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Editors' Note

The *JOURNAL OF ANCIENT CIVILIZATIONS (JAC)* is published annually in two fascicles by the Institute for the History of Ancient Civilizations (IHAC, Northeast Normal University, Changchun, Jilin Province, People's Republic of China).

The aim of *JAC* is to provide a forum for the discussion of various aspects of the cultural and historical processes in the Ancient Near Eastern and Mediterranean world, encompassing studies of individual civilizations as well as common elements, contacts, and interactions among them (e.g., in such traditional fields as Assyriology, Egyptology, Hittitology, Classics, Byzantine Studies, and Sinology, among others). Hence, we publish the work of international scholars while also providing a showcase for the finest Chinese scholarship, and so welcome articles dealing with history, philology, art, archaeology, and linguistics that are intended to illuminate the material cultures and societies of the Ancient Near East, the Mediterranean region, and ancient China. Articles discussing other cultures will be considered for publication only if they are clearly relevant to the ancient Mediterranean world, the Near East, and China. Information about new discoveries and current scholarly events is also welcome. Publishers are encouraged to send review copies of books in the relevant fields.

JAC is a double-blind peer-reviewed journal. Articles must not have been published in, or submitted to, another publication at the time of submission. All articles submitted are first carefully read by at least two editors of *JAC*, who will give a feedback to the author. Articles (excluding book reviews or research reports) are afterwards reviewed anonymously by at least two referees in the specific field, appointed by the editorial board. The whole peer-review process as well as any judgment is based on the quality of the article and the research conducted therein only. In cases where the reviewers recommend changes in the manuscript, authors are requested to revise their articles. The final approval of articles is at the editorial board. Throughout the whole peer-review process, articles are treated confidentially. In case of (alleged or supposed) interest conflict, misconduct, or plagiarism of any party involved the editor in chief and/or the executive editor in chief (or, if necessary, another member of the editorial board) will pursue the case and should the situation of taking action arise, will notify the respective party. From time to time, we will publish a list of the referees on our homepage (<http://ihac.nenu.edu.cn/JAC.htm>), to make the double-blind peer-review process transparent and comprehensible.

The articles of the second fascicle of *JAC* 37 challenge traditional theories and assumptions. Sean Manning looks at the armies of the Teispids and Achaemenids and reveals to what great extent we depend on Greek authors for reconstructing their empires and warfare systems, and to what degree we can use “Persian” sources for answering the most pressing questions about the military setup. Raimund Schulz re-examines the common belief in a Persian expansion policy against the Greeks, leading to the Persian Wars, and assesses the aggressive Athenian foreign policy of that time. Both articles can be read within the framework of the 2,500th anniversary of the end of the Persian Wars. Stanley M. Burstein and Caleb E. Finch re-evaluate data for lead pollution in Roman times and conclude that they can be rather associated with economic expansion than contraction, hence rather with the Early and High Principate than the Late Roman period and an often-supposed link between decline and lead poisoning. Ergün Laflı, Peter Liddel, and Alev Çetingöz enrich our understanding of the complex structures of Late Antiquity by presenting three hitherto unpublished inscriptions from Upper Mesopotamia. Finally, our forum provides a basis for further reflection on, and discussion about, the epistemological and heuristic principles of Ancient Studies and especially Classics through the provocative review by Uwe Walter of a mind-challenging book that looks at the “reality” of Ancient Greece, particularly Athenian democracy.

All communications, manuscripts, disks, and books for review should be sent to the Assistant Editor, Journal of Ancient Civilizations, Institute for the History of Ancient Civilizations, Northeast Normal University, 130024 Changchun, Jilin Province, People's Republic of China (e-mail: jac@nenu.edu.cn), or to the Executive Editor in Chief, Prof. Dr. Sven Günther, M.A. (e-mail: svenguenther@nenu.edu.cn or sveneca@aol.com).

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THE ARMIES OF THE TEISPIDS AND ACHAEMENIDS:
THE ARMIES OF AN ANCIENT WORLD EMPIRE*

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Introduction and historical context

How would the armies of the Teispids and Achaemenids look from a Near Eastern perspective? This would not be a provocative question in most areas of ancient history and archaeology, which have transitioned from an approach centered on the classical literary tradition to one based on all available contemporary evidence.¹ Studies of warfare in Britain before the Roman conquest focus on British archaeology and consider statements in classical texts closely before accepting them.² But whether they are specialists in the Aegean or the Near East, researchers tend to rely on Greek texts, Greek art, and modern ideas about the East to understand the wars of the Achaemenids. By the 1990s, it had become clear that this approach has serious limits. It is very hard to decide whether a Greek tradition about the Persians is factual or a literary construct purely on the basis of Greek texts and Greek art. Modern stereotypes about the East are so diverse that almost any imaginable statement about Persian armies will fit some of them.

One solution to this impasse would be agnosticism: compare and contrast the different types of evidence without claiming to provide an answer. Philosophically speaking this has much to recommend it, but in the current intellectual climate it has one major disadvantage. Many kinds of people feel pressed to write as fast as possible, and skeptical, step-by-step approaches to ancient sources are an acquired taste. Under present circumstances, many who cannot find a workable answer in current research will turn to older research which claims to provide an answer, even if that answer would be hard to defend. Convincing arguments since the 19th century that Herodotus should be used with care have not abolished superficial approaches to his *Histories* because Herodotus-the-trickster is harder to use than Herodotus-the-reporter. Rather than

* My thanks to the named and anonymous reviewers who have commented on versions of this paper since 2018.

¹ Brouwers 2013; James in press.

² E.g., Sealey 2007.

agnosticism, this paper takes the risk of providing a brief overview of Teispid and Achaemenid armies which is as consistent with itself, the evidence, and current methods as possible. No doubt the result is simplistic in many respects, and perhaps it is premature, but it may be useful.

Let us begin with an overview of the history of research, the apparent contradictions in the evidence, and the nature of Teispid and Achaemenid government, then turn to the indigenous and Greco-Roman sources for specific aspects of armies and warfare.

History of research

Research on the military aspects of the Achaemenid Empire is limited, and the few broad works tend to rely on Greek literature and treat it as a harmonious collection of facts.³ Recent research into cuneiform texts from Babylonia, and discoveries such as the painted wood from Tatarlı (fig. 1), the sarcophagus from Altıkulaç (Çan, fig. 2), or the arms and armor from Pasargadae and Deve Hüyük, have not yet been fully integrated into broader studies (for places discussed, see fig. 3).⁴ This reflects that military historians tend to be trained as ancient historians, and so are more comfortable with Greek literary sources than with cuneiform documents, paintings from Anatolia, or scale armor from Iran. However, it also reflects that the Greek military history and Achaemenid studies which are practiced today grew out of two movements in the 1980s with very different goals. Participants in the *Achaemenid History Workshops* wanted to free the study of the empire from colonial ideology and Hellenocentrism, while respondents to *The Western Way of War* tried to understand how Greek military practices had shaped Greek culture.⁵ *The Western Way of War* inspired a flurry of research with a narrow focus on Greeks and Greek texts, while students of the Achaemenid Empire are generally more comfortable talking about kingship or administration than the bloody details of warfare. Some recent scholarship tries to balance pro- and anti-Persian perspectives, while Greek military historians have begun to ask whether those practices were as unique and autochthonous

³ The most common way of thinking about Achaemenid warfare can be traced through Meyer 1965, vol. IV/1, 63–72, Widengren 1956, 14–182, Rahe 1980, Shahbazi 1986, Dandamaev and Lukonin 1989, 222–237, and Sekunda 1992. More useful today are Tuplin 1987, Head 1992, Tuplin 2010, MacGinnis 2012, Tuplin and Jacobs 2021, and the *Encyclopaedia Iranica*. For a detailed research history, see Manning 2021, chapter 1.

⁴ Cuneiform: see section “Recruitment” below. Artwork: Poggio 2020 (*non vidi*); Bovon 1963 (vase painting); Sevinç et al. 2001 and Ma 2008 (Çan sarcophagus); Summerer 2007b; 2011; Summerer and von Kienlin 2010 (Tatarlı paintings); Wu 2014 and Tuplin 2020 (seals). Archaeology: see below.

⁵ Hanson 2020; Kuhrt 2009; Manning 2020b.

as had been thought.⁶ However, as yet no synthesis between these two ways of looking at the past has appeared.

The age of Darius and Xerxes

If we wish to compare different kinds of evidence, then the best place to begin is the reigns of Darius and Xerxes (c. 522–465 BC). From the time of these two kings we have important bodies of evidence for armies and warfare from Persis, Babylonia, and the Aegean. These sources can be grouped into two categories according to the type of army which they seem to describe.

A uniform army?

