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TRANSPORT AND WARFARE

Nigel Tallis

The Persians teach their sons, between the ages of five and twenty, only three things: to ride a horse, use the bow, and speak the truth.

(Herodotus, *History* I.136.2)

The vast Achaemenid Empire could not have functioned without effective systems of communication and transport.¹ Although power was devolved to provincial governors or satraps, the political oversight of the periphery from the centre, the movement and operations of royal armies, and the flow of resources in tribute and trade to support these activities all demanded efficient communications. Herodotus's statement that Babylonia alone provided a third of the total supplies for the court and the army, if in any sense accurate, would be meaningless unless these supplies, or their value in other materials, could be transported beyond the local areas of production. The nature and structure of the army, economy and state were therefore directly related.

The overall nature and general organization of the Achaemenid army, and to a lesser extent the navy, were deeply rooted in the administrative and military traditions of the ancient Near East. This was unavoidable as the structure and deployment of the forces were at least partly determined by the way the empire's resources were harnessed, and how the empire was administered.

Land transport in the ancient world relied on the muscle power of humans and animals. Transport was difficult and extremely expensive over long distances, a situation only partially alleviated by water transport. Utilization of the horse was central to rapid transit on land, and so it is not surprising that the Achaemenid Persians, and the Medes before them, were renowned as consummate horsemen, or that skilled horsemanship should have remained a matter of great interest in Iran into modern times.

One of the most revealing examples of the difficul-

ties inherent in the study of Achaemenid transport – and the Persian military system in particular – is illustrated through the quote from Herodotus which opens this chapter. It is often cited as encapsulating the quintessential nature of a specifically Persian attitude to civil and military horsemanship. Although it most likely refers only to the education of the court elite, if not primarily to the king himself, it probably applied more widely, if only through imitation of the court. It is only one of several allusions to the education of Persian youths in Classical sources. Clearly drawing upon the same tradition available to Herodotus, yet providing additional detail, is Strabo's description of the education of young Persians: 'From five years of age to twenty-four they are trained to use the bow, to throw the javelin, to ride, and to speak the truth; and they use as teachers of science the wisest men, who also interweave their teachings with the mythical element, thus reducing that element to a useful purpose ...' (Strabo XV.3.18).

The elite nature of this education is also revealed in the terse statements of Darius I (522–486 bc), which in essence agree with Herodotus and Strabo, and must at least partly underlie their comments: 'As a horseman I am a good horseman. As a Bowman I am a good Bowman both on foot and on horseback. As a spearman I am a good spearman both on foot and on horseback' (Darius DNb). Remarkably, however, the closest comparison is to be found in the summary of the military and scholarly education of Ashurbanipal, King of Assyria (668–627 bc), as recounted in his annals:

The art of master Adapa I learned – the hidden treasure of all scribal knowledge ... I mounted my horse ... I held the bow, I shot the arrow, the sign of my valour. I threw unwieldy *azmaru*-spears like arrows. Holding the reins like a driver I made the wheels go round. I learned to handle the *aritu* and heavy *kababu* shields like a fully-equipped Bowman.

(ARAB II; 986; Streck 256.I.22)

Clearly there are many layers of complexity in the rela-

tionships between these apparently straightforward accounts, and the manner in which they may reflect an ancient tradition of elite culture. Viewed in isolation, these ancient texts, whether Greek, Persian or even Assyrian, give a misleading, or at best only a partial insight into the realities of the Persian Empire.

HORSES AND HARNESS

Achaemenid art, especially the fine reliefs at Persepolis, supported by a limited amount of osteological evidence, appears to show the same type of Persian draught and riding horses. This suggests that they are the famous



'Great Nesean' horses, said by Classical writers to have been bred on the Median plain.² They are depicted as long-bodied and ram-headed, with thick necks and heavy crests, and were the primary mounts of elite Persian horsemen. Greys seem to have been reserved for the king, senior commanders and the horses of the sacred chariot.³

The Medes and Armenians were also said to have supplied large numbers of tribute horses (Strabo XI.13.8; XI.14.9). The tribute chariot horses depicted on the Apadana reliefs at Persepolis appear much smaller than Neseans, the size of large ponies, and are clearly a different breed. However, it is possible that they have been reduced in scale slightly to fit the composition; the wheel diameters of the attendant vehicles also seem to have been reduced accordingly. The wheels of the Persepolis

chariots are noticeably small in comparison to other representations (compare cats 20, 399).

Draught and riding horses are shown with a distinctive design of headstall (usually formed of cheekstraps dividing at the lower ends and joined by a band over the nose), with a throatlash secured with a toggle and sometimes a browband. The strap-crossings are often decorated with strap-dividers in the form of birds' beaks, boars' tusks (cats 387–8) or simple discs (cat. 393). The straps of headstalls can also be decorated with roundels or discs (cat. 20). The horses are shown being controlled by a bridle and a simple snaffle bit (cats 383–6), of which contemporary examples have been found widely throughout the Near East – many at Persepolis. This type, first attested in this period, is usually made of bronze but also of iron, and has a jointed mouthpiece. Its canons, which are often studded or barbed, are cast in one piece together with the bar cheekpieces and their rectangular or circular rein attachments. The cheekpieces usually have two holes to take the ends of the headstall's divided cheekstraps, and are curved or angular, sometimes with figured terminals (most commonly in the form of a hoof and phallus; fig. 58).

Other animals attested for riding and draught are asses, and dromedary and Bactrian camels (Oxus Treasury cat. 257 and Apadana cat. 20).⁴ The development of camel transport in the first millennium BC was probably a major factor in the growth of long-distance caravan trade. Bovids, an essential part of agricultural life, are sometimes depicted in representations of ploughing scenes on seals.⁵ Pack animals were also employed in large numbers by the army: the Macedonians captured 7,000 donkeys and camels at Damascus (Curtius III.13.16; III.3.24). Human porters were a similarly unglamorous mode of transport largely neglected in the arts, but mentioned, if only rarely, in other sources (Curtius III.13.16).

VEHICLES

WAGONS AND CARTS

Evidence for Achaemenid wheeled vehicles is provided by finds of actual vehicles, and by representations in the major and minor arts and Arabian rock-art. Relevant textual sources from within the empire are limited largely to cuneiform material from Babylonian, but this can be supplemented by extensive references in Classical literature.⁶

It is often difficult to distinguish between two-wheeled light carts and chariots in representations, even assuming that such a simple distinction actually existed in antiquity. It is easy to forget that a bewildering variety of horse-drawn vehicles existed worldwide, with many

relief from
Persepolis
tribute
the typical
elements of an
mid-period
Persepolis
821.

local variations, well into modern times.⁷ Four-wheeled wagons are hardly ever depicted but in the Achaemenid period might be included together with two-wheelers under the Persian term *harmamaxa*, or 'covered carriage', preserved in Greek texts: 'It was thus that Xerxes rode out of Sardis; but when he was so minded he would alight from the chariot into a *harmamaxa*' (Herodotus, *History* VII.41); 'Cyrus inspected the barbarians first, and they marched past with their cavalry formed in squadrons and their infantry in companies; then he inspected the Greeks, driving past them in a chariot [*harmai*], the Cilician queen in a covered carriage [*harmamaxa*]' (Xenophon, *Anabasis* I.2.16). These vehicles, possibly covered or tilted, are attested as being used by the king, by royal officials such as ambassadors, and by royal women, children and staff of the court.⁸

CHARIOTS AND LIGHT CARTS

In the ancient Near East light two-wheeled carts, or chariots, drawn by two or more horses or asses, and carrying between two and four occupants, were vehicles of high status and prestige used for transport, warfare, hunting and display. The chariot retained most of these roles in the Achaemenid period, although its use in warfare declined. Representations of Achaemenid-period chariots are known from stone reliefs on the Apadana at Persepolis (cat. 26); seals (cat. 398); coinage from Sidon in the Levant (cat. 368); Graeco-Persian gems (cat. 407) and reliefs; and tomb paintings from Anatolia. The chariot of Darius III forms the centrepiece of the Alexander Mosaic found at Pompeii, which is thought to have derived from a lost near-contemporary Hellenistic painting. It illustrates the battle of Issus (333 BC) between the Persian and Macedonian armies in terms of a personal combat between Darius and Alexander.

59 An anthropoid linchpin holding in place the spoked wheel of a royal chariot on the east side of the Apadana at Persepolis. The form of the spokes is distinctive of the Achaemenid period.



There are two detailed gold models of Achaemenid-period chariots from the Oxus Treasure (cats 399–400); a bronze model from the Levant (cat. 401); and numerous stone and terracotta models of chariots from Cyprus. There is a small but significant amount of archaeological material, particularly wheels, from Egypt, Anatolia and the Caucasus.⁹

The chariot boxes or cabs from this period have rectangular floor plans, and 'sprung' floors of interlaced thongs (as represented on one of the Oxus gold models and on a Cypriot stone model).¹⁰ The decorated solid sides, often shown with crossed outer braces, may have either a horizontal upper edge or one sloping towards either the front or rear of the vehicle (cat. 20). Handholds are situated at the upper rear of the cabs, while the chariot on the Alexander Mosaic uniquely shows a strap across the side, indicating it was closed by a shield – oth-

erwise shown only by the highly detailed lion hunt chariot reliefs of Ashurbanipal (although this detail may in fact be decoration on the box).

The Oxus models clearly show that the central partition in the cab – dividing it from front to rear, and known from earlier and contemporary Cypriot chariot models (cat. 402) – could be used as a seat (also suggested on Achaemenid-period seals). On a Graeco-Persian relief from Xanthos the seat appears to run across the cab from side to side; this is more likely to be one of the rare examples of an identifiable variant form of light cart specially made for civil use.

Depictions of two-wheeled funerary vehicles carrying coffins on Graeco-Persian and Levantine stelae and sarcophagi appear to be partially dismantled chariots of Persian type, or hearses in chariot style.¹¹ Other Graeco-Persian monuments also show chariots with an open-framed cab of east Greek type, and this would appear to be the design of excavated funerary vehicles.

