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4-5/2004-2005

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# A N O D O S

## *Studies of the Ancient World*

4-5/2004-2005

### **Redakčná rada/Editors:**

Prof. PhDr. Mária Novotná, DrSc.

Prof. Dr. Werner Jobst

doc. PhDr. Marie Dufková, CSc.

doc. PhDr. Klára Kuzmová, CSc.

Mgr. Pavol Hnila

### **Kontaktná adresa (príspevky, ďalšie informácie)/Contact address (contributions, further information):**

✉ Katedra klasickej archeológie, Trnavská univerzita v Trnave, Hornopotočná 23, SK-918 43 Trnava  
☎ +421-33-5939371; fax: +421-33-5939370  
📧 klasarch@truni.sk

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**Redakcia/Editorial Staff:** doc. PhDr. Klára Kuzmová, CSc., Zuzana Turzová

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Motif of the „Miracle rain“ from the column of Marcus Aurelius in Rome. In the window: Relief from the Athena-Temple, Pergamon

**Grafické spracovanie/Graphic elaboration:** Mgr. Pavol Šima-Juriček

**Počítačové spracovanie/Computer elaboration:** PhDr. Ivan Kuzma

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**(From the Bronze Age to the Late Antiquity)**

**Modra-Harmónia, 19<sup>th</sup>-22<sup>nd</sup> November 2005**

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## Preface

ANODOS 4-5/2004-2005 contains 23 contributions in English, German and French presented at the international symposium "Arms and Armour through the Ages. From the Bronze Age to the Late Antiquity" in Modra-Harmónia on November 19-21, 2005. It was the 3<sup>rd</sup> event of this kind organized by the Department of Classical Archaeology of the University of Trnava. Two partner institutions from Turkey - Selçuk University, Konya and Uludağ University, Bursa - took part in the organization for the first time. The Slovak Archaeological Society at the Slovak Academy of Sciences cooperated as traditionally. Participants were scholars from 10 European countries and overseas (Turkey, Greece, Italy, Slovenia, Hungary, Poland, the Czech Republic, Germany, Great Britain and USA), graduate and post-graduate students from Trnava and Vienna, and other guests.

Ing. Vladimír Medlen, mayor of the town of Modra, welcomed the participants. At the end of the symposium, an excursion to the Archaeological Museum of the Slovak National Museum in Bratislava was arranged. Participants had opportunity to see contemporary exhibition "The Sword. The Beginnings of Swords in Slovakia" and permanent exhibitions of the museum.

The symposium was arranged with the support of the Slovak Grant Agency VEGA (Projects Nos. 1/0456/03 and 2/3172/23), The Nuclear Power Plant Research Institute (VÚJE Trnava), the town of Modra, Enterprise Baliarne obchodu a.s. Poprad and other sponsors.

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Editors

Trnava, December 1, 2006

## Warfare techniques in Early Dynastic Mesopotamia

Alessandra Hnila Gilibert

**Keywords:** Ancient Near East, Mesopotamia, Sumer, Early Dynastic, warfare

**Abstract:** *The Early Dynastic period can function as a sort of experimental laboratory to study the early development of state-controlled warfare. This paper approaches the topic from the point of view of technical and tactical achievements in three different warfare type, all of them equally new to the period: the battle on wheels, the phalanx attack, and the siege warfare.*