The walls of the Achaemenid palaces at Susa (fig. 6) and Persepolis (fig. 5) show row after row of soldiers with spears and bows or spears and shields and uniform hair and clothing. Rather than battling the king's enemies like the soldiers on Roman or Neo-Assyrian monuments, they stand quietly keeping order. On other reliefs great cats pounce on oxen and crowned heroes stab leaping monsters. The message is similar to the messages with which the British justified their empire: with overwhelming force, we bring safety, unity, and order. Many of the objects depicted on the reliefs match objects from excavations, such as weapons from the cemetery at Deve Hüyük on the Euphrates, a reinforcement plate for a shield from Samos, and of course the destruction layer at Persepolis itself.⁷ Lists of equipment from Babylonia show that the infantry raised by temples had standard equipment of a hood, tunic, "mountain garment," bow and arrows, spear, and dagger and were often organized into groups of 6–10 and 50. In turn, the texts from Babylonia and sculptures from Iran broadly agree with Herodotus' description of how the Persians, Medes, Cissians (i.e., people from Susa), and Hyrcanians were armed (Hdt. 7.61.1) and his descriptions of battles where Persian, Median, Cissian, and Saca troops do the fighting on land (Hdt. 7.210, 211; 8.113; 9.31, 68). Only a few small details are difficult to harmonize. Herodotus mentions Persian footsoldiers wearing armor "like the scales of a fish" but this does not appear in the sculptures from Susa and Persepolis or the lists of equipment for temple soldiers from Iran. Scale armor has been found at Persepolis, Deve Hüyük, and other sites. Persian horsemen are important in Herodotus but scarce in Babylonian documents and invisible in the sculptures from Persepolis and Susa. Perhaps some ancient and modern observers have

⁶ For the first group, I think of Thomas Harrison, Bruce Lincoln, Lloyd Llewellyn-Jones, and Caroline Waerzeggers. For the second, see Luraghi 2006; Brouwers 2013; 2021.

⁷ Jantzen 1972, 60, pl. 56; Moorey 1980; Schmidt 1957, 97–100, pls. 75 and 76; Sekunda 1992, 12.

emphasized spectacular mounted troops over humble infantry because they expected eastern armies to have cavalry.⁸ Herodotus' Persian infantry carry spear, shield, and bow, but soldiers in the documents from Babylonia and sculptures from palaces only carry two of these weapons. Nevertheless, these pieces of evidence fit together well.

A patchwork army?

Sometime in the first half of the 5th century BC, a wealthy man was buried in a painted tomb at Karaburun in Lycia. In one scene, he gallops across a battlefield and stabs a falling hoplite with a spear. Another body is underneath his horse's hooves. His beard is long and elegant, and he wears purple trousers, a purple tunic to above the knee, and soft shoes. Beyond the hoplite, a friendly footsoldier brandishes a spear and a round Greek shield and wears a cloak, wrappings around his shins, and a long knife. This image has some things in common with the seal of Cyrus the Anšanite from Persepolis (Kuhrt 2007, fig. 3.2) but is a much more direct picture of combat than any of the monuments at Persepolis or Susa, and the footsoldiers are dressed and armed like locals. Some vase paintings from Attica show what are presumably Xerxes' soldiers in combat (fig. 4), but their clothing and armor belong to half a dozen different nations.⁹ Only a few details, such as hoods with cheek flaps and tall rectangular shields, closely resemble images from Persepolis. A cache of documents survives from the Judean and Aramean military colony at Elephantine on the Nile. In a letter dated 25 November 407 BC, the colonists asserted that they and their temple had been there since "the days of the kings of Egypt" and that Cambyses had declared their temple protected (*TADE* A.4.7 in Kuhrt 2007, 856–857). After more than a hundred years and two changes of dynasty (Saiites to Teispids to Achaemenids), they had not been replaced with soldiers from a nation closer to the centers of power, and one of their commanders had the Babylonian name Nabû-kudurri in December 402 BC. In documents from Babylonia, Persian and Median soldiers or soldiers with Iranian names are rare.

Greek and Roman writers often describe Persian armies as a list of national contingents, and sometimes describe the distinctive equipment or fighting methods of each (e.g., Hdt. 7.61–99; Xen. *Anab.* 7.8.15; Curt. 3.2.4–9). This has clear parallels with the groups of national delegations, each with a distinctive name or costume, carved on the palaces at Persepolis, the victory monument at Behistun, and the royal tombs at Naqš-e Rostam. A patchwork army also fits some stereotypes about imperial armies. How can we reconcile the evidence for a patchwork army with the evidence for a uniform army?

⁸ Tuplin 2010.

⁹ Bovon 1963; Raeck 1981.

Most researchers since 1986 begin with the first body of evidence on the grounds that it represents “a standing army (which) was formed from Persians, Medes, and closely related peoples”¹⁰ or “the Persian national army”¹¹ or because to describe a Persian army one should begin with “the distinctively ‘Persian’ forms that might have formed its core.”¹² Before we accept this point of view, let us look at how the empire of Darius came into being.

Two-phase empire building

Many imperial powers emerge in two stages: first a city or dynasty gains control of and homogenizes a core territory, and then it expands outwards. During the phase of homogenization, a common language and writing system are spread, laws and customs harmonized, weights and measures standardized, and a sense of common identity develops. During the phase of expansion, the city or dynasty begins to take control of peoples who are too far away, too different, or simply too numerous to assimilate in the same way. It often chooses to rely on troops from the core territory, and to create a few standard patterns of military unit which can be recruited from that core territory and sent wherever needed. These standardized units from the core territory bring their own military culture into distant parts of the empire. The reliance on soldiers and administrators from the core territory can be understood as a political measure to keep power flowing to those who benefit from the empire. However, it also reduces cultural tensions and language barriers within imperial armies and administration and supports the rulers’ claims to be powerful and necessary. This model fits some famous world empires such as the Roman and the British. But it is not a very good fit for the Teispids and Achaemenids, whose kingdom emerged in different circumstances.

The situation in the Zagros Mountains in the 6th century BC is poorly understood due to a lack of indigenous texts and the scarcity of published archaeological finds. During the collapse of the Assyrian Empire, the former Assyrian provinces in the Zagros had become independent, and some kind of Median polity had emerged.¹³ Older scholarship followed Greek and Babylonian literature to present the Medes as a kind of empire stretching west to the Halys river and east into the Iranian plateau, but since 1988 researchers have emphasized the lack of monumental architecture, court art, writing, and other archaeological traces of a state.¹⁴ The lowland part of the kingdom of Elam

¹⁰ Shabbazi 1986.

¹¹ Sekunda 1992, 4.

¹² Tuplin and Jacobs 2021, 1162.

¹³ Kuhrt 2007, 19–22.

¹⁴ Sancisi-Weerdenberg 1988.

(Susiane) had been devastated by Assyrian invasions, although some kind of literate, urban life may have continued.¹⁵ We do not know when speakers of Old Iranian languages migrated into the highland part of Elam (Persis), or have clear traces of a powerful kingdom in Persis before Cyrus.¹⁶ Nothing is known about the ethnicity of Cyrus: his name could be Elamite or Iranian, and Babylonians and perhaps his own seal call him Anšanite.¹⁷ It was Darius who proudly proclaimed that he was Persian and sharply distinguished between (lowland) Elam and (highland) Persis in the monument to commemorate his victory in a civil war at Behistun. Darius continued to make use of the Elamite language and script for monumental and administrative texts. These are not the circumstances under which many millions of people could be expected to develop a common identity as Persians. We would expect that the Persian nation grew *after* Cyrus' conquests, as neighboring peoples adopted Persian identity (Hdt. 1.125) and gifts of food, silver, or land enabled Persians to raise more children (*PF* 1200–1237 in Hallock 1969; Hdt. 1.136; Plut. *Vit. Alex.* 69.1; Strab. *Geogr.* 15.3.17).

The Teispids conquered their empire in a very short period of time. The chronology of their conquest of eastern Iran and India is hard to establish due to the lack of indigenous texts, but Babylonian texts state that Cyrus captured Astyages the king of the Medes in 550 BC and occupied Babylon in 539 BC (Grayson 1975, no. 7 = Kuhrt 2007, 50–53; Schaudig 2001, 416–418 = Kuhrt 2007, 56–57). Cambyses invaded Egypt in 526/525 BC. The areas which they conquered included urbanized, bureaucratic kingdoms such as Egypt and Babylonia, and areas without cities or writing such as central Iran. After Darius seized the throne, he found that his kingdom faced no serious external threats. The Neo-Assyrians faced Urartu, Egypt, and Elam, the Hellenistic kingdoms faced each other and the city-states of Carthage, Syracuse, and Rome, the Roman Empire faced the Arsacids and Sasanids, but Darius' kingdom was bordered by no large powerful states. The main danger was not invasion from the outside but a palace coup or local revolt. How could he link so many lands and peoples into a single imperial structure without causing some to break away?

War as work

Scholars who see the Achaemenid Empire as particularly Iranian have trouble addressing the many parallels between it and other Near Eastern kingdoms. Righteous, moralizing rhetoric about war appear in Neo-Assyrian inscriptions as

¹⁵ Henkelman 2008, 1–40.

¹⁶ Rollinger 1999.

¹⁷ Kuhrt 2007, 47 and fig. 3.2; Schmitt 1993.

well as in Zoroastrian texts.¹⁸ The Neo-Babylonian army was already based on infantry with spear, dagger, and bow, so Persians were armed like Babylonians.¹⁹ Hittite texts, Neo-Assyrian reliefs, Herodotus' description of the Persians crossing the Hellespont (Hdt. 7.55), and the painting of a funeral procession at Tatarlı all say or show that spears were carried with their points down on ceremonial occasions.²⁰ The Achaemenids drew on existing traditions and institutions to create a much larger and longer-lasting kingdom than any which had gone before.