In terms of the undercarriage and draught, the axle is depicted in various positions. The most common and practical location is at the rear of the cab, as unless the occupants remained seated, the vehicle would rock back and forth endangering both crew and draught-team. Actual linchpins from Persepolis match those shown on vehicles on Persepolis reliefs (cat. 20) securing the wheels to the axle (fig. 59). Wheels are shown with between six and twelve spokes, the latter possibly reflecting an Elamite tradition, usually with ferrules or carved decoration about the mid-point of the spoke. As mentioned above, it seems that the wheels on the Persepolis vehicles may have been slightly scaled down to fit the artistic composition, as the large wheels on both the Oxus Treasure chariot model and the Alexander Mosaic are nearly identical to earlier Assyrian examples. Fragments of wheel from Uplistsikhe in Georgia match the evidence for Achaemenid construction, revealing that they were made with an inner and an outer felloe, the latter partially encased in a metal tyre of channel section, and with the tread studded with large, oval-headed, hobnails (as on earlier Assyrian royal chariots).

The so-called Y-pole form of draught pole was still in use, and is shown on a bronze model from the Levant (cat. 401), but the gold models of the Oxus Treasure and most Cypriot chariot models show the use of two draught poles with traction provided by a team of four horses under either a pair of two- or a single four-horse yoke (cat. 399). This is also the arrangement found in chariot A7 that was buried with draught team and harness at Salamis in Cyprus.¹² Although seemingly a very unwieldy design, modern experiments with this type of draught have demonstrated that the turning circle of

two-pole chariots was only 'a sweep of about 10 metres'.¹³ Harnessing was limited to a neck-strap, to keep the yoke in place, and a 'backing element' in the form of a strap passing under the belly and probably joined to the yoke. These straps are sometimes highly decorated, and, on royal chariot horses, a bell-shaped, fringed ornament hangs at the withers, probably derived from the earlier 'menat'-inspired collar counterpoises of earlier vehicles. Fan-shaped yoke ornaments, again continuing an earlier tradition, are shown at Persepolis (cats 25, 26) and four originally decorated the yoke of an Oxus model (cat. 399). Reins were passed through terrets on the yoke.

RIDING

Horses were ridden astride, although the infirm and women may have ridden in a side saddle on asses. This was the method of riding adopted by Assyrian kings, presumably at a time when riding on horseback, rather than in a chariot, was still not entirely respectable. It is revealing that the most basic techniques of horsemanship, even mounting, could benefit from Persian expertise, as when Xenophon advised his Greek readership that: 'It is well for the groom to know how to give a leg-up in the Persian fashion, so that his master himself, in case he is indisposed or is getting old, may have someone to put him up conveniently' (Xenophon, *Horsemanship* VI.1.12). Persian saddle cloths, fastened with girths and breastband, were recognized as highly distinctive, with rich decoration and edged with a fringe or characteristic stepped tabs.¹⁴ A saddle cloth of this type, made of felt, was found in barrow 5 at Pazyryk in southern Siberia (fig. 60). Simple pad saddles, as found at Pazyryk, may possibly have been used, concealed by the saddle cloth, but hard stirrups at least were a much later invention.¹⁵

POST SERVICE

There is nothing in the world which travels faster than these Persian couriers ... It is said that men and horses are stationed along the road, equal in number to the number of days the journey takes – a man and a horse for each day. Nothing stops these couriers from covering their allotted stage in the quickest possible time – neither snow, rain, heat, nor darkness.

(Herodotus, *History* VIII.98)

Horsemen, runners and express messengers were employed in the royal post service along the network of roads – semi-paved in part, at least – within the Achaemenid Empire, one messenger for each daily stage, according to Herodotus.¹⁶ Texts from Persepolis give information about the officials and other travellers using the royal roads often to travel over long distances

throughout the empire (cat. 310). These texts, which note the rations issued to travellers, preserve the titles in Elamite or Persian for a sophisticated organization of specialists under the direction of officials called *astandēs* (preserved in Greek sources). These included 'road controller' (*dātūmru*: mentioned by Herodotus under the name *hōdophylaktai*), 'travelling companions' (*baršāmana*), 'caravan leader' (*karnabūtīš*) and the elite 'express messenger' (*pirradāziš*), known from Greek sources as *aggaros*, whose speed of travel so fascinated Greek authors. A similar system, on a lesser scale but using some of the same routes, is known from eighth-century Assyrian sources (this seems to have made extensive use of light mule carts rather than horsemen). According to Herodotus, the main Achaemenid royal road linked Sardis in western Anatolia with Susa, but this was only part of a substantial network of roads and tracks, 'safe to travel by, as it never leaves inhabited country', apparently marked at regular intervals with 'milestones' and furnished with guards and regular royal staging posts with inns.

A vivid account of the practicalities of heavy road transport in the empire is preserved in an anecdote by Xenophon; this aside over the baggage train of Cyrus the Younger's army neatly encapsulates Greek obsessions with Persian appearance, organization and discipline:

Once in particular, when they came upon a narrow, muddy place which was hard for the wagons [*amaxai*] to get through, Cyrus halted with his train of nobles and dignitaries and ordered Glus and Pygtes to take some of the barbarian troops and help to pull the wagons out. But it seemed to him that they took their time with the work; accordingly, as if in anger, he directed the Persian nobles who accompanied him to take a hand in hurrying on the wagons. And then one might have beheld a sample of good discipline: they each threw off their purple cloaks [*porphyrous kandaē*] where they chanced to be standing, and rushed, as a man would run to win a victory, down a most exceedingly steep hill, wearing their very costly tunics and many-coloured trousers [*poikīlās amaxurīdās*], some of them, indeed, with necklaces [*forasē*] around their necks and bracelets on their arms; and leaping at once, with all this finery, into the mud, they lifted the wagons high and dry and brought them out more quickly than one would have thought possible.

(Xenophon, *Anabasis* I.5.7)

SHIPS AND BOATS

Most long-distance commerce would have been by river or sea¹⁷ – Darius I is said to have constructed the first Suez canal expressly for this purpose. The general peculiarities and cargoes of riverine transport in Mesopotamia and Egypt are amply documented by



60 A rider in Median dress walking beside his mount shown on a woollen pile carpet from barrow 5 at Pazyryk in Siberia. *State Hermitage, St Petersburg.*

Herodotus (*History* I.194), and in a more detailed, day-to-day level in cuneiform and Aramaic texts (cat. 312).¹⁸ The movement of materials for the construction of Persopolis records the transportation of wood by Assyrians, presumably as logs and in a similar manner to the movement of logs for Sargon II's palace at Khorsabad. The unique vessels of these rivers are also depicted in Assyrian reliefs, engaged on building projects, and, indeed, remained little changed into modern times. As pontoons, boats also provided the basis of probably the majority of bridges, most famously the temporary structures over the Hellespont for Xerxes' punitive expedition against the Greeks (Herodotus, *History* VII.36), but also for all manner of more permanent water crossings (Herodotus, *History* I.193; Xenophon, *Anabasis* I.2.5, II.4.13).

WEAPONRY AND WARFARE

THE ACHAEMENID ARMY

The Greek and Persian wars have inspired innumerable studies of the warfare of the period. There is not space here to discuss in detail the many recent works on Greek warfare, but they invariably treat the Persian army in isolation (if at all) without knowledge of, or any reference to, the 2,500 years of Near Eastern military tradition of which the Persians were the direct inheritors.¹⁹

The army was firmly under the command of the king, his family and his closest companions.²⁰ The armed might available to the king is a significant topic in Achaemenid art. It is represented, for example, on palace reliefs in glazed brick from Susa (cat. 51), and in stone at Persopolis (cat. 33) in the form of the Persian guardsmen possibly to be identified as the so-called 'Immortals'. They made up a 10,000-strong corps, according to Greek sources, and were depicted in the minor arts, for example as the guardsmen and cavalry featured on seals (cat. 414). It is significant that Achaemenid palace reliefs do not, unlike their Assyrian predecessors, depict actual warfare, but focus instead on soldiers in court dress. Thus direct military force is not celebrated in itself, but is hinted at subliminally as the ultimate sanction of the great king against the transgressor and the rebellious.

ORIGINS OF THE ARMY

No race is so ready to adopt foreign ways as the Persian; for instance, they wear the Median costume as they think it handsomer than their own, and their soldiers wear the Egyptian corselet [fig. 61].

(Herodotus, *History* I.135)

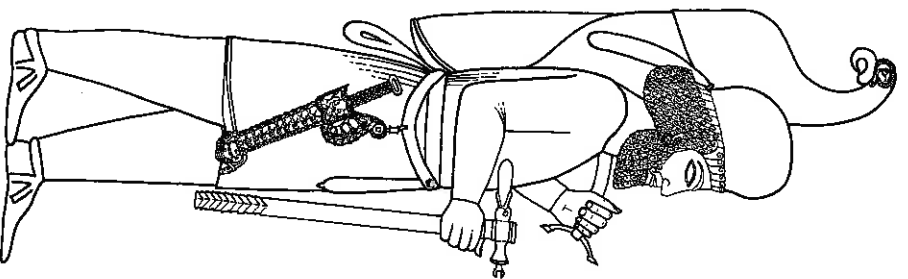
As noted in the introduction to this chapter, there are many threads of cross-cultural influences in the

Achaemenid Empire. In the military sphere they include the use of divine insignia carried in chariots as an army standard;²¹ the adoption of pieces of equipment such as the Elamite *akimakes* and Elamite 'court' dress or items of armour; the adoption of a possible Elamite tradition of massed infantry archery; the use of so-called 'dipylon', figure-of-eight or 'waisted' shields;²² the adoption of the 'Egyptian corselet' (described in Herodotus, *History* II.182 and III.47.2, worn also by Assyrians IX.63); the wearing of 'Saka' armour and Kurgan-style helmets (the latter also known earlier in Elam); and, perhaps most significantly, aspects of military drill and ritual known from Assyrian sources and also preserved in Herodotus.

Given the long military dominance of Assyria in the Near East it has sometimes been suggested that the formidable Neo-Assyrian military was likely to have been a formative influence on the Medes and Persians, but, until recently, there has been little direct evidence.²³ A relief fragment from the North Palace at Nineveh (fig. 62), showing Elamite and other archers, and Assyrian guard spearmen marching towards a group of priests, has long been identified (on the basis of the feather or floral crowns matching the fluted caps on guardsmen from the Persepolis reliefs) as perhaps showing auxiliary archers from Persia.²⁴ The Assyrian guards do not wear garlands in this fragment, but similar guardsmen do in other surviving fragments. The scene depicted is likely to be a ceremonial parade at Arbela following the return of the victorious Assyrian army from their great victory over the Elamites at the River Ulai in 653 bc. The much-abraded surface of the relief has until now concealed a vital detail: the guard spearmen are depicted marching with reversed spears. If we substitute 'garlands' for 'crowns' to describe the headgear it becomes clear that this fragment is actually a vital piece of evidence not only for military continuity in the ancient Near East, but also for the astonishing accuracy of at least some of the sources woven together by Herodotus to create the vivid account of Xerxes and his army marching across the bridge of boats into Europe in 480 bc.