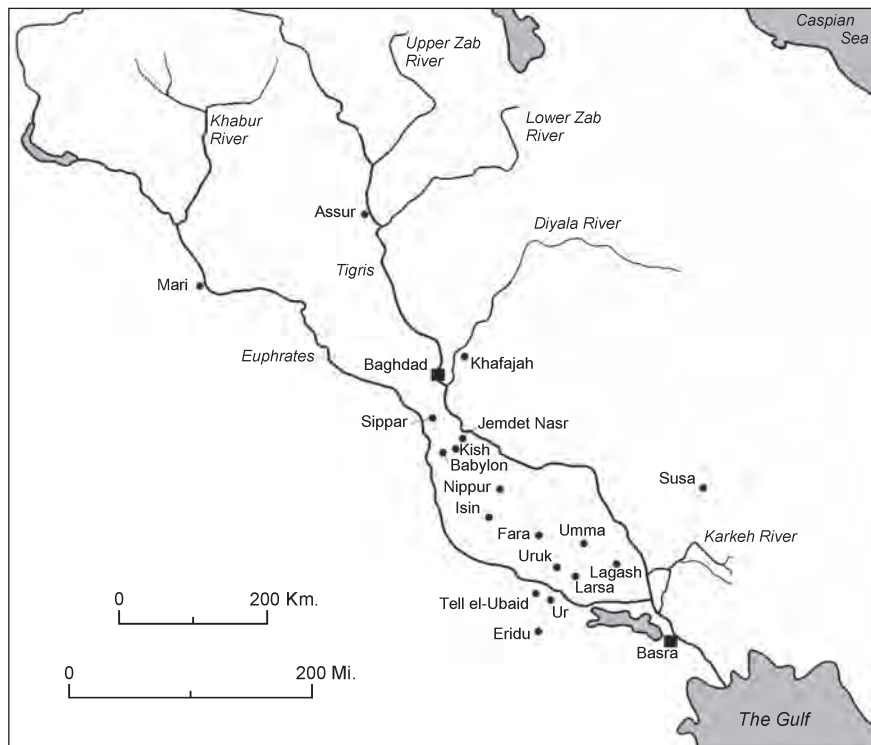


Fig. 1. Early Mesopotamia.

This paper focuses on the ancient Near East between 2900 and 2350 BC, a period known in the literature as “Early Dynastic” and sandwiched between the Uruk period, commonly associated with the origins of the first cities, and the Akkad period, which saw the raise of the first greater territorial empire. In the Early Dynastic period the Mesopotamian landscape was dominated by a mosaic of city-states with a small rural hinterland (fig. 1). Each city-state was governed by its own local ruler and had its own city-gods. Conflicts between competing city-states became the order of the day and for the first time in Mesopotamian history war took on the form of a chronic condition<sup>1</sup>.

Although we may assume that war-like episodes in the Near East occurred whenever human groups began to interact<sup>2</sup>, it is in the Early Dynastic period that unequivocal archaeological and textual evidence for warfare first manifests itself. In this period, for example, fortification walls several meters thick were erected with great collective effort even at small sites<sup>3</sup>; a weapon technology was developed specifically for warfare<sup>4</sup>; and war became a prominent theme in the visual arts.

<sup>1</sup> Jacobsen 1957; Bauer 1988.

<sup>2</sup> Vencel 1984 quoted in Miller et al. 1986, 178.

<sup>3</sup> Postgate 1992, 74-6.

<sup>4</sup> Bernbeck 2004, 61.



