴⁵ Even assuming some exaggeration on Callisthenes' part his description of the marching order and the approximate distances has been taken as reliable. The errors that Polybius makes in his discussion through a desire to discredit Callisthenes allow us to correctly calculate the frontage of the phalanx. In fact his description supports the argument for the existence of a reserve of half the *lochos*.

4. GENERALS FIGHTING ON HORSEBACK

It is very possible that at least the generals of the phalanx regiments, if not lower officers, fought on horseback.⁴⁶ Coenus, Perdikkas, Craterus, and "White" Cleitus all became hipparchs after they had achieved prominence through their commands of phalanx battalions. There are some commanders who did not lead cavalry later but they are the exception that proves the rule.⁴⁷ Neoptolemus, the commander of the hypaspists after Nicanor, died leading a cavalry charge against Eumenes in 321. Seleucus, the commander of the Royal Hypaspists at the Hydaspes (Arr. 5.13.1-4), led cavalry attacks in various battles after Alexander's death. That six of the most important infantry officers of Alexander became cavalry commanders suggests that they had more than a rudimentary understanding of warfare on a horse. All Macedonian nobles would have been trained in the use of a horse in warfare. The page system, where the youths of the Macedonian nobility were taken to court for their education, involved a great deal of training with horses.⁴⁸ Infantry commanders must have continued to hone their equestrian skills in order to be able to command cavalry with such distinction later in their careers.

⁴⁵ Polybius goes too far in his criticism when he states that it is inexplicable that a sarissa phalanx attacked the Persian line up the river bank. This would have been possible for Alexander's expertly trained soldiers, as the battle of the Granicus shows. The fact that so many of Alexander's phalangites were killed and wounded at Issus defending a hole that appeared in the line suggests that Callisthenes' description of the terrain was somewhat accurate.

⁴⁶ Rupert Matthews *Alexander the Great at the Battle of Granicus* (Stroud, 2008) suggests this without referencing how he came to this conclusion.

⁴⁷ Polyperchon and Meleager are the two most prominent generals who did not lead cavalry. Heckel (*Marshals* 167) notes that Meleager "was the only surviving taxiarch of those who held the office in 334 who had not risen above that rank." He attributes this failure to become hipparch to Meleager's character. Also see Heckel *Who's Who* 160. P. Green, *Alexander of Macedon* (London, 1974) 388, comments that "if Meleager never reached field rank this was, in a sense, just retribution for plain stupidity."

⁴⁸ See Heckel, *Marshals* 91-106 for Leonnatos as the best illustration of "the career of the gifted and well-born Makedonian". Cf. W. Heckel "Somatophylakia: a Macedonian *cursus honorum*," *Phoenix* 40 (1986) 279-294.

Furthermore, as mentioned above, Coenus and Perdiccas were wounded by arrows at Gaugamela. The protection afforded to the infantry by the upright sarissas of the rear ranks of the phalanx meant that few phalangites were injured by missiles. If both men commanded their phalanx battalion on horseback they would have been more exposed to injury from missiles and would have been a very visible target for the enemy archers. It would not be surprising if officers were marked out for attack by the enemy before the rank and file. Usually the death of the general means the defeat of the army. Ancient archers probably would have targeted the officers in the enemy line to throw them into confusion, just as snipers have targeted them throughout the history of warfare. It could simply have been two lucky shots to hit both Coenus and Perdiccas while on the ground behind the phalanx, but this is highly improbable.

If commanders were on horseback behind the unit they would get a much better view of the overall situation and the dispositions of their men and be better able to maintain alignment with the rest of the battle line. In an age where aerial views of the battlefield and advanced reconnaissance were unavailable, the general had to do his best to maintain a strong sense of the events of the battle as they unfolded.⁴⁹ The positioning of a commander behind his men is desirable so that he can maintain direct control over his troops. The elevation of the commander on a horse and his consequent flexibility of movement and direction aid in this control.

It is unlikely that any officer other than the phalanx commander was on horseback since lower level officers in the infantry, even today, like to undergo the same hardships as their men. Because of this they would most likely have been on foot in order to march in company with their men. Infantry messengers and aides probably also rode horses so that they could carry orders more quickly around the battlefield, especially the aides of the senior commanders. In early gunpowder era warfare, aides and subalterns rode on horseback around the extensive battlefields and it is highly probable that they did the same in the Macedonian army.