They crossed over, the foot and horse all by the bridge nearest to the Pontus, the beasts of burden and the baggage train by the bridge towards the Aegean. The ten thousand Persians, all wearing garlands [*stephanos*], led the way and after them came the mixed army of diverse nations. All that day these crossed; on the next, first crossed the horsemen and the ones who carried their spears reversed; these also wore garlands. After them came the sacred horses and the sacred chariot, then Xerxes himself and the spearmen and the thousand horse, and after them the rest of the army.

(*History* VII.5.1)



61 Composite drawing of the king's weapon-bearer shown on the central panels from the two sides of the Apadana at Persopolis. He carries an axe, a bow-case (*gorgilus*) and short sword (*akimakes*), and wears Median dress.

Note the careful planning: baggage is separated from the main body and has its own bridge for operational reasons.

ARMY ORGANIZATION

The Assyrian and Achaemenid military systems also had much in common in their use of large professional guards' formations bolstering units of conscripts who were performing their obligations to the state in person or in kind. Both employed a decimal organization, with sections of ten men, companies of 100 and larger formations of 1,000 (the largest Persian body attested is the division of 10,000 men, possibly also known in Assyria); both used paid 'mercenaries', and both established small provincial forces.

62 Drawing of two fragments of an Assyrian stone relief from the North Palace of Ashurbanipal at Nineveh showing a military parade matching Herodotus's description of the 'Immortals'. British Museum, ANE 124923 and ANE 135204.

It has been suggested that the name 'Immortals' (*athanoi* in Greek) for the famous corps of Persian infantry guardsmen is actually due to a Greek mistaking of the Old Persian word *amushya* ('attendants' or 'retainers') for the Old Persian *amashya* ('immortals'). This would certainly accord more with the terminology in Assyrian and Neo-Babylonian texts where royal guards were also known as 'attendants' (*qurbat*). However, the similarity of the words in Old Persian may well have suggested the name of *amashya* for the guards as a Persian

nickname. Herodotus's statement that 'the Persians whom the king called Immortals/attendants' (*History* VII.211.1) is significant, since Assyrian kings could also refer to their elite troops using epithets commonly applied to divine heroes (as found in the usage of the term *hurrađu*, for example).

Persian written sources can give us information on ration lists and some technical terms, but not on how these armies fought. It is difficult to assess the capabilities of the Persian armies through the more ample Greek written sources because of their inherent bias, and the ubiquitous use of literary topoi (see Villing in this volume, pp. 236–43). For example, most scholars now dismiss the idea that Persian armies massively outnumbered their Greek opponents, based on logistical considerations and the need to garrison lines of communication; indeed by the time of Xerxes' offensive in Greece numbers must have been evenly matched.

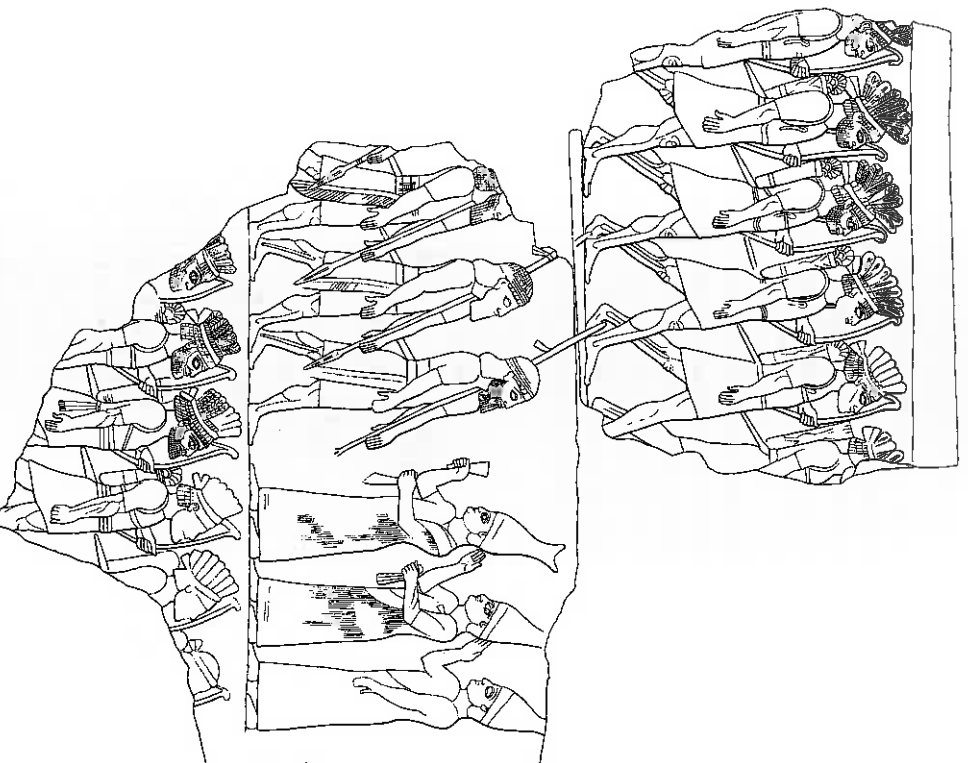
CHARIOTS IN WARFARE

Modern views of the military role of chariots in the ancient Near East are especially confusing and contradictory. According to some scholars, chariots were primarily a 'mobile firing platform', and a flanking and pursuit arm which evolved into largely stationary command and prestige vehicles with the development of cavalry in the first millennium BC. There are, however, many problems with this view of chariot warfare. For example, it ignores the very large numbers of chariots attested in textual sources for the Late Bronze and early Iron Age (and the attendant difficulties of manoeuvring many hundreds of vehicles in any sort of primarily 'skirmishing' role), and, indeed, the distant origins of fighting vehicles in the third millennium BC. It also fails to take account of the evidence that Babylonian charioteers were still being mustered for military service in Egypt in the reign of Darius I.

It seems more likely that the rapid evolution of the cavalry resulted in Near Eastern military chariots abandoning a multi-purpose role to concentrate on their strengths in an area to which the inherently more flexible cavalry were as yet poorly suited, namely as a close-combat 'threat' weapon. This was a process that finally culminated in the famous scythed chariot developed in the Achaemenid period:

From each of these there projected out beyond the trace horses scythes three spans long [c. 70 cm] attached to the yoke, and presenting their cutting edges to the front. At the axle housings there were two more scythes pointing straight out with their cutting edges turned to the front like the others, but longer and broader. Curved blades were fitted to the ends of these.

(Herodotus VII.53.2)



Diodorus's mention of trace horses reflects Greek, not Persian draught. Curtius (IV.9.5) adds that a spear projected forward from the end of the chariot pole and that blades below the chariot reached towards the ground.

Deployed in hundreds, rather than in the thousands of the period of classic chariot warfare, the Achaemenid scythed chariot was probably specially adapted to compensate for the effect of fewer chariots by exaggerating the weaponry that they carried. As a seminal modern work has it: 'Carrying only a driver, and with iron scythes attached to the axle ends and under the floor, with a high armoured box, said to be "like a turret", it was designed to terrify the enemy and break up his battle formation, thus enabling the mounted troops and infantry that followed to charge and decide the battle.'²⁵ But these chariots were deployed in too few numbers to have any significant effect (as recognized by Xenophon).

CAVALRY

There was no more javelin-throwing and no manoeuvring of horses, as usual in cavalry engagements.

(Arrian, *Anabasis* III.15.2)

Persian pictorial sources and Greek texts show that the bow and javelin were the chief weapons of Persian horsemen (cats 420, 421), while cuneiform sources provide more details of equipment. A text of 423/2 BC from the Murashu archive lists the armour and weapons of a cavalryman, including a horse with girth and reins, a saddle cloth, an iron corselet, helmet, what may be a neck-protector, a bronze-faced shield, 130 arrows and two *azmaru* throwing/thrusting spears.²⁶ Such spears were called *paša* by Xenophon, who recommended them over the long Greek lance, together with Persian forms of cavalry armour:

Since the rider is seriously imperilled in the event of his horse being wounded, the horse also should be armed, having head, chest, and thigh pieces: the last also serve to cover the rider's thighs. But above all the horse's belly must be protected; for this, which is the most vital part, is also the weakest. It is possible to make the cloth serve partly as a protection to it. The quilting of the cloth should be such as to give the rider a safer seat and not to gall the horse's back.

Thus horse and man alike will be armed in most parts. But the rider's shins and feet will of course be outside the thigh-pieces. These too can be guarded if boots made of shoe-leather are worn: there will thus be armour for the shins and covering for the feet at the same time.

Herodotus notes that the Persian, Median and Elamite cavalry of Xerxes' punitive expedition against Greece were armed like the infantry, except that some wore

bronze or iron helmets (*History* VII.84). Achaemenid cavalrymen on cylinder seals and in some Anatolian monuments appear to wear items of armour adopted from the Saka, in the form of protective shields fitted to the back or arm, high collars and domed helmets known from Central Asian burials. Other armours – combined rider-and-horse leg and thigh defences – are also known from Greek and Anatolian sources. Greek historians of the Persian Wars tended to downplay the role of cavalry in battle, and therefore it is somewhat overlooked that the decisive battle of Plataea only came about following the Greek army's near collapse from the highly successful skirmishing attacks of the Persian horsemen. The Persians seem to have perceived the ragged Greek retreat to a stronger position to be a rout and advanced too hurriedly in pursuit.