In my view, early Achaemenid government was centered around the collection and redistribution of materials and workers all over the empire rather than on supporting an institutionalized army or navy recruited in Persis. As long as grain arrived in the warehouses, silver arrived in the treasuries, and workers or officials arrived at their worksites, the kings and satraps could live in comfort and oversee great projects such as monument-building and military campaigns. Exactly who paid taxes and who served was less important. The vague references to "lance-bearers" and food for workers/soldiers in the archives from Persepolis show the type of administration which the Achaemenids could use to fight a war, even if the surviving archives do not refer to battles, wars, or sieges.²¹ In early states such as China, Egypt, or the Inca Empire, specialized military organizations tend to emerge out of undifferentiated systems for collecting and redistributing labor, raw materials, and manufactured goods for civil, religious, and military purposes.²²

Even if there had been enough ethnic Persians to form half or a third of a new army, establishing them across the empire would have required either dispossessing hundreds of thousands of locals or creating a way to pay the whole army all year every year. To my knowledge, the first ancient state to pay its whole army year-round in peacetime was the Roman Principate. It took the Romans hundreds of years and several civil wars to develop the ability to support a large standing army, and Darius and his officials did not have hundreds of years. Pierre Briant has described the Persian rulers as an *ethno-classe dominante*, that is, they were united by blood and customs but also by their shared dependence on land or revenues given to them by the king or satrap.²³ Wealthy locals could imitate Persian customs, seek offices with an allowance, and marry to become part of the Persian elite. Ordinary Persian farmers and herders are almost invisible outside of Persis because they did not belong to this class.

¹⁸ Fales 1987; Lincoln 2012.

¹⁹ MacGinnis 2010b, 502, n. 7.

²⁰ Tallis 2010.

²¹ Henkelman 2002; 2010, 33–41.

²² Bauer, Arkush and Szymczak 2008, 301–306; Gnirs 1999, 81–87; Yates 1999, 13 and 28–35.

²³ Briant 1988.

Soldiers were Achaemenid soldiers because they served the king or a satrap, and not because they had a specific ethnicity or were organized into a specific form of military unit. To argue otherwise would be to force a model like the “regular” and “irregular” troops of British India or the legions and auxiliaries of the Roman Empire on evidence which it does not fit. Having defined this way of thinking about the armies of the Achaemenids, let us look at indigenous and Greco-Roman sources for specific aspects of armies and warfare.

Recruitment

We know the most about recruitment in Babylonia, where at least 136 archives cover the “long 6th century BC” from the rise of the Chaldean kings c. 626/625 BC to the revolts in the second year of Xerxes’ reign (484 BC).²⁴ In Babylonia, settlements of landholding foreigners, the great temples with their serfs (*širāku*), the citizens (*mār banê*), and the Chaldean tribes were expected to provide service. Recruits were expected to appear with appropriate clothing, equipment, and provisions (*šidītu*) or money to buy them, and to serve for months or years at a time in places as distant as Egypt. Commutation (the payment of silver to hire a replacement) and substitution (providing a man to serve in your place) were common practices.²⁵ Most of the troops in these documents seem to be conscripts who lived most of the time by one occupation but sometimes spent a few months or a few years as soldiers.

Since the reign of Nebuchadnezzar, many properties in Babylonia were classed as bow, horse, or chariot estates and grouped into collectives called *haṭru* or *hadru* with a foreman or *šaknu*.²⁶ The holder or holders of such an estate had to provide a Bowman, a horseman, or a chariot crew for the army. These properties are famous due to an archive of the Murašû family near Nippur dating to the reigns of Artaxerxes I and Darius II (465–405 BC).²⁷ Bow, horse, and chariot lands could not be sold, but they could be held in common and used as collateral for loans. The Murašû used these loopholes to gain possession of many estates. Other tablets describe other complications, such as four men who divided three properties amongst themselves and agreed that since one property was a bow estate, “each will serve the king for his share” (*TCL 12, 203: mannu ina muhhi zittišu šarra ipallah*).

²⁴ Waerzeggers 2003/2004; 2018, 93–94; for an overview of the archives and the types of texts they contain, see Jursa 2005.

²⁵ Jursa 1999; Jursa et al. 2010, 64–652.

²⁶ Cardascia 1951; Stolper 1985; Jursa 1998; cf. van Driel 1987, who gently questions some of Stolper’s conclusions.

²⁷ Cardascia 1951; Stolper 1985; van Driel 1987; 1989.

Persians and other West Iranians certainly had military responsibilities even if they did not make up half or a third of the army. Herodotus (1.136), Xenophon (*Cyr.* 1.2), and Strabo (*Geogr.* 15.3.18) all say that Persian boys had to undergo paramilitary training from the age of five to 20 and then serve in the army. Whether this education was for all Persian boys (as Herodotus and Strabo imply) or just the sons of wealthy families (as in Xenophon's *Cyropaedia*) it seems likely that most Persian men were expected to serve in the army, such as the forces of 10,000 and 20,000 bowmen and slingers raised by Peucestas the satrap of Persis for Alexander and the Successors (Diod. 17.110.2; 19.14.5). Ordinary Persian conscripts would have mainly come from Persis, so would only appear in the western satrapies when the king traveled there himself or sent an army under a general (e.g., Hdt. 6.43). In western Anatolia, West Iranians seem to have been settled. These Iranians served as cavalry, and possibly as infantry.²⁸ The soldiers who lived at Deve Hüyük on the Upper Euphrates (fig. 3) seem to have come from Hyrcania, and three bronze horse bits were found in their graves.²⁹ These troops presumably made up a garrison based near a crossing of the Euphrates (although they could also have been given land grants in exchange for part-time military service like members of a *hatru* in Babylonia).

Recruitment in Egypt is less well documented because many soldiers lived in the wet Nile Delta where papyrus rots and paintings decay. The *machimoi* of Herodotus (2.141, 164–168; cf. Diod. 1.73.7–9) and powerful dynasts in Libya and the Nile Delta coexisted with settlements of foreign soldiers such as the Carians of Memphis and the Jews and Arameans of Elephantine.³⁰ Soldiers from the Aegean had settled in Egypt since the time of Psammetichus I (Hdt. 2.152–154), and in a letter to the governor of Judah, the Judeans said that their ancestors had lived at Elephantine since “the days of the kings of Egypt,” i.e., since before the Persian conquest (*TADE* A4.7 in Kuhrt 2007, 856–857). Letters and documents from the island show that some of the garrison held land grants (*AP* 16 in Kuhrt 2007, 720) and some received monthly allotments of barley, lentils, and silver (*AP* 2 in Kuhrt 2007, 757; *TADE* B4.2 in Porten et al. 1996, 258). The garrison guarded the First Cataract of the Nile and oversaw the transport of goods between Egypt and Nubia.³¹

Xenophon's Socrates divides Achaemenid troops into those maintained by the governors “to control (the king's) subjects and to protect the country in the event of an invasion” and “guards in the citadels” (Xen. *Oec.* 4.5–7; cf. *Cyr.* 8.6.1–16).³²

²⁸ Sekunda 1985; 1988b; 1991; cf. Tuplin 1987 and Dusingberre 2013, chapter 3.

²⁹ Moorey 1980, 8–10 and 69–73.

³⁰ Ruzicka 2012 focuses on warlords in the Nile Delta.

³¹ Porten 1968, 39–42.

³² Cf. Tuplin 1987.

The Judeans and Arameans of Elephantine are the best example of the second category, but Cyrus the Younger brought the Greek soldiers from the cities with him when he rebelled (Xen. *Anab.* 1.2.1). These soldiers expected to go away when they were no longer paid, whereas the garrison of Elephantine stayed for more than a hundred years, each generation marrying and having children who became the next generation of soldiers.

It is plausible to understand the soldiers on the walls of Susa and Persepolis (figs. 5 and 6) as bodyguards or household troops similar to the Royal Corps (*kīšir šarrūti*) and *ša qurbūti* bodyguards of the Neo-Assyrians. Greek writers mention that the king and his governors maintained large households of soldiers, like the thousand *doryphoroi* (spear bearers) of Oroetes the satrap of Lydia (Hdt. 3.127; cf. Xen. *Cyr.* 8.6.10) and the king's Kinsmen cavalry and thousand Applebearer infantry.³³ These troops were paid or issued rations, so they could follow the king or satrap or go where they were needed. But because so few satrapal records survive, and because the royal archives from Persepolis deal with other matters, almost nothing is known about who served in these units. Presumably most were Persians and other West Iranians. In the Achaemenid army we know the most about ordinary conscript infantry, some things about the garrison troops, and the least about prestigious troops such as the bodyguard of the king.

Beginning with Ctesias, Greek writers often mention that thousands of Greeks fought for Achaemenid kings and satraps in exchange for pay (in earlier periods Greeks fought for the king as allies or subjects). Modern researchers have written half a dozen books about these so-called “mercenaries” but have not always considered the Egyptian and Near Eastern context.³⁴ Since the Old Kingdom, Egyptian armies had contained large contingents of Nubians, Libyans, and other people from the edges of the Egyptian world.³⁵ The Neo-Assyrians and Neo-Babylonians deported all kinds of people to the cores of their empires, gave them land to work, and extracted civil or military service from them.³⁶ By the Achaemenid period Babylonians often provided a substitute or paid a fee rather than serve themselves. Hiring Greeks for coins was just another way of obtaining foreign soldiers.