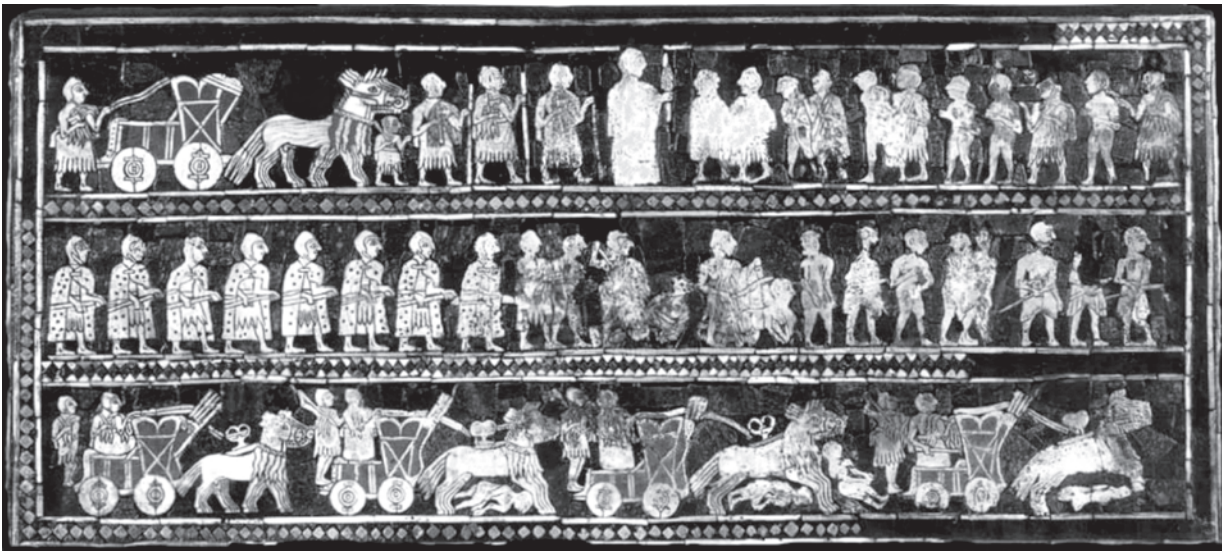


Fig. 2. The so-called Standard of Ur: the “battle panel” (From Zettler and Horne 1998, 44, fig. 36).

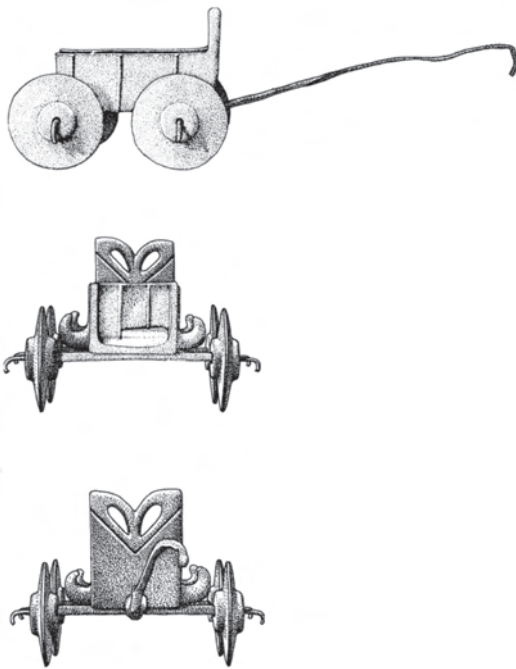


Fig. 3. Copper model of a “battle car,” now in Paris, Louvre (From Littauer and Crouwel 1979, fig. 14).

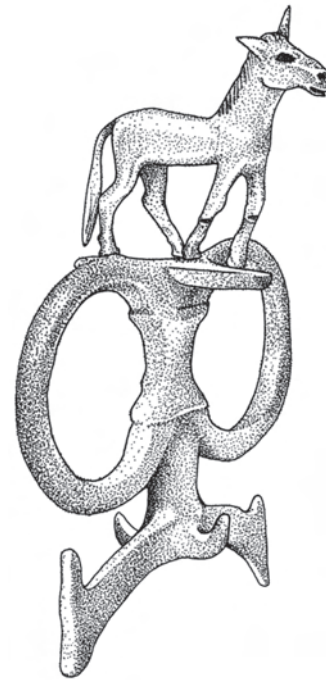


Fig. 4. Rein ring from Ur (from Littauer and Crouwel 1979, fig. 10).

A prime example of this breakthrough of war-related topics in the arts is the so-called “standard” of Ur, a small-scale object of unknown use decorated with figurative inlays of a narrative kind. Its two main panels tell the story of a military battle and of a feast which followed the victory. The story is to be read from bottom to top. The lower register of the “battle panel” (fig. 2), which particularly pertain to our theme, depicts warriors on four-wheeled vehicles charging and rapidly overwhelming the enemy; the register above shows a “phalanx” of foot soldiers chasing and capturing bleeding enemies in disordered retreat; the top register features

the ruler at its centre, behind him his officers and his vehicle, in front of him a parade of naked bound prisoners led on to him by soldiers.