INFANTRY

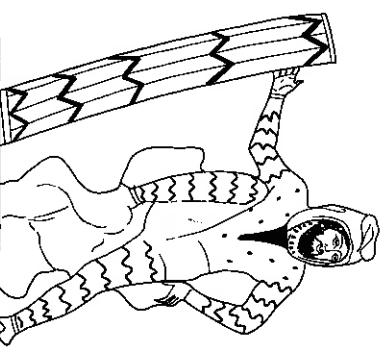
Although often represented in court or Persian dress, military battle-dress was based upon the Median dress, or riding costume, also observed in battle by Herodotus and Xenophon:

The nations of which the army [Xerxes' army] was composed were as follows: First the Persians themselves: the dress of these troops consisted of the tiara, or soft felt cap [*kitharis*], embroidered tunic with sleeves, a coat of mail looking like the scales of a fish, and trousers [*maxyrides*]; for arms they carried light wicker shields, quivers slung below them, short spears, powerful bows with cane arrows, and daggers swinging from belts beside the right thigh. ... The Median contingent ... was equipped in the same way as the Persians ... that armour is originally Median and not Persian.

(*History* VII.61.1, 7.62)

The basic description is quite accurate, and matches in general appearance, if not in detail, for example the Persepolis Apadana reliefs (fig. 63).

Persian infantry were seemingly formed into formations of mixed archers and shieldbearers with spears, as also attested in earlier Assyrian sources. Spearbearers,



63 Drawing of a Persian infantryman shown on a Greek cup (Berlin 3156) with a shield made of wooden rods inserted through a leather sheet. Such shields are also illustrated at Persepolis and have been found in excavations at Paiziyk, Siberia.

arsibara, are known from Persian sources; and *sparabari*, defined by the Greek lexicographers as 'troops bearing wicker shields', are derived from an assumed Persian form *sparabara*, or 'shieldbearer'. In earlier Assyrian texts similar terms are used interchangeably for 'soldiers'. It is likely that a battle array of this kind would be highly effective when facing the large mounted forces known in the Near East since at least the second millennium BC. A horse is a large and vulnerable target for archery; well-equipped infantry is less vulnerable – as the Persians were to discover. It is probable that Achaemenid formations followed the Elamite tradition of maximizing the number of archers in the infantry units, unlike the Assyrians who seem to have maintained a 50:50 ratio of archers to shielded spearmen.

THE PERSIAN NAVY

The trireme, or fast, three-banked ship designed for ramming, was the standard warship of the Achaemenid period. Persia had created a trireme fleet in the Mediterranean as early as 525 BC (Herodotus, *History* III.19). Indeed, according to Thucydides (I.13.2), Corinth was

first amongst the Greeks to use the trireme; Clement of Alexandria (late second to early third century AD) attributed its invention to the Sidonians (*Stromateis* I.16.36). It is even possible that an early form of the three-banked ship was invented by the Phoenicians in the eighth century BC under pressure from the Assyrians; similarly the true trireme may have been developed to serve Persian imperial needs.²⁷ Ephorus of Cyme refers to the Persian fleet as the royal navy (*basilikos stolos*) and states that the king furnished the ships, and that the Ionian Greeks (and other seafaring peoples), primarily the Phoenicians, supplied the crews (Diodorus Siculus XI.3.7).

Herodotus gives a total for the Persian fleet mustered against the Greeks as 1,207 triremes (*History* VII.89.1) and nearly 2,000 other vessels. However, this is possibly inspired by the 'catalogue of ships' in Homer, and, if true, would have required more than a quarter of a million men as crew! As with the land forces, if the figure has any basis in reality, then it might reflect the total skilled manpower available in the coastal provinces, of which only a fraction might practically be mustered at any one time.

1 The frontiers of the huge Central Asian hinterland make estimates of size difficult. At around 7,500,000 square kilometres (2,900,000 square miles) the Achaemenid Empire was the same size or larger than the Roman and Han Chinese Empires at their peak.

2 'The horses are called Nesaean because there is in Media a wide plain of that name, where the great horses are bred' (Herodotus, *History* VII.40.3).

Arrian (*Anabasis* VII.13.1) claims that 150,000 manes were pastured there.

3 Mardonius rode a grey at Plataea (Herodotus, *History* IX.63); 'The sacred chariot of Zeus was drawn by eight white horses' (VII.40.4). Ordinary mounts were apparently usually black (Aeschylus, *Persae* 318).

4 For camels used as paired draught in a seemingly ritual context see Calmeyer 1975: 13/3.

5 Delaporte 1923: A791.

6 For example, there were supposedly at least 400 food wagons in the baggage train of Cyrus the Younger's army (Xenophon, *Anabasis* I.10).

7 Sturt 1923: 17ff.

8 Arrian, *Ach.* 70; Xenophon, *Cyr.* III.1.40, VI.4.11; Curtius III.3.14–25; 13.10–11.

9 For vehicle finds from Georgia see Kiplani 1999:

7–18; Kiplani 2000: 74–95.

10 Stodnicka 1907: no. 32.

11 Littauer and Crowell 1979: 146–7.

12 Karageorghis 1973: 73.

13 Crowell 1987: 113.

14 Goldmann 1984.

15 For soft stirrups see Littauer 1981.

16 Plutarch (Vit. Alex. XVIII.7) says that the royal messenger service were dressed in distinctive cloaks.

17 For travel costs overlaid in the late Roman empire doubling in only 150 miles see Garnsey *et al.* 1983: 104, n. 46.

18 Abraham 2004: 84–118.

19 Postgate 2000 summarizes the state of research of ancient Near Eastern armies. Recent studies on ancient Greek warfare: Hanson 1989, Van Wees 2004, Hanson (ed.) 1991, to cite only a few.

20 Herodotus lists the Persian commanders of the army corps, nearly all connected in some way to the royal family.

21 Persian examples described variously, but apparently a winged disc: Herodotus, *History* VII.40; Xenophon, *Anabasis* I.10.

22 Possibility of Anatolian origin. A bronze element similar to the shield boss of a waisted shield, as depicted at Persepolis, has been found on Samos

(Jantzen 1972: pl. 56/B1681).

23 Dandamayev 1997: Liverani 1995.

24 Not least because it has sometimes been dismissed as completely fictional: Sekunda 1992: 12–13.

25 Littauer and Crowell 1979: 152.

26 Ebeling 1952.

27 Morrison 1995: 55. Perhaps these early three banked ships were the origin of the early Egyptian 'triremes' of Necho.

HORSES AND HARNESS

According to pictorial and archaeological sources, Achaemenid Persian draught and riding horses were both controlled by a simple bitted bridle. The commonest form known is a bronze snaffle with jointed canons, or mouthpiece, cast in one piece together with the usually curved or angular, rod- or bar-like cheekpieces and rein attachments. The attachments are ring-shaped or rectangular, while the cheekpieces, often with decorated terminals, have two holes to take the ends of the bifurcated cheekstraps.

Significantly, the canons are usually studded or barbed, which is a device to improve a rider's control (by increasing the effect of the bit on the horse's mouth). This arrangement particularly suggests a military context, where a horse will be operating in an unusual and frightening environment and where an extra emphasis on coercive control is required.

Fifteen bits of this type were found at Persepolis in the Treasury and the Garrison Quarters, and examples are also known beyond Persia from Georgia, Iraq, Turkey, the Levant, Egypt and Greece. Iron examples have been discovered, but are rare, while earlier inscribed examples are also known from Urartu. The cheekpieces of this form of bit are easily identifiable on the Persepolis reliefs on both Persian and tribute horses.

Interestingly, while the Alexander Mosaic chariot horses have this type of bit, the Persian cavalry horses are shown with Greek forms. This suggests that either the artist had only imperfect access to authentic references or, perhaps less likely, that some Persian cavalry had adopted the more extreme forms of Greek biting (perhaps in addition to Greek lances, although this is also uncertain: Arrian, *Anabasis* III.15.2).

383 Bronze snaffle-bit

This bit has curved cheekpieces with plain, slightly swollen terminals. Each cheekpiece has double circular perforations for the ends of the cheekstrap, and integral round rein-attachments. It has a jointed mouthpiece and the canons are barbed.

This is the commonest type of Persian bit, a development of an earlier form with separate, straight bar cheekpieces. Fifteen examples were found by Schmidt in the Treasury at Persepolis (and others in subsequent excavations); horse bits of this type have also been discovered throughout the Near East, as well as in Georgia and even on the Acropolis at Athens.

Persepolis, probably from the Treasury or Garrison

Quarters

L 25 cm (cheekpiece), W 21.5 cm (canons),

max. Th 4 cm

Tehran, 204

Cf. Schmidt 1957, pl. 78/4; Tadjvidi 1976: 96-7,

205, figs 151, 165; Moorey 1980a: 69-72

384 Bronze snaffle-bit

The bit has angular cheekpieces, each with double circular perforations for the ends of the

cheekstrap. These are decorated with ridges

forming a triangle at the junction with the canons, below the integral square rein-attachments. The terminals are flattened and plain; one end has a cylindrical thickening while the other end is cut away. It has a jointed mouthpiece and the canons are lightly studded.

Persepolis, found in Hall 38 of the Treasury
(PT5 819)

L 37 cm (cheekpiece), W 31 cm (canons),

max. Th 5 cm

Tehran, 334

Schmidt 1957: pls 78:3, 79:8

385 Bronze snaffle-bit

This example has slightly curved bar cheekpieces, swollen around double perforations for the cheek-strap, and slightly swollen terminals. The canons are joined by a separate ring, a rare variant of the standard type, and are barbed.

Found at Warka, Iraq

Excavated by W.K. Loftus and acquired in 1856

L 15.24 cm (cheekpiece)

British Museum, ANE 91187

Potratz 1966: 117, pl. III/122

386 Bronze snaffle-bit

This has curved cheekpieces with plain, flattened, slightly swollen terminals. Each cheekpiece has double circular perforations for the ends of the cheekstrap, and integral round rein-attachments. It has a jointed mouthpiece and the canons are barbed.