³³ On the Applebearers, see Charles 2011; on Kinsmen and the unnamed Persian cavalry in Herodotus, see Charles 2015. Stories about the “Immortals” probably trace back to Herodotus: Schmitt 2004 (the modern assumption that they are the guards in reliefs at Persepolis and Susa definitely derives from Herodotus). Heracleides of Cyme, *FGrH* 689 F2 = Ath. 4.26, and Isoc. 4.145 speak more generally of the king travelling with an army, peltasts, and *doryphoroi* (spear bearers).

³⁴ E.g., Rop 2019; Seibt 1977; Trundle 2004; Tuplin 2021; cf. Luraghi 2006.

³⁵ Gnirs 1999, 77–83 and 90–91; Fischer-Bovet 2014, chapters 2 and 5.

³⁶ Alstola 2019, 8–15.

Organization and equipment

The fundamental division of a Near Eastern army was into infantry (“bowmen” in Babylonian), horsemen, and charioteers. In the time of Darius and Xerxes, most infantry from the center of the empire were equipped with a bow, a quiver of arrows, a spear, and a two-edged dagger. This equipment had been common in Babylonia before Cyrus’ conquest, and at that time it had already been mixed with Scythian material culture. *TCL* 12, 114, a document from the 15th year of Nabonidus (541/540 BC), mentions that some archers were given the traditional Akkadian bows with quivers worn on the back, while others were given Cimmerian (i.e., Scythian)³⁷ bows with bow-and-arrow cases (Greek *gōrytos*) worn at the hip. The longer Akkadian bow with its heavier arrows may have struck harder, while the short Scythian bow with its light, mould-made arrowheads (fig. 7) allowed an archer to turn in all directions on horseback and deliver an endless hail of missiles.³⁸ The reliefs at Persepolis show the king accompanied by a man with an axe with a narrow blade for piercing skulls, and similar axes appear in combat scenes on seals (Tuplin 2020, nos. 7, 11, 13, 17, and perhaps no. 40) and have been found at Achaemenid sites (fig. 7).³⁹ Axes do not appear in lists of weapons from Babylonia,⁴⁰ but some Babylonians carried two daggers, one next to their quiver and the other in their belt (*TCL* 12, 114; cf. van Ess and Pfedde 1992, nos. 724 and 732).

Outside the core provinces, we know the most about infantry in Anatolia. Most footsoldiers in Anatolia had a round or crescent-shaped shield (Greek *peltē*, fig. 9) and one or two spears. Smaller and lighter shields are more convenient for soldiers who will run and jump around the battlefield, while large and heavy shields such as the rectangular shields from Persepolis provide good protection against arrows and slingstones. Some infantry carried long curved knives, others two-edged straight swords, and Greek painters show barbarians with axes with broad cutting edges (fig. 4). Greek writers called many of the spearmen with big shields hoplites, such as the Assyrian hoplites in Herodotus (7.63) and Xenophon (*Anab.* 7.8.15) and the *kardakes* hoplites in Arrian (*Anab.* 2.8.6). Outside Persis, Susa, Babylonia, and Anatolia, there is very little evidence on the equipment of

³⁷ Texts from Assyria distinguish the *Gimmeraja* from the *Iškuza*, a name which seems to be cognate with Greek *Skythēs* and Old Iranian *Saka-*. But in texts from Babylonia after 600 BC, Old Iranian *Saka-* is equated with Babylonian *Gimmeraja*, and the new B-shaped bows are named after the *Gimmeraja* (e.g., MacGinnis 2012, 85). All of these terms are exonyms – they are used by outsiders to cover many different peoples; see Kuhrt 2007, 34, n. 3.

³⁸ Zutterman 2003; Blyth 1977, 62–64 (the idea of bows with a low draw weight is now controversial due to studies of military bows from the 16th century AD).

³⁹ Schmidt 1957; Moorey 1980.

⁴⁰ Kleber 2014, 442.

soldiers except passages in Greek and Roman literature and the Hebrew Bible.

The evidence for shields, helmets, and armor is not unanimous. The guards on the walls of Persepolis and Susa do not have helmets or body armor. Herodotus twice says that some Persian infantry had scale armor (Hdt. 7.61; 8.113), and once says that the Persian commander Masistius wore scale armor hidden under his tunic (Hdt. 9.22). If soldiers wore clothes over their armor, we would not see it. Whereas Neo-Assyrian sculptures emphasize how much equipment the king's soldiers have, the sculptures at Persepolis and Susa (figs. 5 and 6) show only the most necessary items. The bronze and iron scale armor from sites such as Persepolis, Pasargadae, Deve Hüyük, and the Palace of Apries at Memphis could have been for footsoldiers or horsemen.⁴¹ Greek literature and inscriptions mention armor of linen and leather, and Easterners in Greek art often wear "Greek style" armor with a skirt of flaps and a piece on the back which folded over the shoulders. When this armor was not covered with scales, it was probably made of leather or quilted or twined linen.⁴² The bullet-shaped gilt bronze helmet dedicated to Olympian Zeus by the Athenians (National Archaeological Museum, Athens, B 5100) resembles helmets from Urartu and in Neo-Assyrian reliefs.⁴³

Many of the guards at Persepolis carry medium-sized, violin-shaped shields (fig. 5) or large bowl-shaped or rectangular shields (fig. 4). Words for shield are rare in the lists of equipment from Babylonia (*YOS* 3, 190).⁴⁴ Perhaps the soldiers made them themselves, or were only given shields in wartime. Did every soldier get a shield, as Herodotus says (7.61), or did some men have spears and shields to protect the unit and others have bows and spears to fight at a distance, as in the reliefs at Persepolis? And which of these shields did Herodotus have in mind when he described Persian infantry?⁴⁵

Horsemen had a wide variety of equipment. The riders on the Tatarlı wood (fig. 1) were armed in the Cimmerian fashion with just bow, *gōrytos*, and *akinakes* (the Greek spelling of a Persian or Scythian word for "dagger"). Others, like the military colonist Gadal-Jâma near Nippur, had iron helmets and body armor, a pair of spears, and a heavier striking weapon (probably *dēpu* in Akkadian, a word which can also mean the "sword" used to beat the weft threads on a loom together).⁴⁶ Many of these heavily-armed cavalry appear on cylinder

⁴¹ Petrie 1909, 13 and 16, pl. xvi; Schmidt 1957, 100, pl. 77; Moorey 1975, 115; Muscarella 1988, 212, pl. 321.

⁴² Granger-Taylor 2012; Manning 2020a.

⁴³ Litvinsky 2003.

⁴⁴ Kleber 2014, 444.

⁴⁵ Manning 2021, 299–301.

⁴⁶ *UCP* 9/3 269–277. This text contains many difficult words and phrases, so the free translation in Kuhrt 2007, 722–723 should be read alongside Ebeling 1952. Manning 2021, 159–163 has another translation.

seals and funeral monuments from Anatolia, where horsemen usually carried one long or two short spears and no bow. It is likely that more horsemen than infantry had helmets and body armor, not only because those unable to afford expensive equipment fought on foot, but also because the horse carried the weight. Horsemen during the Achaemenid period did not usually hold shields, although Scythians sometimes wore a shield on their back (e.g., a vase in the Martin von Wagner Museum der Universität Würzburg, Inv. K 1814; Sekunda 1992, 22; Arr. *Anab.* 4.4.4; and the Solokha Comb in the State Hermitage Museum).

In Anatolia and the north-eastern parts of the empire, cavalry experimented with new types of armor, such as sleeves of metal lames to protect the arms, armored saddles to protect the rider's thighs, armored hangings to protect the horse's flanks, or a chamfron to protect the horse's head (Xen. *Anab.* 1.8.6–7; *Cyr.* 7.1.2; *Eq.* 12.8–9).⁴⁷ Fully armored men on armored horses armed with long lances held in both hands (cataphracts) began to appear in central Asia around the end of the Achaemenid period. They appear on terracottas from Khumbuz Tepe and Koi Krylgan Kala on the lower Oxus (probably post-Achaemenid; see map in fig. 3), and are described by Curtius Rufus (3.11.15; 4.9.3; cf. the vague statement about armored horses and riders in Arr. *Anab.* 3.13.4); a long sword and fragments of iron armor for a horsemen were found at Chirik-Rabat on the Jaxartes.⁴⁸ These might have developed in Chorasmia or the regions beyond the Jaxartes (Hdt. 1.215 already mentions Massagetae horses with bronze armor), but none of the finds from east of the Zagros can be dated earlier than the sculptures from Anatolia or Xenophon's description of Persian cavalry with armor for horses and men. Chorasmian and Massagetae riders may have begun to wear more armor after contact with riders from further west, rather than the other way around.⁴⁹

A single chariot with two horses, a driver, and an archer fights against the Scythians on the Tatarlı painting (fig. 1), and at least three cuneiform documents from the reign of Darius I suggest that three-man chariots similar to those used by the Assyrians were still resources worth arguing over.⁵⁰ Babylonia had “chariot estates” as well as “horse estates” and “bow estates.” To be the “third man” (*tašlīšu*/ {lu2} 3.TA) on an official's chariot was an important post. The king had a special chariot, and Alexander the Great boasted about capturing Darius' chariot after the battle of Issus (Plut. *Vit. Alex.* 20.10; Arr. *Anab.* 2.11.4–5). The tablets from Babylonia, Herodotus (5.113; 7.86), and the Tatarlı painting suggest that

⁴⁷ For specific points, see Head 1992, 33–39.