The structure of this paper will follow the rhythm suggested by the “standard” of Ur. It will approach first the “battle car” technology and then go on to topics related to warfare by foot. A short discussion of the role played by bow and arrows will conclude what would like to be a quick panorama view on Early Mesopotamian warfare techniques.

### 1. The “battle car”

In the Early Dynastic period representations, three-dimensional models and actual remains provide a rich evidence for various kinds of wheeled vehicles<sup>5</sup>. Yet only one type seems to have been used in military context, and has therefore been termed the “battle car” (fig. 3)<sup>6</sup>. We already saw it represented in action at various speed on the lower register of the Ur “standard,” first walking, with the driver squatting, then cantering and finally at full gallop, with the driver now standing and the warrior on the rear platform steadying himself on the shoulder of the driver.

The “battle car” was a four-wheeled vehicle with disk wheels made of two or three wood planks. The wheels were revolving on fixed axles, which means the “battle car” could turn only in wide arcs or by manual lifting of its rear wheels<sup>7</sup>.

The “battle car” was drawn by four small, light equids, either domestic asses or some sort of half-asses<sup>8</sup>. These equids were controlled by lines attached to nose rings and passing through a metal rein ring (fig. 4). This method of control enabled only braking<sup>9</sup>. The direction must have been controlled by voice, by whip, or, as depicted in the Ur “standard,” by goad – in the same way as one might control a cart drawn by oxen.

A sheath of throwing spears was attached to the breastwork and the Ur “standard” shows warriors making use of them in the battlefield. On the other hand, both warriors and drivers are depicted armed with close-range weapons as well, such as axes or, as seen elsewhere, sickle-swords. This, combined with the existence of an open rear platform, suggests that the “battle car” was also employed to back fighting from the ground, with warriors mounting and dismounting as necessity arose.

Leonard Wooley compared the appearance of the “battle car” on the ancient Mesopotamian battlefields as to its terrifying effect on foot soldiers, to the use of tanks in the First World War. Yet, technically speaking, the “battle cars” had some major disadvantages that tanks had not. Their crew had to operate in almost completely exposed conditions, they were extremely unwieldy, and their field of action was limited to open and level ground<sup>10</sup>. Probably, the “battle cars” had a largely symbolic value. They demanded training and expertise, they were expensive to maintain, they were important war booty and the most affluent people would let themselves be buried with them. They were “intimately bound in with a noble class”<sup>11</sup>, much as horses and weaponry were for the medieval knight.

### 2. Warfare by foot

Decisive for the outcome of a battle in open terrain were the methods of warfare by foot. Both the “standard” of Ur and the so-called “stele of vultures” (fig. 5), possibly the two most important sources for warfare techniques and equipment in this period<sup>12</sup>, show infantry corps

<sup>5</sup> See literature quoted in Crouwel 2004, footnote nr. 2.

<sup>6</sup> Littauer and Crouwel 1973.

<sup>7</sup> Littauer and Crouwel 1979, 33.

<sup>8</sup> Littauer and Crouwel 1979, 22-8; Crowel 2004, 71. Most of the following bases on Littauer and Crowel 1979, 28-33. For a discussion of the appearance and early use of the horse in the ancient Near East, s. Moorey 1986, 197-9.

<sup>9</sup> On the drawback of the nose ring type of control, s. Littauer and Crowel 2001, 335.

<sup>10</sup> Littauer, Crouwel and Raulwing 2002, 11-14.

<sup>11</sup> Postgate 1992, 246.

<sup>12</sup> As N. Postgate noted, „the written sources are surprisingly silent about the types of weapon and protective clothing with which the state’s craftsmen must have been busily engaged”. Postgate 1992, 246.