5. COMMAND CONCLUSIONS

So we see that infantry officers fought behind their respective units, accompanied by messengers and aides and in between the front units and any reserve units. The senior officers in each phalanx probably rode on horses giving them a better view and consequent understanding of the battle. The messengers were probably also mounted so that they could pass messages more quickly. This means that Alexander's army was one of the first in the ancient world where none of the infantry officers led from the front but directed the battle from the rear.

Alexander and the cavalry were obviously different where the officers fought alongside, and usually at the head of, the rank and file. Since this was Alexander's strike

⁴⁹ The improved, and advantageous, view of the battle available to mounted infantry commanders is similar to that achieved by Rommel when he based his battle plan on personal aerial reconnaissance even though he was a tank commander.

force, personal leadership was much more effective here than in the infantry battalions. This also highlights the different roles that the infantry and cavalry played in Alexander's battle plans. The infantry phalanx was to maintain formation and to hold the enemy, forming the solid and immovable centre of the battle line. The cavalry, on the other hand, were the shock troops, which were expected to be extremely mobile and aggressive in exploiting any weakness on the part of the enemy. For the infantry officers, control was more important than leading from the front since they rarely attacked at any speed. For the cavalry the shock of the charge was better achieved if the officers were at the front directing the attack personally. Moreover horses by nature follow each other and so if the officers were at the front they could lead the whole unit much more effectively than simply by giving orders from behind. The two different roles in battle called for different styles of leadership, which resulted in two different positions of commanders on the battlefield.

The infantry of the Macedonians foreshadowed the structure of infantry regiments in the eighteenth and nineteenth centuries. The Macedonian army was the first truly national, professional army and the first to adopt command from the rear as a necessary means of directing well-ordered infantry in the chaos of a battle. It was this sound structure that allowed the Macedonians to defeat the Greeks and Persians so easily and by doing so they changed the nature of infantry warfare and command forever.

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Figure 1: Table of numbers of the phalanx of Alexander

| Unit | Troop total | Commander |
|---------------|-----------------------------------|--|
| <i>Dekas</i> | 16 | Dekadarch (1 <i>Dimoirites</i> & 2 ten stater men as subalterns) |
| <i>Lochos</i> | 128 (8 <i>Dekades</i>) | <i>Lochagos</i> |
| Taxiarchy (?) | 512 (4 <i>Lochoi</i>) | Taxiarch (?) |
| Battalion | 1536 (12 <i>Lochoi</i>) | Eponymous general |
| Phalanx | 9216 ⁵⁰ (6 Battalions) | No specific commander |

Figure 2: Table of numbers of the Hellenistic phalanx as described by Asclepiodotus