⁴⁸ Nikonov 1997, 21 and 22; Litvinsky 2011.

⁴⁹ Potts 2007.

⁵⁰ Dar. 154, BM 79541 (MacGinnis 2008); *CT* 22, 74 (Jursa, Hackl and Schmitt 2014).

small number of chariots were still part of Achaemenid armies in the 5th century BC. Horses were more manoeuvrable and less expensive (Xen. *Cyr.* 6.1.27–30), so chariots must have offered other advantages such as carrying more weapons or allowing each crew member to focus on a single task (shooting arrows, driving the chariot, or defending with a shield).

Greek writers mention Achaemenid armies using scythed chariots at the battles of Cunaxa (401 BC) and Gaugamela (331 BC). These writers also attributed scythed chariots to the legendary times of Cyrus and Ninus (Xen. *Cyr.* 6.1.27–30; Diod. 2.5.4, citing Ctesias). Scythed chariots are only known through classical literature, especially through writers of the Roman imperial period who use them as symbols of terrifying but ineffective eastern armies. No remains of scythed chariots have been excavated, and no ancient relief or painting shows one.⁵¹ They were apparently intended to break up enemy formations at the start of combat, but it is difficult to say when they were invented or how effective they were given the rhetorical, one-sided sources.⁵²

Arrian (*Anab.* 3.8.6, 11.6, 15.4) reports that Darius III brought 15 war elephants to the battle of Gaugamela and that these beasts were captured after the battle.⁵³ Asiatic elephants still lived in Mesopotamia in the Bronze Age, and the Black Obelisk of Šalmaneser III shows tributaries bringing an elephant in the 9th century BC, but cuneiform sources do not mention elephants being ridden in war.⁵⁴ In the Hellenistic period the successor kingdoms and Carthage learned to use war elephants from India, and it seems like Darius' elephants were Indian.⁵⁵

Combat mechanics and diachronic change

Combat scenes on seals, the magnificent battle scene from Tatarlı (fig. 1), and a few passages in Herodotus give us some idea of how the armies of the “long 6th century BC” fought.⁵⁶ Infantry formed up in one main line (densely packed and protected by large wicker shields in Herodotus) and opened the battle with arrows. Their equipment was much more standardized than we see in contemporary Greek art, they were organized into a clear hierarchy which could transmit orders, and it seems plausible that drill was common in the Near

⁵¹ Briant 2002, 1037 reports that a scythed chariot had been found at Kizıldün in Turkey in 1994, but Selim Adali and Reyhan Körpe tell me that the blades on this vehicle did not seem large or sharp, and that it is still unpublished.

⁵² Manning 2021, 269–278.

⁵³ Briant 1997; Charles 2010; 2011.

⁵⁴ Cf. Hilzheimer 1938.

⁵⁵ Trautmann 2015.

⁵⁶ This section is closely based on Manning 2021, §6.5.

East long before the Greeks grudgingly adopted it.⁵⁷ Several seals show warriors shooting or stabbing down onrushing beasts or barbarians (e.g., Tuplin 2020, nos. 12, 40, and 51; seal of Darius I in Kuhrt 2007, 237, fig. 6.4). However, this does not mean that Persian infantry only fought at a distance. The central figure of the battle scene at Tatarlı is a Persian hero grappling with and stabbing a Scythian, and this motif occurs over and over again in Achaemenid art. In Herodotus' version of the death of Cyrus (Hdt. 1.214), the Persians and the Massagetae rushed each other as they ran out of arrows, and Herodotus also describes single Persians or groups of ten leaving their lines at Plataea to wrestle with the Greeks (Hdt. 9.62). The contrast of dense, orderly lines while advancing into battle and shooting, and chaotic single combat at close quarters, resembles European warfare in the age of the flintlock musket and bayonet.

The seals and documents have less to say about the equipment of early cavalry, but the Persian horsemen at Tatarlı (fig. 1) resemble their Scythian opponents. In Herodotus, horsemen are most visible before and after the battle, whereas at Tatarlı they have galloped ahead of the infantry to shoot. However, some cavalry in the 6th century BC seem to have fought in "thick ranks" with lances and long swords (Mimnermus fr. 14 West; Hdt. 1.79.3), and horsemen on seals and grave monuments usually thrust with the spear.⁵⁸ The solitary chariot at Tatarlı trots forward while the bowman shoots. While it is traditionally said that the Persians relied on a cavalry charge to defeat enemies weakened by archery, that is not what we see in Herodotus or the art.⁵⁹

Evidence for some types of soldier fades in the reign of Xerxes, while other types become more visible or appear for the first time.⁶⁰ Art from the Aegean less often shows infantry with the tall rectangular shields (fig. 4) and more often shows infantry armed with a small round or crescent-shaped shield (Greek *peltē*), some carrying several javelins and others an axe, spear, or sword. The first type probably fought in loose clouds, running forward when the enemy was weak and

⁵⁷ On the patchwork equipment of Greek armies, see van Wees 2004, 48–52; Krentz 2010, 47–50. On the very simple organization of early Greek armies outside Sparta, see van Wees 2004, 97–101; Lee 2008, chapter 4. On drill from the Nile to the Tigris, cf. Xen. *Anab.* 1.8.11, the Stele of the Vultures in the Louvre, and the figurines in the 11th-dynasty Egyptian tomb of Mesehti to Raaflaub 2013, 100. On the difficulty of getting Greek soldiers and sailors to practice marching and rowing or do hard physical labour, before the battle of Chaeronea knocked some sense into them, see Hdt. 6.12; Thuc. 4.3–4; Xen. *Lac.* 11.4–9; *Eq. Mag. passim*. Herodotus is no sympathizer with the Ionian Revolt, and Thucydides is no friend of Demosthenes the general or the ordinary Athenians at Pylos (cf. Diod. 12.61.1), but early Athenian literature consistently presents Greek armies and navies as needing to be coaxed to do anything tedious: van Wees 2004, 212 and 220. Lendon 2005 presents a "big idea" about the change in Greek attitudes to trained military skill from the 5th to the 2nd century BC.

⁵⁸ Tuplin 2010, 110 and 114.

⁵⁹ Manning 2021, §6.4.

⁶⁰ Head 1992, 39–44.

backward when the enemy was strong, while the second type may have formed up in dense lines like Greek hoplites: Xenophon certainly thought that stories about men with the weapons which “the Persians are drawn holding” (Xen. *Cyr.* 1.2.13) could help Greek soldiers. Later sources show cavalry equipped with more and more armor (see section “Organization and equipment” above). Slingers do not appear in art or texts from the empire like they do in Neo-Assyrian reliefs, and piles of slingstones have not been found at Achaemenid sites.⁶¹ Persian slingers appear in classical writers from Xenophon onwards (e.g., Xen. *Anab.* 3.3.6; Nep. *Dat.* 8.2; Curt. 3.9.1). The Persian army at Issus was preceded by groups of slingers and archers, while the main line was composed of spearmen and horsemen, with dense formations of archers behind wicker shields nowhere to be seen. Which of these differences reflect change over time, and which reflect differences between troops in different regions, is difficult to say.

Persian cavalry are more prominent in Xenophon and the Alexander historians than in Herodotus, and they fight in different ways: Herodotus’ Persian cavalry shoot from a distance then get out of the way during the main fighting, while Arrian’s Persian cavalry charge in and fight at close quarters with spears and swords. Some interpret this literally, believing that the Persian infantry declined and the cavalry and Greek mercenaries became more and more important, but Christopher Tuplin questioned whether this says anything more than that Xenophon was more interested in horses than Herodotus.⁶²

Army organization

Documents from the Achaemenid Empire show a sophisticated and wide-reaching system for collecting and moving labourers and raw materials. However, these documents do not present a theoretical structure of larger and smaller units with an ideal size into which soldiers were organized. For example, when Karkiš the satrap of Kurmana requisitioned between 15,000 and 32,000 quarts of flour from the Persepolis administration for his troops/workers, it was irrelevant what groups or units the troops/workers were divided into.⁶³ All that mattered was their total requirements. Numbers such as four, eight, and fifty are common in lists of troops from Babylon,⁶⁴ but actual military units are usually larger or smaller than the ideal military units in theoretical works such as Polybius’ description of a Roman legion (Pol. 6.19–26) or Asclepiodotus’ description of a Macedonian

⁶¹ Potts 2020. For one lead sling bullet, see Foss 1975 with criticism in Briant 2002, 1037 and 1038.

⁶² Tuplin 2010.

⁶³ Henkelman 2010, 33–41.