Probably from Deve Hüyük, Syria

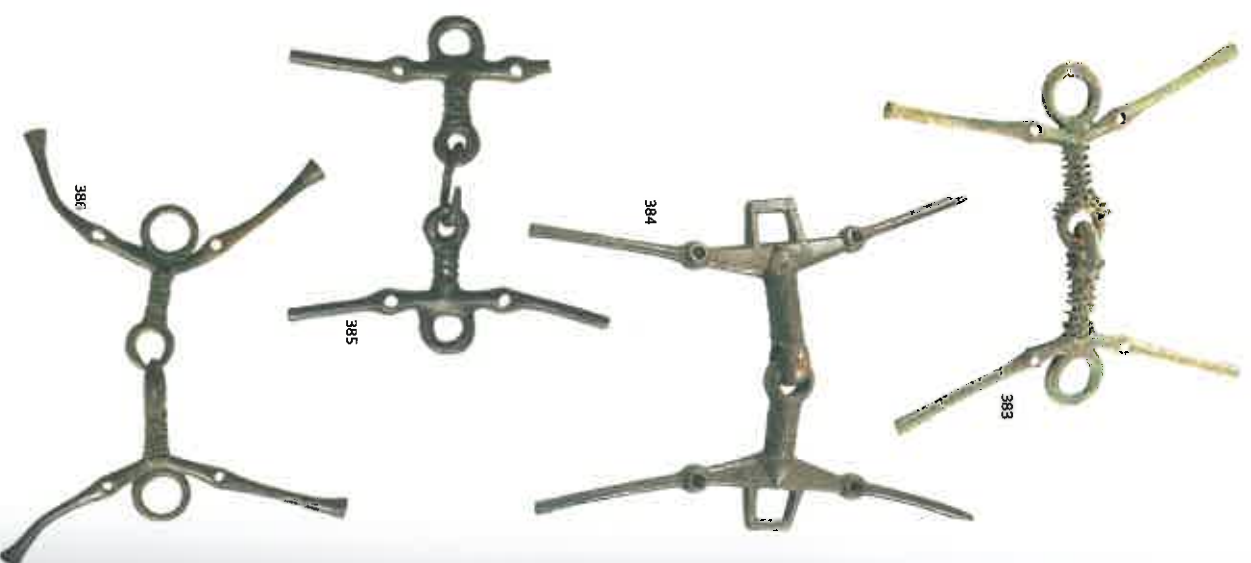
Acquired in 1913

L 21.6 cm/25.4 cm (cheekpieces), W 21.59 cm

(canons)

British Museum, ANE 108759

Potratz 1966: pl. III/124b; Moorey 1980a: no. 228, fig. 10/228



BRIDLE-HARNESS ATTACHMENTS

The Persepolis reliefs show that bridle ornaments in the shape of boars' tusks were mounted on horses' headstalls in sets of four and were used to align and divide the straps of the harness. They are depicted both on horses belonging to the Persians and on horses being led by tributaries (see fig. 58). Actual examples in stone and in bone, as well as three pierced boar's tusks, have been found at Persepolis (Tadividi 1976: 198, fig. 152; Schmidt 1957: 100, pl. 79/3-5; Herzfeld 1941: 271) and Babylon, and there are examples in stone from Susa. These bridle ornaments are thought to have developed from bone attachments that are linked with the nomadic people of the steppes, and it has been argued that they should be associated with Iranian tribes such as the Cimmerians and the Scythians.



387

387 Four horse-harness strap-dividers

Made of white stone in the shape of boar's tusks. The three smaller dividers are pierced with interconnecting holes at right angles to each other and have an incised line along the outside face. The larger example is closed at the top and has no groove.

Persepolis, from Room 1 in the Fortifications

Excavations of A. Tadividi

H 5.2 cm, Diam 2.05 cm (base); H 3.65 cm,

Diam 2 cm (base); H 3.6 cm, Diam 1.95 cm (base);

H 3.6 cm, Diam 1.9 cm (base)

Tehran, 4525

Tadividi 1976: 198, fig. 152



388

388 Horse-harness strap-divider

Made of bronze, in the form of a boar's tusk. It is square in section and tapers to a point. The other end is hollow and is pierced on four sides with interconnecting holes. The end is closed.

Provenance unknown

Acquired in the nineteenth or early twentieth century

H 3.33 cm, W 3 cm, 1.58 cm x 1.53 cm (base),

Wt 32.4 g

British Museum, ANE 1999-12-1.17

Curtis and Kruszyński 2002: no. 180, fig. 44, pl. 17



389

389 Horse-harness strap-divider

Made of copper-gold alloy with gold inlay, in the form of a griffin head. It has been deliberately given a dark patina in antiquity to enhance the surface contrast with the inlay.

Provenance unknown

Purchased from Messrs Rollin & Renard in 1891

H 3.2 cm

British Museum, ANE 1891-5-13, 3

Walters 1899: no. 2875



390

390 Horse-harness strap-divider

Bronze, in the form of a goat or ibex.

Said to have been acquired in the Troad

Purchased from Revd John Greville Chester in 1888

H 3.14 cm, W 3.18 cm, max. Th 1.55 cm, Wt 23.5 g

British Museum, GR 1888.5-12.12

Curtis and Kruszyński 2002: no. 185, fig. 45, pl. 18

391 Horse-harness strap-divider

In the form of a bronze plaque showing a recumbent goat or ibex in low relief. Two loop-fasteners are mounted on the back, which is flat.

Provenance unknown

Purchased in 1956 from Mrs Margarette Burg

H 2.94 cm, W 3.35 cm, max. Th 1.76 cm, Wt 33.5 g

British Museum, ANE 132120

Curtis and Kruszyński 2002: no. 186, fig. 45, pl. 18



392 Horse-harness strap-divider

A bronze plaque showing a recumbent boar in low relief facing left. On the back, which is flat, is a hollow 'junction box' pierced by four lateral holes.

Provenance unknown

Purchased from Messrs Rollin & Beaudant in 1891

H 2.25 cm, W 4.1 cm, Th 1.7 cm, Wt 43 g

British Museum, GR 1891.5-13.2

Walters 1899: no. 2876; Curtis and Kruszyński 2002: no. 187, fig. 45, pl. 18



392

393 Gold strap-divider, probably a bridle-fitting

A plain disc with a flat top, at the back of which is a hollow 'junction box' with four openings at right angles to each other.

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

Diam 2.4 cm, Wt 6.5 g

British Museum, ANE 124049

Dalton 1964: no. 146, fig. 69; Curtis and Kruszyński 2002: no. 174, fig. 41, pl. 16



393

396 Horse-harness ornament or silver shield-boss
With gold overlay, consisting of a circular disc with embossed centre pierced by five holes.
There is a gullloche pattern around the edge, and between the rim and the central boss is a hunting scene involving three riders on horseback. They are wearing Median dress without stirrups, which were not known at this time. The horses wear patterned saddle-cloths secured with a breaststrap and fringed at the back, and their tails are tied in mud-knots with bows. The ornate saddlecloths may be compared with those shown on the pottery horses (cats 410–12). Two of the horsemen converge on a pair of ibexes, one of which has already been struck by a spear. One of these horsemen is armed with a spear and the other with a bow and arrow. The third horseman, again armed with a spear, pursues two deer, one of which has a broken spear sticking into

of the frontlet of the Oxus gold horse model (cat. 400) and are probably intended to represent circular plaques, or *phaleræ*. A wooden disc from a tomb at Pazyryk in Siberia with a similarly stylized lion's mask is classified as a harness ornament (Rudenko 1970, pl. 138A) as are similar elements from barrow 4 at Pazyryk (Rudenko 1970: pls 111D and F).

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

Diam 4.15 cm, Wt 10.2 g

British Museum, ANE 123941

Dalton 1964: no. 40, pl. XII; Curtis and Kruszyński 2002: no. 176, fig. 42, pl. 16g



394–5

394 Hemispherical gold disc

Embossed with a pair of recumbent boars placed head to tail, each facing a goat's head. There is a stout loop for attachment on the reverse.

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

Diam 4.3 cm, Wt 23.3 g

British Museum, ANE 123944

Dalton 1964: no. 43, fig. 50; Curtis and Kruszyński 2002: no. 175, fig. 42, pl. 16

395 Circular gold plaque

With embossed decoration showing the head of a roaring lion facing front. There is a cable pattern border and a thick gold wire loop for attachment on the back. This was probably a harness ornament.

Circular rings made of gold wire form part

it. In front of the ibexes is a hare, but as Professor B.A. Litvinsky has pointed out, Dalton was mistaken in thinking that one of the riders was aiming an arrow at the hare.

Dalton pointed out that the figure-of-eight or waisted-shield types at Persepolis are sometimes represented with similar circular fittings in the centre (Dalton 1964: fig. 47), but the similarities are not close. Instead, the Persepolis representations are best paralleled by a circular bronze disc from Samos (Janzen 1972: 60, pl. 56 B 1681). So it is more likely that this piece is a harness ornament, or *phalera*, in which case the central holes could be for attachment of a tassel, or to secure the disc to harness.

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

Diam 9.65 cm, Wt 29 g

British Museum, ANE 123925

Dalton 1964: no. 24, pl. X; Litvinsky 2001: 157–8, fig. 9



396–7

397 Gold disc

The disc is convex, with embossed decoration showing an eagle in the centre, surrounded by a band of lotus-flower decoration. There is a scalloped border around the edge and at the back is a ring for attachment. This was possibly a harness ornament.

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

Diam 9.8 cm, Wt 39 g

British Museum, ANE 123926

Dalton 1964: no. 25, pl. XI

CHARIOTS AND CARTS



398

398 Cylinder seal in green and grey-brown clouded chalcidony

The king stands in a chariot driven towards the right, and aims a third arrow at a rampant wounded lion. The two horses are leaping over the body of a fallen lion. Above is a figure in a winged disc. The scene is flanked by palm trees, between which is a trilingual cuneiform inscription in Old Persian, Elamite and Babylonian (SDa): 'I [am] Darius, great king' (the word 'great' only occurs in Babylonian). This was probably a seal of office (cf. Garrison and Root 2001: pl. 281).

Said to have been found in Lower Egypt

Acquired from the Salt Collection in 1835

H 3.7 cm, Diam 1.7 cm

British Museum, ANE 89132

Pope 1938: IV, pl. 123A; Boardman 2000: 161, fig. 5.9; Merrillees 2005: no. 16



399

399 Gold model four-horse chariot

The chariot box or cab is open at the back. It has an irregular square front, wider at the top than the bottom, ornamented with two incised bands in saltire, probably representing diagonal bracing struts as shown on the seal above and the copper-alloy model from the Louvre, cat. 401 (also on a seal of possibly Neo-Elamite date: Schmidt *et al.* 1989: pl. 233, no. 43). These bands are decorated with triangles and have a Bes head at the intersection. The floor is covered with cross-hatching, most probably representing a flooring of interlaced leather thongs. The two large wheels each have eight or nine spokes, and the running surfaces are studded with small pellets to represent the bulbous heads of large stud-like nails which in the full-size original would have secured a tyre and felloe-sheathing of bronze. A seat, in the form of a narrow strip of gold, runs from the front to back of the interior. On this is seated the principal

figure. He wears a long robe reaching to the ankles, the sleeves of which appear to be empty like those of the *kandys*. On his head is a hood or cap and around his neck is a gold wire torc.