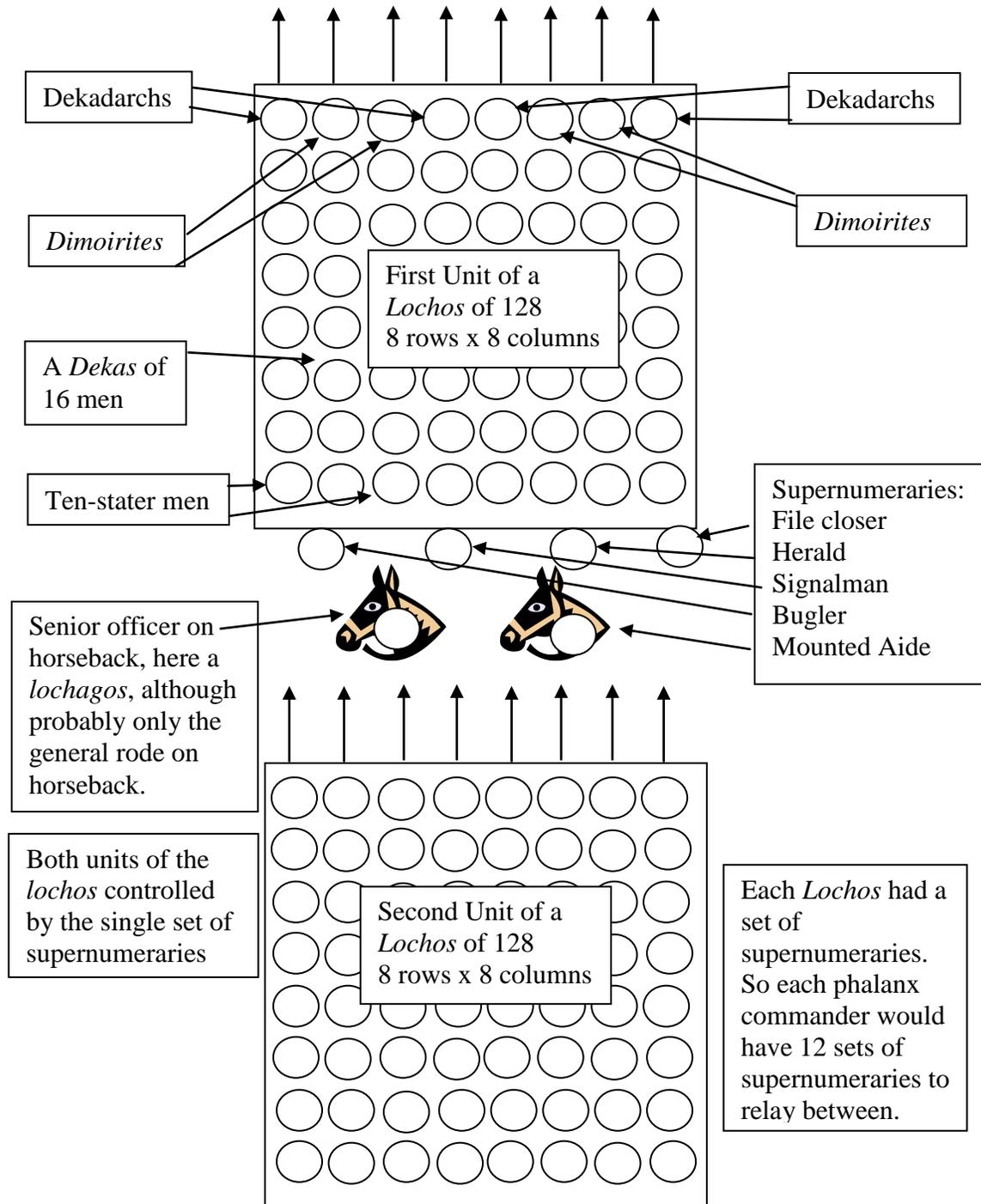
| Unit | Troop total | Commander |
|--|--------------------------|---|
| <i>Lochos</i> <i>Hemilochion</i> renamed after reorganization (<i>Dimoiria</i>) ⁵¹ | 16 (changed to 12 later) | <i>Lochagos</i> [<i>Ouragos</i> as the second in command] <i>Hemilochites</i> (<i>Dimoirites</i>) |
| <i>Dilochia</i> | 32 | <i>Dilochites</i> |
| <i>Tetrarchia</i> | 64 | Tetrarch |
| <i>Taxis</i> (later <i>Hekatontarchia</i>) | 128 | Taxiarch (later Hekatontarch) |
| <i>Syntagma</i> ⁵² | 256 | Syntagmatarch |
| <i>Pentakosiarchia</i> | 512 | Pentakosiarch |
| <i>Chiliarchia</i> | 1024 | Chiliarch |
| <i>Telos</i> (<i>merarchia</i>) | 2028 | Telarch (<i>merarch</i>) |
| <i>Phalangarchia</i> | 4056 | Phalangarch |
| <i>Diphalangia</i> (<i>keras</i>) | 8112 | Kerarch |
| Phalanx | 16224 | General |

⁵⁰ This is before the arrival of a seventh phalanx battalion at Sittacene with the reinforcements.

⁵¹ The parentheses indicate the terms used when the units were altered.

⁵² In Asclepiodotus' army the *syntagma* is the main tactical unit as discussed above. This is the level to which the supernumeraries were attached after a reform. Previously they were attached to the level below.