⁶⁴ Manning 2021, 197.

phalanx (Asclep. 2).⁶⁵ No such theoretical work survives from the ancient Near East before the 2nd century BC, and it is not clear to what extent this Qumran War Scroll reflects earlier practices. Many Babylonians were organized into tens or fifties which provided taxation and service, but it does not appear that all ten or fifty men served at once. The military colonists at Elephantine were organized into about four banners (*degelin*) and many hundreds but the relationship between the two is not clear.

Herodotus (7.81) states that Xerxes' army was organized by a decimal system, and Xenophon (*Cyr.* 2.1.22–25) states that Cyrus' army was organized into groups of 5, 10, 50, 100, 1,000, and 10,000. Modern researchers often cite these passages and list reconstructed Old Persian terms for the commanders of ten (*+daθapatiš*), one hundred (*+atapatiš*), one thousand (*+hazārapatiš*), and ten thousand.⁶⁶ In contrast, most Greek armies had very limited internal organization.⁶⁷ A variety of Old Persian terms for commanders are known, but not all fit the scheme five – ten – fifty – one hundred – one thousand, and not all appear in a military context. In particular, the supposed Old Persian word for “commander of ten thousand” is not found in any ancient text but has been reconstructed on the basis that Greek writers say there was such an office.⁶⁸ Some workers, soldiers, and taxpayers in the Achaemenid Empire were probably organized into fives and tens or tens and hundreds, but not all, and no indigenous source names a unit of more than 1,000 men.

The relationship between all of the different contingents is difficult to define. Xenophon implies that governors command the troops raised from the countryside while the king controls the garrisons of the citadels (*Xen. Oec.* 4.5–11; *Cyr.* 8.6.1–16), but the only trace of this in a Near Eastern text is the dispute between the governor and the fortress commander of Babylon in *CT* 22, 74. Herodotus implies that the troops called to central points like Uruk or Critalla were organized into new units with Persian commanders (*Hdt.* 7.81, 96).⁶⁹

⁶⁵ Cf. Amélie Kuhrt's comment on a group of 201 workers, 63 of whom were decurions or assistant decurions (*PT* 15 in Kuhrt 2007, 801, n. 4).

⁶⁶ For the latest philological work, see Tavernier 2007.

⁶⁷ Van Wees 2004, 97–101; Lee 2007, 80–86 and 88–89.

⁶⁸ Marquart 1896, 233, n. 48; Widengren 1956, 162, n. 6.

⁶⁹ On the muster at Uruk in the second year of Darius II, see Widengren 1956, 152–160; Gombert 2018, 579–587. On the Greek and archaeological evidence, see Tuplin 1987.

Siege warfare

Thanks to Herodotus, it is a commonplace that the Persians were skillful besiegers and engineers. Traces of their sieges remain at Sardis in Lydia, Phocaea in Ionia, Palaepaphos on Cyprus, and Gordium in central Anatolia.⁷⁰ They were also determined in defense: the *Hellenica Oxyrhynchia* describes Agesilaus marching helplessly from fortified site to fortified site (15.1; 24.3–25.3 Behrwald), and sieges are central to the narratives of Alexander's campaigns west of the Euphrates. Philip received a serious setback when the Persian king interrupted his siege of Perinthus on the northern shore of the Sea of Marmara with money, munitions, and men (Diod. 16.75.1–2). In contrast, sieges are erased in Persian portrayals of their empire. Both the Cyrus Cylinder⁷¹ and the Nabonidus Chronicle⁷² insist that Cyrus entered Babylon without a fight. In the Behistun inscription, Darius presents the empire as having existed since time immemorial, and makes battles not sieges the key events.⁷³ Cylinder seals, tomb paintings, and palace reliefs show heroic duels in the open, not assaults on walls. Given the prominence of sieges in Neo-Assyrian art and literature, and their appearance in art from Phoenicia, Lycia, and the Aegean, this was probably a deliberate choice which served ideological purposes. Battles could be presented as a contest between righteous and unrighteous warriors, but everyone knew that noncombatants were killed and mistreated in sieges.

Persian engineers relied upon the tools which had been used since the 3rd millennium BC: ramps of earth, timber, and stones, portable shields and shelters, ladders, wheeled towers, battering rams, fire, and hand tools. The proverbial way of taking a city was building a ramp of packed earth up to the battlements, wheeling towers onto it to overshadow the defenders, and then storming the walls (cf. Hdt. 1.162); less spectacularly, a city could be blockaded until the defenders starved.⁷⁴ Other cuneiform texts hint that the tricks, treachery, and surprise attacks known from classical literary sources were just as old.⁷⁵ The same gambits which appear in Greek and Roman stories about clever generals appear in official procedures for opening the gates of a border town in the morning and careful inquiries to the gods about all the ways a town might fall.

In the 4th century BC, mechanical artillery appeared in the Achaemenid Empire, probably with engineers from Sicily and southern Italy. The early history

⁷⁰ Campbell 2006, 14–29.

⁷¹ Schaudig 2001, 555.

⁷² Grayson 1975, no. 7.

⁷³ Manning 2021, 144–146.

⁷⁴ Nadali 2009.

⁷⁵ Eph'al 1995; Goetze 1960; cf. Neh 7:3 and Aeneas Tacticus.

of these weapons is obscure, and Diodorus' report that they were invented for Dionysius of Syracuse is not the whole story, but by the time of Darius III they were common in the king's lands.⁷⁶ The engineers who took Tyre came from Cyprus and Phoenicia as well as Macedonia (Arr. *Anab.* 2.21.11) and, in Arrian's version of the battle, the defenders of the Persian Gates "shot (at Alexander's men) with machines" (Arr. *Anab.* 3.18.3). Some medium-sized, three-bladed bronze points were found at Persepolis and Pasargadae (fig. 7), and similar barbed points from Olynthus have been identified as the heads of catapult bolts shot by the Macedonian besiegers.⁷⁷

Naval and riverine warfare

The Teispids and Achaemenids had much greater ambitions in the Upper Sea (Mediterranean) than the kings who went before them.⁷⁸ The Assyrians had collected taxes from Phoenicia and Cilicia and invaded Cyprus and Egypt but did not build a permanent royal navy to match their *kīšir šarrūti* "Royal Corps." The new Persian policy may be connected with the invention of the trireme, although arguments that this occurred just before their conquest of Egypt are built on scraps of later evidence.⁷⁹ Boats were also critical for transportation in Mesopotamia and Egypt, and Darius boasted about crossing the Tigris and "the sea" (*DB* §18, 74) and building the famous canal from the Nile to the Red Sea (*DZ*; Hdt. 2.158).

Warships appear on clay models from Egypt and Cyprus, coins from Phoenicia, and a design stamped into a clay label at Persepolis.⁸⁰ Shipsheds at several sites in Ionia and the Levant may date to the Persian period.⁸¹ Herodotus thought that the Phoenician fleet was more maneuverable than the Greek fleet in 480 BC (Hdt. 8.10, 60), but other writers do not emphasize that ships built in Sidon differed from the triremes of Lesbos. Naval experts – admirals, rowers, shipwrights – traveled far in search of work, and ships which fought in the Aegean were often built and crewed there. If we had Achaemenid sources on naval warfare in the Aegean, they might not be radically different than our Athenian sources (although

⁷⁶ Pimouguet-Pedarros 2000, Schellenberg 2006, Campbell 2011, 678–682, and Manning 2021, 334–344 reconsider the traditional narrative. Before c. 170 BC the only evidence for catapults is Greek texts (and projectile points interpreted according to those texts).

⁷⁷ Schmidt 1957, 99 and fig. 76; Musacrella 1988, 213, no. 323; Campbell 2006, 60. I thank the late Paul McDonnell-Staff for the comparison.

⁷⁸ Cf. Cawkwell 2005, App. 4 to Rollinger 2014a, 159 and 160, who proposes that an imperial fleet required reforms similar to Themistocles' reforms at Athens.

⁷⁹ Wallinga 1993.

⁸⁰ Casson 1995, 92–94 and 449. The clay tag in fig. 105 is Oriental Institute P 57226 (Schmidt 1957, pl. 9, seal 32).

⁸¹ Blackman and Rankov 2013.

they would probably boast about Persian victories and Persian commanders rather than Athenian victories and Spartan admirals).

Persian naval operations in the Mediterranean focused on controlling Cyprus, the Aegean coast and islands, and Egypt. Cyprus was close enough to the core of the empire that it could usually be kept under control, but keeping control of Egypt and the Aegean was more challenging.⁸² Because many Greeks and Carians had settled in Egypt, those unhappy with Persian rule in one region could learn about opportunities in the other. Greek cities sometimes sent fleets to Egypt to help rebels there, and the Egyptian-Carian admiral Tamos probably acted as intermediary between the king's rebellious brother in Lydia and magnates in the Nile Delta.⁸³ Very little is recorded about small-scale naval operations such as chasing pirates or escorting shipments of silver.

Almost nothing is known about warfare in the Caspian Sea or along the routes from Chaldea to the Indus and the Red Sea. It was customary to bring shipwrights, sailors, and timber from the Aegean and the Levant when seagoing ships were needed in Babylonia.⁸⁴ However, Herodotus mentions Scythian archers on Xerxes' triremes (Hdt. 7.96, 184), and a text from Uruk records distribution of flour to two *Gimmiraja* (what Greeks would call Scythians, see n. 37) who were in charge of boats (*VS* 20, 49).⁸⁵ The Persian navy may not have been such a Mediterranean project as it appears.