**Fig. 5.** "Stele of Vultures": detail of reverse, from Telloh (From Moortgat 1967, pl. 119).



**Fig. 6.** Limestone inlay from Ebla (modern Tell Mardikh) (From Aruz 2003, 176, no. 115c).



**Fig. 7.** Dagger with gold handle from the grave of Meskalamdug (U. 10020, PG/755). (From Wolley 1934, Pl. 154b).



**Fig. 8.** Limestone inlay from Ebla (modern Tell Mardikh) (From Aruz 2003, 177, no. 115f).



**Fig. 9.** Relief on a column base from Lagash (From Yadin 1963, 136).



**Fig. 11.** Shell inlay from Kish (From Orthmann 1975, fig. 92b).



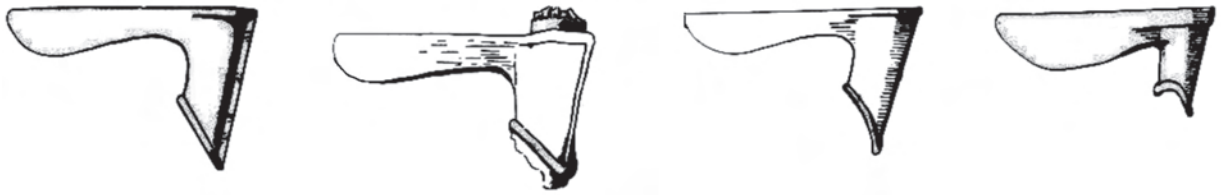


Fig. 10. Types of Early Dynastic socket axes (After Yadin 1963, 41).



Fig. 12. Detail of an Akkadian "victory stele" (from Aruz 2003, 199, fig. 127).



Fig. 13. Gold helmet from Ur (From Hackett 1989, 26).

trained to fight in methodical and disciplined formations. In particular the upper register of the "stele of vultures" depicts quite in detail a tight formation of heavily armed infantrymen, advancing behind strengthened rectangular shields and thrusting forward an array of spears. Following the Classical Greek tradition, this kind of coordinated infantry tactic has gone into the literature as the "Sumerian phalanx." The development of the "phalanx" is a remarkable novelty of the Early Dynastic period and goes hand in hand with the development of a specific warfare weaponry.

Next to the spear, which was used for stabbing as well as for throwing (fig. 6), three further short-range weapons made their debut in this period. The first one was a double-edged dagger, typically with a crescent hilt (fig. 7). This too was an implement designed mainly for stabbing, as an inlay work from Ebla brutally illustrates (fig. 8).

The second newly introduced weapon was an implement similar to the better known sickle-sword of the Middle Bronze Age. In the Early Dynastic period it took the form of a short-bladed curved sword (fig. 9) and functioned as a striking weapon.

The third and most important development in hand-to-hand fighting technology was the socket axe (fig. 10). This was an axe with a narrow, long blade and a pipe-like socket fixing the blade

firmly to the handle. It could be swung with force and it functioned as a piercing weapon.

The socket axe was by far not the only known axe kind. As it has been observed, the Early Dynastic period "saw the emergence of every type and prototype of axe which was in use in all subsequent periods right up to the end of the Iron Age"<sup>13</sup>. Particularly interesting is the tang-type axe with a crescent-shaped blade, as we see depicted in an inlay from Kish (fig. 11) and on a slightly later Akkadian stele (fig. 12). Third millennium examples of this axe have been found in graves at Ur, Kish, and Jericho. As opposed to the socket axe, which was an axe for piercing, the tang-type axe was a weapon for cutting, not unlikely the sickle-sword.

The development of piercing and cutting warfare instruments were rapidly followed, as one might expect, by new achievements in the field of personal protection. The prime innovation

<sup>13</sup> Yadin 1963, 41.



Fig. 14. Skulls and helmets as found in situ in the “Royal Tombs” at Ur (After Yadin 1963, 49).

had been the use of metal helmets. While military leaders could sport ceremonial gold helmets elaborately worked in repoussé and simulating a distinctive coiffure (fig. 13), less important warriors are often depicted wearing simpler copper helmets covering the ears and fixed with a strip under the neck, as found on the skulls of six soldiers in a royal grave at Ur (fig. 14).