Figure 3: The formation of a *Lochos* with reserve unit and supernumeraries



APPENDIX: *LOCHAGOI*

The term *lochagos* appears in Arrian only three times, suggesting the low status of this officer in Alexander's army.⁵³ The first occasion is just before the battle of Issus when Alexander rode along the front of his line and addressed by name his commanders, not only generals but *ilarchs* and *lochagoi* also (Arr. 2.10.2). Arrian's point here is that Alexander knew the names of men who were low down in the hierarchy of command, thus suggesting that a *lochagos* was possibly the lowest officer in the army.

The second instance of Arrian using the term is just before the battle of Gaugamela when Alexander told his officers to encourage their own men (3.9.6). The order of the list that Arrian gives is probably a general list also, showing that Alexander gave personal instructions to all his officers whether a *lochagos* or a general. Here again the *lochagos* seems to be the most junior commander in the infantry and even in the army as a whole. We can see here a possible order of rank for officers. In order Arrian lists *lochagos*, *ilarch*, *taxiarch* and *phalanx* commander.⁵⁴ An *ilarch* was the lowest cavalry commander, until Alexander split the cavalry *ilai* into two *lochoi*, when this distinction went to the *lochagos*. An *ilarch* then commanded roughly twice as many troops as a *lochagos*. There is no clarification by Arrian to determine which parts of the army these officers were from. They may all have been from the phalanx or a mixture of the whole army. All we can say for certain is that the *lochagos* is the lowest officer on the list.

The final appearance of the term is when Alexander received the reinforcements of Amyntas and distributed them among the army. Arrian states that Alexander formed two companies (*lochoi*) in each cavalry *ile* where before there had been none and he appointed *lochagoi* for each company.⁵⁵ While it is dangerous to use the relative unit strengths of the cavalry as evidence for unit strengths of the infantry, we can nonetheless conclude that a *lochagos* is indeed the lowest officer that we find in the Alexander historians.

Brian Bosworth suggests that the introduction of new commands into the hypaspists was a "parallel reorganization" to that of the Companion cavalry.⁵⁶ Curtius (5.2.6) states that the new commanders of the cavalry were not appointed by nationality. Arrian (3.16.11) states that the *lochagoi* were chosen from "men distinguished for courage

⁵³ Asclepiodotus tells us that the smallest file in the Macedonian infantry was a *lochos* (*Techne Tactike* 2.2.1) and that the commander of the file was the *lochagos* (*Techne Tactike* 2.2.3). *Lochagos* appears a large number of times in Greek sources — 433 times in the *TLG* — showing the multipurpose nature of the word. Diodorus uses it only three times and all to do with Greek armies. Xenophon uses the term 128 times and Dionysius of Halicarnassus 42 times. I will not cite all of the instances here due to space considerations.

⁵⁴ Since we are dealing with infantry and cavalry we cannot speak of relative seniority. If anything, a cavalry officer ought to be regarded as superior to an infantry commander — but this does not stand up to prosopographical analysis.

⁵⁵ Arrian 3.16.11. Here we see again that a *lochagos* is a minor officer.

⁵⁶ Bosworth, *HCA* 1.320

among the Companions”. Previously, as noted by Curtius, the cavalry squadrons were organized by tribal affiliation. If the appointments of *lochagoi* in these squadrons were not by nationality but by merit then it is a significant change in the nature of Alexander’s cavalry. Bosworth suggests that the reorganization of the cavalry and the infantry was due to existing “tensions between Alexander and his high command.” He notes that because of this “it would have been prudent to interpose an additional link in the chain of command between the regional ilarch and his men.”⁵⁷ Whatever the reason the *lochagos* was the lowest officer in the Macedonian cavalry after the reorganization but did not exist there before. However, this officer must have existed in the army elsewhere before the arrival of the reinforcements.

Where then might we find the *lochagos* in the hierarchy of the phalanx? If we exclude the three thousand hypaspists who crossed the Hellespont with Alexander, there are nine thousand Macedonian infantry who filled the six battalions of the phalanx.⁵⁸ Each battalion numbered 1536 men and was commanded by an eponymous officer.⁵⁹ For a command structure to jump from an officer commanding 16 men, the base file, to an officer commanding 1536 men is difficult to imagine. If we work down the ladder of infantry command we see that there were six battalions of *pezhetairoi* each under a general. If we assume that the basic unit was sixteen men, as Arrian says, then we have 96 basic units in the battalion. Sixteen basic units of sixteen give 256 men and six of these give the battalion total of 1,536. In the Alexander historians the terms taxiarch, pentakosiarch and chiliarch are used to refer to infantry officers.