The driver wears a similar cap without a fillet, a short girdled tunic and a wire torc; his legs are also formed of wires. The two human figures are fixed to the chariot by wires.

The chariot is pulled via a pair of draught-poles fixed to four horses under a single four-bay yoke, as in an excavated chariot from Salamis B in Cyprus. On the yoke, above each horse, is a large loop, representing the terrets, through which the wire reins pass, alternating with these loops were originally four crescentic fan-shaped yoke ornaments (found full-size made of sheet-bronze on the Salamis B chariot). The bits have large rings at the sides as rein attachments, and each animal has duplicate representations of the neck-strap and backing-element, the former with a pendant tassel, punched into the metal.

The horses are small, pony-sized animals, but otherwise have the appearance of ram-headed Neseans. Their tails are tied up in mud-knots and the hair of the forelock is pulled back, as shown on the Darius seal (cat. 398), and horse vessel (cat. 410), but not tied in a splayed tuft as shown on the Persepolis reliefs and elsewhere. Only nine legs of the horses survive and the spokes of one wheel are imperfect.

The profile of the cab or box and the general appearance of the wheel match representations of Achaemenid chariots on the sculptured façades of the Apadana at Persepolis, on the so-called Darius seal above, and the Alexander Mosaic. These do not show the fronts of the chariots, although the Alexander Mosaic and the scaraboid seal (cat. 407) suggest that, other than band decoration, they were plain. The royal chariots depicted at Persepolis on the eastern stairway of the Apadana have a different decorative scheme;



400

400 Gold model chariot

The box is edged with a frieze of striding lions and decorated with a lattice pattern. They are also equipped with quivers. The use of a Bes head on the Oxus chariot model is compatible with it having been made for a child or as a votive offering, as Bes was regarded as being a protective deity of the young, and his popularity throughout the Persian Empire is demonstrated by the discovery of amulets (for example, in a hoard at Babylon) and on gold jewellery.

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

L 18.8 cm

British Museum, ANE 123908

Dalton 1964: no. 7, fig. 20, pl. IV

Cf. Karageorghis 1973: 79, figs 10–11, pls OCL-1;

Littauer and Crouwel 1979: 145–52, fig. 82; Abdi

1999: fig. 8/4; Kipiani 1993: 7–18; Kipiani 2000: 74–95

represent circular plaques or *phalerne* as found on a bridle from barrow 5, Pazyryk (Rudenko 1970: pl. 114; see also pls 73A–B, 90G–H).

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

L 8.4 cm, W 4.7 cm; L 4.3 cm (horse)

British Museum, ANE 132256 (chariot),

123909 (horse)

Dalton 1964: 4, fig. 21 and unnumbered pl.

The chariot has no wheels, and contains a driver and a now-headless seated figure. There is only a single surviving gold model horse. The vehicle has a long body with a central box-divider and seat, and added wire stiffening for the top edge of the sides forming two open loop handgrips at the rear of the box. The axle is formed by gold wire and is placed at the rear edge of the box. There are two draught-poles, as the model above, but made of flat gold strip. Unlike that model, there are two two-horse yokes, each originally fitted with two terret rings for reins (only one of which survives).

The horse has a highly detailed headstall made of gold wire, which includes a frontlet consisting of a central diamond joined to two upper and lower rings, probably intended to



401 Bronze model chariot with figures of two divinities in Egyptian style

The chariot has a rectangular cab or box with external cross-braces in saltire on the front and sides, and raised bands on the upper edges and front angles. There are looped, round-topped handgrips at the top rear. Two six-spoked wheels are set under the middle of the cab and the two draught-poles run underneath the length of the floor. Each pole has an upper support secured to the front of the box (as also shown on the Darius seal, cat. 398, and on earlier Neo-Assyrian chariots).

Certain elements of the group are known prior to the first millennium bc, but the vehicle's combination of features indicates an Achaemenid date.

Said to come from 'Phoenicia'

Acquired in Beirut for the de Clerq Collection

H 6.5 cm (vehicle, excluding handgrips), W 10.8 cm,

L 6.75 cm

Louvre, AO 22265

De Ridder 1905: 129ff., no. 209, pl. XXXII; Littauer,

Crouwel and Colton 1976

403



402 Limestone model four-horse chariot with traces of red paint

There are two figures in the cab or box and both heads are now missing. There is a clear cab-divider/seat and the vehicle has two draught-poles and two two-horse yokes. It dates to the late sixth century bc.

From Ialalon, Cyprus

Purchased from Sir Robert Hamilton Laing in 1873

H 19.5 cm

British Museum, GR 1873.3-20.93

Smith 1900: no. C84



405

403 Linchpin from a wheeled vehicle, probably a chariot

The upper part is of bronze cast on an iron core, in the form of a beardless man in an apparently sleeveless belted tunic and wearing a plain round, flat-topped Persian cap. His arms are flexed and his hands are shown resting on his chest. A ring on each wrist, made of metal strip and representing a bracelet, was probably intended to make a jingling noise as the vehicle moved.

Persepolis, from Hall 41 (PT6 206) of the Treasury

H 8.95 cm, max. W 7.7 cm, Th 2.75 cm

Tehran, 332

Schmidt 1957: 68, pl. 31/8; Calmeyer 1980b:

100-101, no. A1, fig. 1



404

404 Linchpin from a wheeled vehicle, probably a chariot

Similar to cat. 403 above, in bronze with an iron core, but representing a female figure in a robe with her hands clasped below her breasts. Linchpins of this form, showing figures with clasped hands, are depicted in use on reliefs of chariots at Persepolis (Calmeyer 1980b: pls 21/13, 22/1–2, 23/1).

Persepolis

H 9.5 cm, max. W 4.1 cm

Persepolis Museum

Calmeyer 1980b: 100–101, no. A2, pl. 23/2, 24/1–3



405 (right), 406 (left)

406 Gold sheet cut-out figure of a horse

The horse, possibly intended to be a Nesaean, is more finely finished than the above, with punched and incised details of harness, mane (though not dressed in typical Persian style) and tail. The mouth is pierced, probably for wire reins now missing. The forelock is shown tied into a splayed tuft on the poll and there is a loop on the horse's back, probably for a wire yoke. If so, then this is a draught horse for another chariot model.

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

H 4.2 cm, L 5.5 cm, Wt 9.5 g

British Museum, ANE 123947

Dalton 1964: no. 46, pl. XIII

407 Scaraboid stamp seal in carnelian

The seal is engraved in 'Graeco-Persian' style on the convex face with a mounted figure in Median dress, wearing a cap or hood and a cloak. He is seated on a tufted saddlecloth, and aiming a spear at two figures in a fleeing two-horse chariot. The charioteers wear rounded helmets or caps and long-sleeved tunics. The main figure appears to have a crest to his helmet and carries a small double-recurved bow. The chariot is superficially of

Persian type, with an eight-spoke wheel (with decorative ferrules or turnings on the spokes) and a studded tyre. The front of the box, however, is open at the top with a double fenestration; this possibly owes more to East-Greek styles of vehicle. The reverse is engraved with a seated dog.

Many of the so-called Graeco-Persian seal stones produced during the fourth century BC were probably made in Asia Minor. They may have been commissioned by the local ruling satraps.

Said to be from Mesopotamia

Purchased from Ilias Géjou in 1911

L 2.4 cm, W 1.8 cm

British Museum, GR 1911.4.15.1

Walters 1926: no. 435, pl. 7; Boardman 1970: no. and pl. 864, col. pl. 307/3



407

405 Gold sheet cut-out figure of a horse

With punched and embossed details. There are the remains of an attached yoke with a circular yoke-standard and a short length of rein. This must originally have been a draught horse for a model chariot, possibly also made of metal sheet.

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

H 3.4 cm, L 5.25 cm, Wt 5.5 g

British Museum, ANE 123945

Dalton 1964: no. 45, pl. XIV

RIDING



408

408 Gold figure of a male rider

The rider is wearing a high, stiff cap, trousers and a tunic with edge-decoration. He was probably originally holding reins and mounted on a horse.

Oxus Treasure

Purchased from the 2nd Earl of Lytton in 1931

H 7.6 cm, Wt 69 g

British Museum, ANE 124098

Dalton 1964: after pl. XL

409 Cast bronze figurine of a horse and rider

The rider is wearing Median riding dress with a soft cap and an *aknakes* suspended from a waist belt on his right thigh. His tunic has edge-decoration and he wears bracelets. The horse has a rectangular saddle blanket with edging tufts along the lower edge and stepped lappets at the rear. There is a strap below the blanket to secure either it or a pad-saddle and a breaststrap. The mane is pulled but has long strands on the lower neck and a forelock tied up into a splayed crest on the poll – all of which are distinctively Achaemenian features. The horse is shown in a fast gallop, and the pairs of fore and hind hooves are joined together for attachment to an ele-



409

ment now missing (perhaps a vessel). Similar riders are shown as border decoration in a pile hanging or carpet from barrow 5, Pazyryk (Rudenko 1970: pls 174–6); a decorated saddle blanket of felt with stepped lappets in Achaemenid style was recovered from the same barrow (see fig. 38) (Rudenko 1970: pl. 160).

Provenance unknown

Purchased from W. Talbot Ready in 1890

H 8.5 cm, L 10.1 cm

British Museum, ANE 117760

Christman 1964: fig. 315; Curtis 2000: fig. 65



409, showing the *aknakes* worn on the right

410 Horse-shaped vessel

A 'horse rhyton' in yellow ceramic, with details of horse and harness added in red, yellow and black paint. It has a saddlecloth with stepped lappets.

Said to be from Maku, Azerbaijan
Found in 1924

H 21 cm, W 11 cm, L 31.5 cm

Tehran, 6700

Ghirshman 1964: 287–8, pl. 467, figs 347–8;

Stronach 1974: 243ff, pl. LIII: 2; Moorey 1985:
30, fig. 6a; Seipel 2000: no. 101



410

411 Horse-shaped vessel

In a buff ceramic with details of horse and harness added in purplish-red paint. It has a tufted saddlecloth. It can be dated to the fifth century BC.