Numbers and effectiveness

Greek and Roman historians were expected to give a size for Persian armies and navies, and give that size in tens of myriads of men and hundreds of ships. Nobody was very concerned about where these numbers came from, or that different sources gave wildly different numbers – the most they do is quote different authorities (e.g., Plut. *Vit. Cimon* 12.5). Often the Greek or Roman historian who gives the most detailed narrative of the battle gives the highest figures, such as the 40,000 horsemen and 1,000,000 footsoldiers in Arrian's version of the battle of Gaugamela (Arr. *Anab.* 3.8.6). In contrast, the Persian kings and their predecessors made no such claims to lead specific, vast numbers of troops. The Assyrian kings boasted of conscripting tens of thousands of troops from conquered lands, and Šalmanassar III claimed to have lead 120,000 men across the Euphrates in the 9th century BC, but in the Behistun inscription the only numbers are enemies killed and captured, ranging from a few hundred in

⁸² Ruzicka 2012.

⁸³ For Tamos, see Manning 2018a, 5–6.

⁸⁴ Rollinger 2008.

⁸⁵ Dandamaev 1982.

some battles to 55,200 + xx (the tens and ones are illegible) killed and 6,572 taken alive with Frada in Margiana.⁸⁶ Surviving documents from the Teispid and Achaemenid empires do not let us estimate the total number of men liable for service or the number of troops in an individual army (although we can watch ones to thousands of soldiers moving from place to place, and estimate the troops available to specific Babylonian temples).⁸⁷

Skeptics such as Polybius (12.17–22) or Ibn Khaldun have long pointed out that armies of hundreds of thousands of men could never feed themselves, march, line up, and fight in the conventional way, and that the narratives in the same Greek writers suggest that the Persians were somewhere between about as many as their opponents and three times as many.⁸⁸ Armies of hundreds of thousands of men appear throughout world literature, but in world history they cannot be documented west of China before the 18th century, when armies in Europe learned how to divide an army into many small columns which traveled by separate roads but came together to fight. Aside from Xerxes' march of 150 km from Doriscus in Thrace to Acanthus on the Mt. Athos Peninsula (Hdt. 7.121), the Persian armies in classical sources do not behave like this.

More recent researchers have noticed signs that many numbers in the classical sources are derived from other literary or artistic sources rather than careful counting. The 1,207 Persian triremes in Herodotus (7.89.1, 184.1) seem to derive from Aeschylus' *Persae* (341–343), but Herodotus adds a list of contingents and how many ships belonged to each. The most famous list of ships in Greek literature is in the *Iliad* (2.494–759), where the total is about 1,196 ships with some variation from manuscript to manuscript (Thuc. 1.10.4 says 1,200 ships). A Greek who believed that Xerxes' invasion of Greece was similar to but even bigger than the Achaean attack on Troy could have created the figure of 1,207 by counting the Homeric Catalog of Ships and adding eleven (10 + 1), rather than counting physical ships along a beach. The Athenian boast that they defeated 46 nations at Marathon (Hdt. 9.27) may be connected to the two groups of 23 delegations on the Apadana at Persepolis: if so, the number 46 would mean "the King's subjects."⁸⁹ Numbers are symbols, but the thing which that symbol

⁸⁶ Šalmanassar: De Odorico 1995, 107. Behistun: von Voigtlander 1978; Kuhrt 2007, 141–157. Most Assyriologists have great doubts about the numbers in the Behistun inscription, e.g., Windfuhr 1994. On the number 120,000, see Manning 2021, 329–330.

⁸⁷ E.g., MacGinnis 2012, 8–10; Dar. 253; Naveh 1981, no. 7.

⁸⁸ A good summary of the arguments against vast Persian armies is Cawkwell 2005, App. 3; see also Tuplin 1997, 366–373. For Ibn Khaldun's attack on the figures in Ex 1:45, 46, see Nicholson 1922, 176–179.

⁸⁹ Parker 2007 gives an overview of Herodotus' debt to Aeschylus; Tuplin 1997, 366, n. 2 looks closely at the ships in particular; Bichler 2020 represents several unpublished conference and seminar papers.

signifies is not necessarily a measurement. Since the 19th century, researchers have spent a great deal of energy arguing about the true size of specific armies, but the only clear result is that since 1990 classicists or historians rarely write about Persian armies of hundreds of thousands of soldiers in scholarly journals or books by university presses.⁹⁰

Arguing about numbers is part of a larger debate about why an empire which stretched from the Nile to the Jaxartes was often defeated by federations of cities across the sea. Herodotus says that the most important reasons why Mardonius lost at Plataea was that his troops were naked men against hoplites (Hdt. 9.62–63), and many scholars have followed him in blaming differences in equipment for Persian defeats (e.g., Diod. 11.7.3; 14.23.3).⁹¹ However, Herodotus' picture of Persian soldiers and their diminutive weapons is shaped by Aeschylus' motif of the Greek spear and the Persian bow (esp. *Persae* 85, 86, and 147–149), and differences in equipment such as one side having round wooden shields and the other side having rectangular wicker shields, or one side having more bows and the other side having more protection for their heads and legs, rarely decide battles.⁹² Moreover, in writers after Herodotus, "Greek" cavalry, triremes, and archers usually beat "Persians" with similar equipment. In the fifth and fourth centuries BC, it was widely considered that some *ethnē* were simply better fighters than others: Thucydides remarks that everyone was startled to see Ionians defeat Dorians in the battle of Miletus (Thuc. 8.25). This is just as much a part of Greek understandings of their victories as the technological explanation.

Herodotus' picture of Xerxes lusting to conquer all of Europe is almost the opposite of the way that the Achaemenids talked about their own kingship. In their inscriptions and monuments, the Achaemenids are already kings of the world, as established by Ahuramazda in the murky past, and lands which they do not already control are invisible.⁹³ They do not seem to have faced the ideological pressure or peer competition which drove Assyrian kings and Roman magistrates to fight war after war against peoples on the edges of their empire and commemorate their deeds with monuments and inscriptions. The third Persian expedition to Attica is instructive. In 393 BC, a Persian fleet under Pharnabazus and Conon occupied Cythera, landed at Corinth, and helped the Athenians rebuild the Long Walls (Diod. 14.84–85; Xen. *Hell.* 4.8.7–10; on the

⁹⁰ Strauss 2004, 51 and 52 is an example of a high estimate by a professional classicist writing outside scholarly venues.

⁹¹ Hyland 2011; Charles 2012b; Konijnendijk 2012.

⁹² The best recent overview of Greek and Persian equipment is Krentz 2010; cf. Hyland 2011. On the length of spears and the limits of technological determinism, see Manning 2021, § 6.5.2 and Rey 2010.

⁹³ Rollinger 2014b.

importance of controlling Cythera, see Hdt. 7.235). This did not lead to a Persian boot stamped on the face of Greece, but to a peace where the powers west of the Aegean agreed that the cities of Asia belonged to the king and that the king could settle their disputes while Artaxerxes II turned his attention to Cyprus and Egypt.

After 479 BC, the fighting in the Aegean was mostly carried out by local forces paid with local funds, although the king occasionally sent money or ships. The resources which the Persians actually committed were not so much greater than those of the Delian League or the Spartans and their allies. The Athenian navy and the Macedonian army of Philip were clearly very good and humiliated many Greek opponents. Diodorus boasts that Cyrus' Greeks had larger shields than their opponents, but he also says that they were veterans of the Peloponnesian War facing inexperienced soldiers (Diod. 14.23.3–4). The very success of the Persian Empire meant that its armies only rarely faced serious opponents, whereas the cities across the Aegean had to constantly struggle to maintain their position.

Conclusion

If we look at the armies of the Teispids and Achaemenids from the perspective of the ancient Near East, we see something quite different than if we look from the perspective of Greek literature or our own stereotypes about the East. The king's men were part of a story which begins with the first cities, not with Cyaxares (Hdt. 1.103.1).⁹⁴ They faced problems which soldiers in many other empires, preindustrial societies, and agrarian societies faced, and drew on multiple traditions to solve them. They changed in response to many forces, and not just contact with one of the peoples on the edge of their world.⁹⁵ Some of our sources help us understand real armies, but others are better for understanding the ideologies of their authors or the kinds of stories people told about mighty kings and powerful armies. Doubting a Greek text does not leave us helpless, because there are many other kinds of evidence we can draw on to understand the armies of the Teispids and Achaemenids.

Although a third of this survey is bibliography, it seems appropriate to suggest directions for further research. Recent work on the Persepolis archives and Neo-Assyrian texts enable new studies of the geography of the empire. The question whether Cyrus invaded Lydia or Urartu in 547 BC is hardly the only one where a combination of philological research and examination of the ground can

⁹⁴ Still dutifully cited by van Wees 2004, 173.