Sekunda shows that the terms chiliarch and pentakosiarch disappear from usage in Ptolemaic Egypt after the 2nd century. He uses this evidence to show that the Ptolemaic reform was to institute commanders of 256 men instead of commanders of 500 and 1000.⁶⁰ Since he believes that Alexander’s phalanx battalions had pentakosiarchs and chiliarchs he has to explain their disappearance. Under Alexander these officers existed only in the hypaspists, where the troop totals were three units of a thousand.⁶¹ The

⁵⁷ Bosworth, *HCA* 1.320-1.

⁵⁸ For direct evidence see the battle dispositions of Alexander’s army at the Granicus, Issus and Gaugamela.

⁵⁹ It has been argued that the arrival of reinforcements at Sittacene prompted an increase in the size of Alexander’s phalanx battalions to 2000. See: J. E. Atkinson, “The Infantry Commissions awarded by Alexander at the end of 331 B.C. (Curtius Rufus V 2.2-5)” in W. Will (ed.), *Zu Alexander d. Gr.* (Amsterdam, 1987) 413-35; Milns, *GRBS* 7 (1966) and T. Daniel, “The Taxeis of Alexander and the Change to Chiliarch, the Companion Cavalry and the Change to Hipparchies: A Brief Assessment,” *Ancient World* 23.2 (1992) 43-57.

⁶⁰ Sekunda (*Hellenistic Infantry*) has argued that the Ptolemaic infantry went through a reform in the 160s to copy the Roman legion’s hierarchy. He argues that it was not until then that a commander of 256 men was introduced and that this unit became the basic tactical subdivision of the phalanx. Asclepiodotus also states that the base tactical division in a phalanx moved to the unit of 256, but that before this it used to be at the level of 128 men.

⁶¹ Chiliarch and pentakosiarch references in the Alexander historians: Arr. 1.22.7, 3.29.7, 4.30.6, 5.23.7, 7.25.6; Plut. *Alex.* 76.3; Curt. 5.2.3. Chiliarchs are mentioned in Alexander’s army before the

reason for their disappearance under the Ptolemies is probably that the Guard regiment, that was the equivalent of the hypaspists, was reformed along Roman lines and pentakosiarchs and chiliarchs were not required.⁶² The normal phalanx battalions were still organized according to the fourth century practice of 1536 men. The new hierarchical reform instituted commanders of 256 as the tactical unit commander. Perhaps this command was implemented at the expense of commanders of 512, in order to mimic the Roman maniple.⁶³

reinforcements arrived at Sittacene but it is not clear which command they held in the army. The new appointments created, as mentioned by Curtius, were of chiliarchs and pentakosiarchs among the hypaspists. There was no strengthening and reorganization of the existing phalanx battalions.

⁶² Sekunda states that Roman equipment was adopted throughout the Ptolemaic infantry at the same time as these reforms took place in the 160s. His argument of using painted evidence as the proof of armament changes in the Ptolemaic army is by his own admission "...rather circular, and the paintings cannot therefore be taken as evidence in support of the infantry reforms" (*Hellenistic Infantry* 79). The other evidence he uses is also far from secure in proving that the armament of the whole Ptolemaic infantry was changed to match the Roman at any time, let alone during the second century. The fact that Ptolemaic soldiers are pictured with shields and spears does not mean that the sarissa was abandoned as the standard armament. In the army of Alexander hypaspists were armed with a spear and shield as their main weapon and it is possible that all the soldiers of the phalanx used a spear in sieges or at other times where a sarissa was impractical. A unit of hypaspists or royal bodyguards was used in the Ptolemaic army from its inception and so there was at least one unit in the army that used a spear as its principle weapon. These changes in armament to match the Roman equipment then could have simply been an alteration in the armament of the unit(s) that used a shield and spear anyway. Moreover as Sekunda reminds us "Hellenistic painted funerary *stelai* showing soldiers tend to show them wearing 'walking out dress' rather than 'battle dress'" (*Hellenistic Infantry* 68). Soldiers would not have taken their sarissas with them as part of their 'walking out dress' but could conceivably have taken their spears and shields, with which they were also trained and equipped. Alexander's infantry also used the sword on occasion, and this was undoubtedly the most suitable personal armament. This also supports the theory that these pictures represent 'walking out dress' and not wholesale armament changes in the Ptolemaic infantry. The Ptolemaic infantry did not adopt the Roman weapons as well as their command structure because they wanted to maintain the weapons with which they were familiar. Although it was the Roman use of the javelin and the short sword that formed the basis of their military success, Egypt may not have wanted to completely retrain its whole army. Sekunda's conclusion that Roman tactics and equipment were adopted at the same time as Roman tactical organization then is a tentative claim not wholly supported by the evidence.