Susa, Achaemenid Village I (Susa 1329/3179)

H 22.8 cm, W 10.5 cm, L 30 cm

Tehran, 8485

Ghirshman 1964: 289–91; Stronach 1974: 243ff, pl.
LIII/1; Moorey 1985: 30, fig. 6b; Seipel 2000: no. 42



411



412

412 Fragmentary horse-shaped vessel

In a buff ceramic with added painted harness details, and tufted saddlecloth. It was found in a bathroom with other vessels and was perhaps used for perfumes or cosmetics, or in washing. Dated to the late fifth century BC.

Persepolis, from bathroom F6

A. Tadjvidi excavations (72/III/13)

H 6 cm, W 5.7 cm, L 9.7 cm

Tehran, 4181

Stronach 1974: 243ff, pl. LIII/4; Tadjvidi 1976:
175, fig. 126

WEAPONRY, HUNTING AND WARFARE

413 Cylinder seal in blue chalcedony

The seal is engraved with two battle scenes divided by vertical lines, showing a figure in Persian dress, probably the king, fighting opponents who wear nomadic-style dress. This consists of a long-sleeved, thigh-length, cut-away coat, with double borders, with a girdle tied in front and high boots coming to a point at the knee, fastened with tassel-ended cords. The king has a quiver on his back with three tassels (probably with a practical use for cleaning arrows as well as for decorative effect) and containing a bow and arrows. In his right hand he grasps a long spear with a spherical terminal at the butt. The standing nomad in the wider scene wears a cap or hood with ribbon-like attachments which is falling off. In the space above the combatants is a version of the figure in the winged disc, and on the other a winged disc and a bust inside a circle.

Oxus Treasure

Bequeathed in 1897 by A. W. Franks
H 3.7 cm, Diam 1.1 cm
British Museum, ANE 124015
Dalton 1964: 31–2, no. 114, pl. XVI, fig. 114; Pope 1938: IV, pl. 124X; Boardman 2000: 160, fig. 5.5; Merrilees 2005: no. 66

414 Cylinder seal of red and pale brown limestone

An archer in Persian dress aims an arrow at a figure armed with a prominent battle-axe (cf. cat. 436), which he holds upright in both hands. This figure has a short pointed beard and wears a pointed hood or cap, with nomadic-style dress of a jacket and kilt or belted tunic and leggings – or possibly trousers – with folds. As well as the axe he is equipped with a large *gorgyus* bow-case.

Between these figures are two animals facing right: a semi-crouching, snarling lion above, and a dog-like creature with bull's hooves below. To the side, facing left, is a monkey (?) with a staff and above it is a crescent. There is a small letter-like sign beneath the elbow of the figure on the left.

Provenance unknown

Acquired in 1945, with the assistance of the National Art Collections Fund, from the Southesk Collection, having been acquired for that collection in 1902 from J.J. Nauman
L 3 cm, Diam 1.3 cm
British Museum, ANE 129569
Carnegie 1908: 107–108, no. Qc32; Merrilees 2005: no. 38

415 Cylinder seal of pale blue chalcedony

The seal shows a battle scene, with the Persian royal hero preparing to stab an enemy dressed in nomad style with a distinctive pointed hat, tunic and leggings, and carrying an axe and a *gorgyus*. Between them lies the body of a similarly dressed enemy which is being attacked by a rearing lion. Behind the royal hero, and attached to his waist by a rope around the neck, is a captive. A crowned figure in a winged disc is shown above a palm tree. This scene resembles that showing Darius's victory over his enemies on the rock relief at Bisitun. Two of the enemies may be 'pointed hat Scythians' who are depicted on reliefs from Persepolis.

Provenance unknown

Bequeathed by Miss M.F.T. Ready in 1959
H 2.15 cm, Diam 1.1 cm
British Museum, ANE 132505
Merrilees 2005: no. 65

416 Scaraboid stamp seal in greyish-blue chalcedony

The seal is set in a silver mount which may be modern. A rider in Median dress gallops towards the right and spears a boar that leaps towards him. The rider sits on a saddlecloth, with tufts along the rear edge, secured by a breaststrap.

Provenance unknown

Acquired before 1930
H 1.3 cm, Diam 2.0 x 2.8 cm (base)
British Museum, ANE 120325
Boardman 1970: 354, pl. 905

417 Cylinder seal of mottled blue and grey-blue chalcedony

A horse stands facing right. The dismounted rider in Median dress spears an advancing boar. The reading of the name, written in Aramaic above the horse, is uncertain, but it is probably of Iranian origin.

Provenance unknown

Purchased from J.R. Stewart in 1846
H 3.3 cm, Diam 2.2 cm
British Museum, ANE 89144
Pope 1938: IV, pl. 123R; Merrilees 2005: no. 12

418 Cylinder seal in grey, translucent sparry calcite

A rider in Median dress gallops from the right and aims a spear at a rampant lion.

Acquired by A.H. Layard in Mesopotamia between 1845 and 1851

H 2.5 cm, Diam 1.1 cm
British Museum, ANE 89583 (N1082)
Merrilees 2005: no. 9



413



414



415



416



417



418





419



419 Cylinder seal of pale white-grey chalcidony

A rider in Median dress, with a *gorgetus* at his waist, gallops towards the right and aims an arrow at a retreating rampant lion that turns its head to look back at him. The seal is late Elamite–Early Achaemenid.

Provenance unknown

Presented by G.D. Hornblower in 1940

H 2.35 cm, Diam 1.2 cm

British Museum, ANE 130808

Merrillees 2005: no. 6.



420



420 Cylinder seal in pale blue chalcidony

Only half of the seal remains. A rider in Median dress gallops towards the right and turns back in the saddle to aim an arrow from a double-recurved bow at a leaping lion, of which only the nose and forepaws survive. This is an example of the so-called 'Parthian shot', first known in the Near East from ninth-century Assyrian depictions: a skirmishing technique of the highly skilled horse-archer later made famous by the Parthians in the wars against Rome. The rider sits on a saddlecloth, with tufts along the rear edge, secured by a breaststrap.

Provenance unknown

Acquired in 1869

H 2.6 cm, Diam 1.4 cm

British Museum, ANE 89816

Merrillees 2005: no. 14



421



421 Cylinder seal of red and brown limestone

The seal shows a rider galloping towards the right and aiming a spear at a retreating, leaping stag that looks back at him.

Provenance unknown

Acquired from J.J. Naaman in 1909

H 2.2 cm, Diam 0.9 cm

British Museum, ANE 103013

Merrillees 2005: no. 3



422



422 Scaraboid stamp seal in greyish-blue chalcidony

A rider in Median dress gallops towards the left and aims an arrow at a retreating wild goat.

Provenance unknown

Acquired before 1930

H 1.3 cm, 2.0 x 2.8 cm (base)

British Museum, ANE 120326

Boardman 1970: 354, pl. 927



423



423 Cylinder seal in streaked grey chalcedony

There are remains of an iron pin in the perforation. Two soldiers face each other beneath a winged sun disc. On the left a soldier in Median dress, wearing a cuirass with a fringe (*pteruges*) and with an axe apparently carried in its high collar, aims a spear at a Greek hoplite who wears a crested Attic helmet and kilt, and carries a round shield and two crossed spears.

Provenance unknown

Purchased in 1859 at Sotheby's from J. Mayer via G. Eastwood, originally part of the Hertz Collection

H 3.3 cm, Diam 1.75 cm

British Museum, ANE 89333

Pope 1938: IV, pl. 124A; Merrillees 2005: no. 64



424

424 Impression of a cylinder seal

The seal shows a soldier in Persian dress aiming his spear at a vanquished Greek hoplite wearing a crested, possibly Corinthian, helmet. In the complete design, not present here, three further hoplites are in a line to the left with their hands tied behind their backs (Schmidt 1957: pl. 9, seal no. 28).

Persepolis

Excavations of A. Tadjvidi

L 2.6 cm, W 2.5 cm

Tehran, 6580

Tadjvidi 1976: pls 140–42

425 Athenian red-figured *hydria* (water-jar) with two Greeks fighting a mounted Persian

On the right a bearded Persian is mounted on a rearing white horse and aims a spear at a Greek warrior on foot. The Persian wears a soft skin hat (*kidaris*) with its long ear-flaps hanging down, an oriental trouser-suit, and soft shoes. The young warrior is equipped with a white *pilos*-style helmet, circular shield and a *chlamys* round his back. He thrusts up with his long spear at the Persian. On the left a wavy-haired archer, wearing a short *chiton* and with a quiver at his hip, aims his bow at the Persian.

This is one of the latest red-figured Athenian vases to show a fight between Greeks and Persians, dating to about 360–330 bc.

From Cyrenaica (Libya, north Africa)

Gift of George Dennis in 1866

H 29.5 cm

British Museum, GR 1866.4.15.244

Smith 1896: 183, no. E 233; Beazley 1963: 1471,

no. 3 (near Group G); Raeck 1981: 120–21, 327, no. P 659



425



426

426 Copper *gorytus*-fitting

This thin metal plate with a row of ten holes along one edge was originally stitched onto the tip of a combined quiver/bow-case known as a *gorytus*. Its shape mimics that of a bird's beak and wattles, most probably that of a cockerel because of the resemblance of the neck of the *gorytus*, stretched when carrying a bow, to a cockerel when crowing. Quiver covers decorated to resemble a crowing cockerel are earlier shown used by horsemen, perhaps even Medes or Persians in Assyrian service, on a few seventh-century Assyrian reliefs (for example, Barnett *et al.* 1998: no. 351b, pls 258–9, 261).

Dewe Hüyük, Syria

L 8.9 cm

British Museum, ANE 108681

Moorey 1980: 66–7, no. 218, fig. 10/218



427

427 Gold *gorytus*-fitting

Gold cut-out plaque in the shape of a stylized bird's head with a large curved beak and a coiled serpentine neck. At the back of the plaque are five loops for attachment. This plaque was evidently attached to cloth or leather and most probably decorated the top of a *gorytus* or bow-case as shown on the Persepolis reliefs (see fig. 61) (Moorey 1985: 27).

Plaques for fixing to clothes, textiles and horse harness are well known from Scythian contexts, and stylized bird's heads with round bulging eyes and hooked beaks are a characteristic feature of Scythian art.