It seems that advancements in the protection of the rest of the body took place as well. Warriors are often depicted wearing various kinds of wraparound sheepskin dresses, an attire known from other contexts too and not specifically marked as a garment for warfare. Foot soldiers, though, are sometimes represented wearing a distinctive cape decorated with drill holes (fig. 15). Perhaps the spots signify that it was a leopard skin. Yet, it seems more likely that this cape was a primitive version of a coat of mail, a leather cloak studded with round metal pieces and designed to protect the body of the warriors.

### 3. Bow and arrows

The axe, the sickle-sword, the stabbing spear and the dagger discussed above were all shock weapons used in hand-to-hand combat. Undoubtedly, the most common long-range weapon of the period was the throwing spear. Yet there is rare but clear evidence that the bow as well played a role in Early Dynastic warfare. In this respect, it is most interesting to have a closer look at a small limestone slab found in Mari (fig. 16)<sup>14</sup>. This is the earliest representation of a double-curved composite bow with reflexed tips used in a war scene<sup>15</sup>. The composite bow is a bow where layers of wood, horn, and animal sinew are glued together to maximize tensile and compressive strength<sup>16</sup>. This kind of bow is a work of precision engineering and it must have added a new dimension to the art of archery of the period, since it is more reliable, more accurate and twice more powerful than a simpler wooden bow of the same dimension<sup>17</sup>. In the Mari slab we found it in the context of a siege scene, in fact the earliest representation of a siege scene in Mesopotamian history<sup>18</sup>. Three interlinked clues lead to this interpretation. The first is the presence of a soldier holding a huge, and presumably very heavy, wicker shield with a curved top. The function of this shield, which would be absolutely impractical in an open battlefield, was clearly to protect the archer while assaulting a city-wall, a technique well-known from later periods<sup>19</sup>. The second clue is the archer aiming upwards, trying to reach a target above him and not in front of him, as in the case of a siege of a walled city. The third clue is the kind of arrow being shot, which is most probably a fire arrow<sup>20</sup>. The function of this arrow

<sup>14</sup> Parrot 1971. For a further depiction of a bow in a war-related scene, see the Ebla Standard in Dolce 2004, 125, fig. 6.

<sup>15</sup> Yadin 1972; Miller, McEwen and Bergman 1986, 182; for possible earlier representations of composite bows, s. Collon 1984, 53-6.

<sup>16</sup> Miller, McEwen and Bergman 1986, 179-80, 183.

<sup>17</sup> Miller, McEwen and Bergman 1986, 187.

<sup>18</sup> Yadin 1972, 91-2.

<sup>19</sup> Yadin 1972, 91-2.

<sup>20</sup> Miller 1982.



Fig. 15. Shell inlay from Mari (From Aruz 2003, 158, no. 98).



Fig 16. Incised limestone plaque from Mari (From Aruz 2003,158, no. 99).

was not to hurt people but rather to set buildings on fire, which again points to a scene taking place at the foot of a city-wall, an urban feature which, as mentioned above, started to spread exactly in this period.

In conclusion, it is possible to say that a new technology of warfare developed in the Early Dynastic period, of which the “battle car,” the “phalanx” of foot soldiers, the new piercing and cutting weapons, the innovations in the field of personal protection, the use of fire arrows are prime examples. It appears clear that this technology was functional to the developments of new warfare tactics: the battle on wheels, the phalanx attack, and the siege warfare. Of course the pressing question arise, what kind of social and economic changes brought about this rather sudden “boom of warfare” in the Early Dynastic period – but this is another story.

M. A. Alessandra Hnila Gilibert  
Institut für Vorderasiatische Archäologie  
Freie Universität Berlin  
Hüttenweg 7  
D-14 195 BERLIN  
gilibert@zedat.fu-berlin.de

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