⁶³ The Ptolemaic reform of the phalanx probably also included the creation of pentekontarchs at a level below hekatontarchs. Sekunda shows that pentekontarchs did not exist earlier than the 160s. He argues that the number of men in a *pentekontarchia* was nearer 32 than the 64 it would have to be to fit with the *hekatontarchia* of 128 men described by Asclepiodotus. However even in trying to impose the Roman tactical divisions onto the Ptolemaic army he has to conclude that there is no extant evidence for Roman commanders at a level below the centurion. If the normal complement of a *pentekontarchia* was 64 then the numbers in the units revealed on the Lefebvre Stele are a lot less than half the normal total. It is possible that the reforms maintained the previous structure of officers (taxiarch/hekatontarch; syntagmatarch, regimental officer) but altered the number of troops in the units so that the base unit of the dekas was altered from 16 men under Alexander to 10, 8 or 6 as Sekunda suggests. This would make the actual numbers of men in the Ptolemaic century and maniple closer to the Roman army numbers. Whichever number was the base unit for calculating unit totals the overall structure of command in infantry regiments remained the same.

Sekunda states that the papyri and *stelai* in Ptolemaic Egypt show that the maniples were grouped into six and the officer in charge of all six was referred to by name. The maniples below him were referred to by number up to six. So the next tactical division after the maniple was six maniples together. If we take Asclepiodotus' unit total for a maniple (*syntagma*) of 256, six of these gives a total of 1536 commanded by an eponymous regimental officer.⁶⁴ This total number is exactly what we see in the Alexander historians. The Ptolemaic evidence confirms that the Macedonian style phalanx usually consisted of six battalions each under the command of an eponymous officer from Alexander onwards.⁶⁵

This leaves the terms *lochagos* and *taxiarch* to define other officers in the sarissa wielding infantry. Working down the hierarchy numerically you would expect to find a commander of 512 men, of which there were three in every battalion, and below them commanders of 256 or 128. The two other terms extant in the Alexander historians could be taken to refer to these positions in the hierarchy.

The problem with this interpretation is that Asclepiodotus states that *hekatontarch* is the new name for an already extant position of *taxiarch*.⁶⁶ He also states that the *lochagos* commands the base unit of 16 in his command structure. Asclepiodotus' use of these two terms does not match the evidence given in the Alexander historians. Sekunda rightly notes that the term *taxiarch* disappears at the same time as the term *hekatontarch* appears thus showing Asclepiodotus was right to associate both terms as the same.

From the uses of *lochagos* in Arrian it is clear that it was the lowest officer in the army. The reform of the Ptolemaic infantry in the 160s also confirms that the *lochagos* in the army of Alexander cannot have commanded 256 men. If this officer existed already in fourth century armies commanding 256 then there would be no need for any reform to create a manipular structure. Clearly in the Alexander historians *lochagos* was the equivalent to Asclepiodotus' *taxiarch* commanding 128 men.⁶⁷

⁶⁴ It is at this point where Asclepiodotus differs from reality in constructing his ideal army. He joins units together in pairs until he gets to his army total of 16,384. In reality we see from both the Alexander historians and from the Ptolemaic evidence that six maniples made a regiment given the name of its commanding officer. All the evidence for the lower unit sizes of the maniple and the century, to use the Roman terms, suggests that at this level Asclepiodotus is describing reality and not the ideal that he continues to illustrate. The infantry reforms instituted by the Ptolemies then do not actually alter the hierarchy of the infantry phalanx as it existed under Alexander but simply add in lower level officers in order to compete with the small tactical units employed by the Romans.