⁹⁵ Manning 2021, 58–60 and 316–319.

lead to new insights.⁹⁶ Recent studies of soldiers and combat on seals⁹⁷ and in Anatolian tomb paintings⁹⁸ could be followed up by broader studies of warriors and violence in art from the Teispid and Achaemenid empires. A public-domain corpus of images would make these objects easier to study and discuss. Many artefacts from the Achaemenid period are unpublished or poorly published, so projects to “excavate the museum storage room” would be valuable. The ongoing Iranian-European project on the Achaemenid and Sasanid salt mine at Chehrabad shows what can be learned from Near Eastern sites with the latest scientific methods.⁹⁹ Archaeologists fluent in Russian and French could have a good deal to say about how cavalry in the Achaemenid Empire compared to cavalry in the Eurasian steppes and about the transition from Achaemenid to Argead and Successor rule in Bactria, Sogdia, and Chorasnia. The relationship between Achaemenid and Hellenistic military institutions and practices also deserves further examination. Pierre Briant made the interesting suggestion that Persian *epigonoí* infantry who were trained for Alexander were the successors to the young men undergoing Persian education in Xenophon and Strabo.¹⁰⁰

Both the study of early Greece and the study of the Achaemenid Empire have sometimes turned inwards and chosen not to explore connections with neighboring regions or earlier and later periods. While many questions remain, our understanding of early warfare in both the Aegean and the Achaemenid Empire has become firm enough that we can look outwards and place particular ancient societies in the context of the wider ancient world.

⁹⁶ Rollinger and Kellner 2019.

⁹⁷ E.g., Tuplin 2020.

⁹⁸ E.g., Summerer and von Kienlin 2010.

⁹⁹ E.g., Aali and Stöllner 2015.

¹⁰⁰ Briant 1999, 122–124.

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Fig. 1: Sketch of the central section of the battle scene from the wooden tomb chamber at Tatarlı, Dinar Province, Turkey. One group of archers on foot and one group of archers on horseback have been omitted from either end. Drawing after Summerer 2011, Abb. 4.



Fig. 2: The battle scene on the sarcophagus from Altıkulaç near Çan, Çanakkale Province, Turkey. The style suggests a date sometime in the late 5th or early 4th century BC. Photo by Dan Diffendale released under a CC BY-SA 2.0 license, <https://www.flickr.com/photos/dandiffendale/10506956496> (03.10.2022).



Fig. 3: Places discussed in this article. Squares indicate modern names, dots indicate ancient names. Coastlines, courses of rivers, lakes, and the Aral Sea are from 2021 and have changed since antiquity.



Fig. 4: An Attic red-figure kylix with a battle of Greeks and barbarians, c. 490–480 BC (possibly the same as Metropolitan Museum of Art, New York, number 1980.11.21). After Gerhard 1847, 50–52, Taf. CLXVI.



Fig. 5: Relief of guards from the Apadana, Persepolis. Photo by Sean Manning 2016.



Fig. 6: Glazed brick relief of guards from Susa (now in the Louvre). Photo by Sean Manning 2020.



Fig. 7: A bronze axehead, two bronze arrowheads, and a possible bronze catapult dart from Persepolis (now in the National Archaeological Museum, Teheran). Photo by Sean Manning 2016.

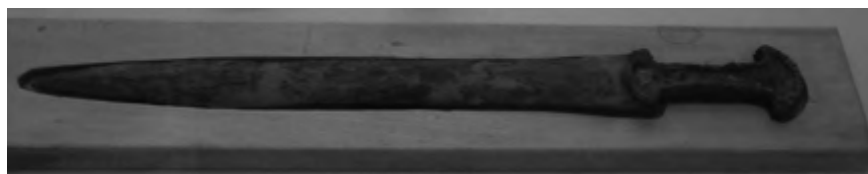


Fig. 8: An iron sword from Persepolis (now in the National Archaeological Museum, Teheran). While not as long as a La Tène longsword or a Han Dynasty *jian*, it is similar in size and shape to the larger types of Greek and Roman infantry sword. Photo by Sean Manning 2016.



Fig. 9: A barbarian or Amazon with a *peltē* shield stands behind a horse. Scythians, Amazons, Persians, and Anatolians in Athenian art look very similar. Attic red-figure kylix, c. 510–500 BC, Metropolitan Museum of Art, New York, accession number 06.1021.170 (photo by the Metropolitan Museum in public domain).

ABSTRACTS

Sean MANNING (Independent scholar, Victoria BC, Canada)

THE ARMIES OF THE TEISPIDS AND ACHAEMENIDS: THE ARMIES OF AN ANCIENT WORLD EMPIRE (pp. 147–192)

doi: 10.16758/j.cnki.1004-9371.2022.04.013

Although ancient warfare and the Teispid-Achaemenid Empire are common topics for research, no concise and up-to-date overview of Teispid and Achaemenid armies and warfare exists. The most recent syntheses were published in the period 1986–1992 when the current understanding of the empire was only beginning to form. This article combines indigenous and Greco-Roman texts, art, and artifacts to provide a short introduction to the armies and navies of the so-called Persian empire. It focuses on the reigns of Darius I and Xerxes (522–465 BC) from which a variety of texts and artwork survive from Persis, Babylonia, and Greece. Ten main sections cover the history of research, the seemingly contradictory evidence for a uniform army and a patchwork army under Darius I and Xerxes, how the very rapid conquests of the Teispids lead to an army very different than the Roman or imperial British armies, recruitment, organization and equipment, combat mechanics, army organization, siege warfare, naval and riverine warfare, and numbers and effectiveness. Whereas the author's recent monograph focused on methodological problems and the origin of different theories, this article offers usable answers to many difficult questions.

Raimund SCHULZ (University of Bielefeld)

BETWEEN WAR OF CONQUEST AND PRE-EMPTIVE ATTACK: NEW PERSPECTIVES ON THE BACKGROUND TO THE PERSIAN WARS (pp. 193–224)

doi: 10.16758/j.cnki.1004-9371.2022.04.014

This paper aims to re-investigate the premises and causes of the Persian Wars, examining recent theories of a pre-emptive Persian attack against Athens. Indeed, as early as the sixth century BC, and before Themistocles, Athens' foreign policy displayed aggressive tendencies towards the northern Aegean involving war fleets. Both Athens' engagement in the Ionian Revolt and the later campaigns

of the Delian League were consistent with this policy. Darius and Xerxes were compelled to react to Athenian aggression, which endangered both their plan of a Persian Aegean and Asia Minor's safety.

Stanley M. BURSTEIN / Caleb E. FINCH (California State University, Los Angeles / The University of Southern California)

LEAD POISONING IN ANCIENT ROME: THE STATE OF THE QUESTION (pp. 225–246)

doi: 10.16758/j.cnki.1004-9371.2022.04.015

Ancient reports on lead toxicity from Roman era writers are substantiated by data concerning the extent and effects from lead content in their environment. Contrary to the theory that connects lead poisoning with the decline of the Roman Empire, our review of data from ice cores and skeletons shows much lower levels of lead pollution in Late Antiquity than during the Roman Republican and Imperial periods. While no level of lead is safe to brain development, such behavioral disorders cannot be evaluated from ancient reports. Given the current state of the evidence, severe lead toxicity in ancient Roman adults was probably limited to those whose occupations brought them in close contact with lead such as miners and artisans. We conclude, therefore, that lead pollution in antiquity was more strongly associated with economic expansion than contraction.

Ergün LAFLI / Peter LIDDEL / Alev ÇETINGÖZ (Dokuz Eylül Üniversitesi, İzmir / University of Manchester / Dokuz Eylül Üniversitesi, İzmir)

THREE INSCRIPTIONS FROM UPPER MESOPOTAMIA (pp. 247–265)

doi: 10.16758/j.cnki.1004-9371.2022.04.016

In this brief paper we present two inscriptions from the Museum of Mardin and one inscription built in the wall of Ulu Mosque in Diyarbakır, both in southeastern Turkey. The first inscription in Mardin is a pedimental funerary stele of a man and his wife, and dated to the late 3rd to early 4th century AD. Its translation is as follows: *Argeios son of Papinios, while living and of good mind, for Kyria his wife as a memorial.* The second inscription in Mardin is a slab with baptismal iconography and an inscription. It originates from the Mardin region and could be dated to the 5th century AD. Its translation is as follows: *The voice of the Lord is upon the waters. A vow.* The last inscription is an Early Byzantine inscription from Diyarbakır. Its translation is as follows: *+On behalf of a vow of your servant Akakios, comes of Caesarea and his child. He made it from his own resources in the times of the most pious abbot Gourias.+*

FORUM: WHAT REMAINS OF CLASSICS?

In our often declared global, post-modern societies with the frequent claim of being “post-structuralist,” “post-colonial,” and “post-imperial,” among others, it has become common to challenge seemingly familiar truths, institutions, concepts, and the like. Naturally, this has not excluded Ancient Studies, and Classics in particular. But how and to what extent does, and should, this affect the epistemological and heuristic core of our discipline(s)? The review by Uwe Walter (University of Bielefeld) critically assesses a mind-challenging approach to studying the “reality” of ancient Greece, particularly the Athenian democracy, and is intended to trigger, and provoke, thoughts on that important topic.

Uwe WALTER (University of Bielefeld)

REVIEW OF ANDERSON, G. 2018. *THE REALNESS OF THINGS PAST. ANCIENT GREECE AND ONTOLOGICAL HISTORY*. NEW YORK & OXFORD: OXFORD UNIVERSITY PRESS. (pp. 267–274)

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