Oxus Treasure

Bequeathed in 1897 by A. W. Franks

L 3.35 cm, Wt 3.9 g

British Museum, ANE 123940

Dalton 1964: no. 39, pl. XIII

428 Arrowheads

Thirteen cast bronze tripartite socketed arrowheads and one large bronze bipartite arrowhead. Small, light arrowheads of this type, ideal for use by mounted archers, and quick and easy to manufacture, are the standard Persian form and are found throughout the empire. The type appears in the Near East around the seventh century BC in association with the Cimmerians and Scythians. It thereafter remained the commonest form of arrowhead until the Parthian period.

Persepolis, Fortifications

Excavations of A. Tadjvidi

L 2.5–4.25 cm, W 0.7–1.35 cm (tripartite)

L 6.01 cm, W 1.5 cm (bipartite)

Tehran 4193; 4194; 4196; 4198; 4199; 4202; 4204;

4209; 4223; 4237; 4265; 4289; 4299; 7184

Tadjvidi 1976: 209, fig. 172

429 Tripartite

bronze javelin head
or large arrowhead

Persepolis, from Room 5

in the Fortifications

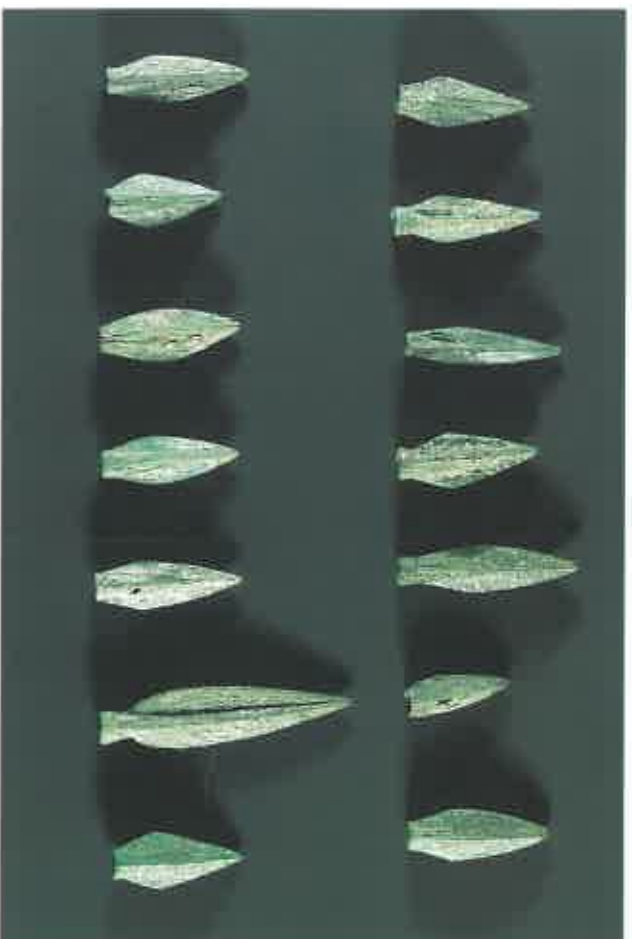
Excavations of A. Tadjvidi

L 9.6 cm, W 3.15 cm,

Diam 1.65 cm (socket)

Tehran, 4331

Tadjvidi 1976: 199, fig. 156



428



429

430 Gold dagger

Gold dagger with the handle ending in adorsed lions' heads. The hilt at the top of the blade is decorated with ibex heads.

Said to be from Hamadan

L 41.27 cm, W 10.47 cm, Wt 817 g

Illustrated London News, 21 July 1956, pl. on p. 107;

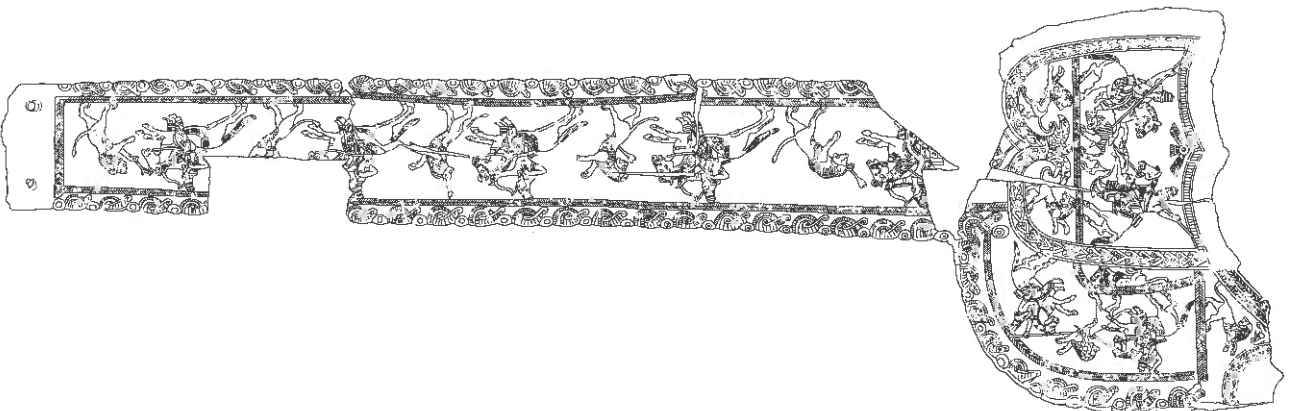
Ghirshman 1964: fig. 328



431

431 Gold scabbard for an *akīnakes*

With embossed decoration of hunting scenes. It was originally overlaid onto a wooden or leather sheath with a double-convex profile, with a separate chape, now missing. The reverse was plain. The wide upper part shows four riders on horseback, armed with long spears and attacking lions, within herring-bone pattern and serpentine borders. There is a winged disc above one pair of horsemen. The riders wear belted decorated dresses and tall hats, and are apparently barefoot. They are seated on rounded saddlecloths, the surfaces covered with small punched circles, the edges



430

finished with decorative borders or fringes. The long narrow part of the scabbard has a further five horsemen and lions arranged in a line. At the top of scabbard on the back is a strap-fitting by which the scabbard was partly suspended. It has been restored from seven fragments.

This scabbard has sometimes been compared with Assyrian art of the seventh century BC because of the lion hunt theme and the tall fez-like hats of the riders; however, the horse harness is not Assyrian and has Scythian parallels, particularly with the rounded saddlecloths. David Stronach believes, partly because of the form of the winged disc, that this scabbard cannot be earlier than the reign of Darius and possibly dates from the reign of Artaxerxes II (404–359 BC).

Oxus Treasure

Bequeathed in 1897 by A.W. Franks

L 27.6 cm, Wt 160 g (with perspex support)

British Museum, ANE 123923

Delton 1964: 9–11, no. 22, pl. IX; *Moorey* 1985:

26–7; *Stronach* 1998; *Curtis* 2000: fig. 67



432 Scabbard for a small *akinakes* made of tamarisk wood

Made in two pieces and joined lengthways, this was originally decorated with gilded stucco, traces of which still survive.

Acquired in Egypt and purchased from Joseph Sams in 1834

L 28 cm, W 8,9 cm

British Museum, AES 5428

Barnett 1962: 95 n. 2, pl. IIc

433 Ivory or bone pommel for an *akinakes*

With ram's-head terminals.

Provenance unknown

Acquired in 1906. Formerly ex Clot Bey Collection H 1 cm, W 4,5 cm, Th 1 cm

Louvre, N8331/MN 1373

Stucky 1985: no. 15, pl. 8; Moorey 1988a: fig. 75

434 Ivory or bone scabbard chape for an *akinakes*

The chape shows a lion attacking a goat.

Said to be from Egypt

Acquired in 1906. Formerly Clot Bey Collection

H 3 cm, W 4,5 cm, Th 1 cm

Louvre, N8336/MN 1376

Herzfeld 1941: fig. 367; Stucky 1985: no. 17, pl. 8

435 Ivory or bone scabbard chape

With carved relief decoration showing part of a stylized ram.

Provenance unknown

Purchased in 1961

H 4,4 cm, W 6,6 cm

British Museum, ANE 132925

Barnett 1962: 79, n. 4, pl. IIb



435

436 Bronze axehead

With a vertical socket and a long, thin blade. There is a modelled ram's head at the front of the junction of the blade with the socket. Rudenko suggests that the warrior from Pazyryk barrow 2 and all the sacrificed horses were killed by blows from axes of this type, which left distinctive wounds on the skulls (Rudenko 1970: 219). Cf. fig. 61.

Persepolis, found on the floor of the Hall of 100 Columns (PT4 1094)

H 4,9 cm, L 24 cm

Tehran, 2052

Schmidt 1957: pls 78/1, 79/1a-1b



436

437 Axehead

This axehead has a vertical bronze socket, closed at the top, and a long, thin iron blade. There is a stylized bird's head on the front of the socket beneath the blade and a projection at the back with a square hole. There are two circular holes at the bottom of the socket, presumably for attachment of the axehead to a haft.

Provenance unknown

Purchased in 1969

H 7,9 cm, L 20,25 cm, Wt 297,5 g

British Museum, ANE 135142

Curtis and Kruszyński 2000: no. 178, fig. 43, pl. 17



437

438 Iron axehead

The axehead has a vertical socket and long, thin blade with a tubular projection at the back, and a carefully modelled sheep's head at the junction of socket and blade. It is made of wrought iron.

Provenance unknown

Purchased in 1969

H 5,7 cm, L 23,9 cm, Wt 532,5 g

British Museum, ANE 135855

Curtis and Kruszyński 2000: no. 179, fig. 43, pl. 17



438



439



440

SHIPS AND BOATS

439 Amphora

With a stamp impression on the shoulder showing a galley of Phoenician type.

Susa, 'Donjon'

Excavations of R. de Mecquenem, 1928

Louvre, Sb 9278

Ct. de Mecquenem 1934 : 223; de Mecquenem

1947 : 90, fig. 48



439, detail of galley

440 Clay sealing

Showing a galley of Phoenician type with a long conical ram. Warships of this distinctive type are first shown on Assyrian palace reliefs of the seventh century BC. At this early date the exact rowing arrangements are disputed, but by the Achaemenid period warships of this form are almost certainly 'three-banked' ships. This sealing was originally attached to another object with cord, burnt traces of which still survive. It has four other impressions apart from the galley, showing the king and a priest in a ritual ceremony, a male figure in a crescent moon, a scene of heroic encounter and a mythical combat scene.

Persepolis, Treasury (P14.704)

L 6.3 cm, W 5.6 cm

Tehran, 1921/58

Schmidt 1957: pl. 9, no. 32



440