⁶⁵ Sekunda wants the Ptolemaic reform to introduce this division of the phalanx. He is working under the belief that Alexander's distribution of reinforcements at Susa caused him to alter the size of the units of his sarissa regiments from a total of 1516 men per regiment to 2028. This would allow for the creation of chiliarchies in the infantry. But the expansion of the phalanx never occurred under Alexander. Sekunda then has inadvertently disproved his contention that Alexander reformed the infantry into units of 2000.

⁶⁶ If the position was already extant and just received a new name then the Ptolemaic reform of the infantry was not to create a new command position but to rename an existing one.

⁶⁷ The term *taxiarch* is used as a general term for a commander of a unit in the Alexander historians. This echoes the general use of the term *taxis*. Plutarch (*Alexander* 76.3) seems to equate *taxiarch* with *chiliarch* as the equivalent passage in Arrian (7.25.6) suggests. But this is still a general use of the term.

Milns when discussing the command structure places *lochagoi* as commanding units of 256 men (16x16). He adds that there should be another level of command below in charge of 128 — the Asclepiodotean hekatontarch or taxiarch — but he uses Asclepiodotus as his only evidence and this is problematic.⁶⁸ He calls this lower unit a tetrarchy. This however would mean that a *lochagos* was not the lowest officer. He does not address the fact that there is no evidence for *lochagos* being in command of 256 men or for the existence of a tetrarchy in the infantry. It seems to me more likely that the *lochagos* was a commander of 128.

Sekunda (*Alexander's Army* 37) suggests that a *lochagos* commanded 512 men. He is following Curtius (5.2.3) who states that before Alexander's reform of the infantry there had previously been "quingenariae cohortes". This is the only evidence for the *lochos* being 512, and rests solely on Curtius' description being the Roman equivalent of the *lochos*. Curtius is rarely precise in his use of military terms and it is very unlikely that he would know the equivalent of a Greek *lochos*. Atkinson in his commentary on this passage and the reform of the infantry states that "there is no other evidence on the size of the *lochoi* before this reform."⁶⁹ We must then discount Curtius as evidence for the size of the *lochos*.

An ilarch in the Companion cavalry commanded 250 men, so for a *lochagos* to be a lower officer he had to be in charge of 128 or fewer. If the *lochagos* existed in the phalanx battalions commanding 128 men then there would be a structural mirror between the Macedonian infantry and cavalry, after the reorganization of the latter. It is possible that Alexander instituted the *lochagos* into the Companion cavalry in order to achieve this structural mirror. It would have been too confusing in a professionally organized army for a *lochagos* to exist in different places in the command structure of the infantry and cavalry at the same time.

The existence of an officer in command of 128 men would mean that the subordinate unit of a Macedonian phalanx battalion is not sixteen files by sixteen but eight by sixteen. This gives a much more hierarchical command structure and makes the *lochagos* a much less important officer, as he appears to be. So if we accept that a commander of 128 men was the lowest of the officer class then we must call him a *lochagos*, since this is the lowest attested officer rank.

However Arrian 3.9.6 provides a list of officers seemingly in order of importance. Taxiarch is third on the list after *lochagos* and ilarch but before the eponymous general. It is possible that taxiarch here describes the officers in command of the hierarchical level below the battalion commander. But equally the term could be used to describe commanders of other units in the army, such as the mercenaries or archers, who would be considered inferior in rank to the battalion commanders of the phalanx. We cannot then be certain of the specifics of the taxiarch in Alexander's army. In the Spartan army the *lochagos* commanded just over 100 men (*Lac Pol* 11.4). Although this does not further the argument for the Macedonian *lochagos* commanding 128 it does show that there was some consistency in the application of the term in other near contemporary armies.

⁶⁸ Milns *Historia* 20 (1971) 195.

⁶⁹ Atkinson, *Comm.* 2.59.