

“WON BY THE SPEAR”

THE IMPORTANCE OF THE *DORY* TO THE ANCIENT GREEK WARRIOR

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The spear, or *dory*, was the major weapon of the ancient Greeks. The ancient Greek warrior, especially the hoplite, was known for his prowess in using the *dory* as a thrusting weapon in hand-to-hand combat and as part of the formidable Greek phalanx, but the *dory*, too, could be used as a missile weapon, when necessary. Other specialized throwing-spears were commonplace among the ancient Greeks' arsenal of weapons. The Greeks incorporated a throwing loop, called an *ankyle*, that was used to maximize the distance that a spear could be thrown, enhancing the ancient Greeks' military dominance on the battlefield. The *dory*, and its athletic kin, the javelin, or *akon* or *akonition*, were fixtures in ancient Greece, and often Greek soldiers would carry two spears into battle for an edge over their adversaries. The following is a description of the *dory*, its construction and development, and how modern-day experiments indicate how impressive the *ankyle* was at helping the ancient Greeks to achieve victory that was “won by the spear”.

Sophocles, in his fifth century BCE tragedy, *Ajax*, forever immortalized the importance of the spear, or *dory* (δόρυ), to the ancient Greeks. The *dory* was the weapon of choice for the ancient Greek warrior, especially the hoplite, who would typically be fitted with a helmet, greaves, and a shield for protection¹, but used the spear as his main offensive weapon. The *dory* simply was invaluable to the hoplite, and his masterful use of it was the reason for his successes. In fact, the conquering of a foe

¹ *Snodgrass* (1964). P. 137, *De Groot* (2016). P. 197-212.

as well as the capturing of booty was known as being "won by the spear" rather than the more ubiquitous phrase of being "won by the sword"². The spoils of war were referred to as "prizes of the spear" and "spear-won" by Sophocles (*Ajax*. 141-146, 210) and included such things as booty, brides, and slaves.

Just so with the passing of the night loud tumults oppressed us to our dishonor, telling how you visited the meadow wild with horses and destroyed the cattle of the Greeks, their spoil, *prizes of the spear* which had not yet been shared, how you killed them with flashing iron (141-146, emphasis added).

Daughter of Teleutas the Phrygian, speak, since for you his *spear-won* mate bold Ajax maintains his love, so that with some knowledge you could suggest an explanation (210, emphasis added).

What insult will he forego against "the bastard offspring of his spear's war-prize," against your "cowardly, unmanly betrayer," dear Ajax (1014) (Soph. *Aj.* 141-146, 210, 1014)³.

The dory, or hoplite's spear, was a constant with the famed warrior and essential to his success. The spear was constructed from a wooden shaft, with a metal spearhead fitted to one end and a metal butt-spike (*sauroter*, or "lizard killer") fixed to the other end. The length and style of the spear would not have been completely consistent, because hoplites were citizen-soldiers, they often built their own weapons. Regional variances, too, would affect the length, weight, and girth of the shafts. Differing sources of wood, based on the area from where the hoplite hailed as well as the accessibility of metals — bronze or iron — and the skilled craftsmen available to make the spearhead and sauroter, all would have affected the final qualities of the spear. Nonetheless, common traits of the spears can be ascertained from iconographic and archaeological evidence, as we have no complete surviving examples of the dory from antiquity.

Numerous vase paintings depict ancient Greek soldiers holding spears. From these images, we can estimate that a dory was a length equal to or greater than the warrior's height, but care must be taken here,

² Anderson (1991). P. 25.

³ Perseus Digital Library. Retrived from <http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0184%3Acard%3D134> (August, 2020).

as obviously not all hoplites were the same height and that artists were not bound by realism when creating the artwork. Further, modifications, over time, must have occurred, as the hoplites incorporated spears in their arsenal for several centuries. However, by looking at various images of hoplites and their spears, a fair estimate of a length of approximately 200 cm, perhaps longer, give or take 10-20 percent, would seem reasonable, but longer lengths are possible.

The shaft of the dory was wooden, and as such, each spear would have had differing dimensions, depending on the wood that was sourced, the craftsmen making it, and the personal preferences of the warrior who would use it. The archaeological evidence of extant spearheads and buttspikes makes estimating the girth of the wooden shaft, at least where the shaft interfaced with the metal ends, at around 20 mm, and perhaps up to 25 mm, in diameter⁴. The shaft may or may not have been tapered, as the iconography on vases, other containers, and drinking vessels is inconsistent, but Aristophanes (Ar. *Peace*, 549n) refers to a spear-maker, which can be interpreted as a “spear-scraper,” giving credence to the idea of tapered shafts.

A tapered shaft would lessen the overall weight of the spear, alter its center of gravity, and allow the grip to be placed at a personalized area, depending on the warrior’s wishes. The type of wood used for the shaft varied over time. We know that Homer refers to ashen spears in the *Iliad* (Hom. *Il.* 4.47)⁵, yet the only known surviving piece of wood, found in a sauroter, was of pine, hinting that either replacement shafts were made from whatever local wood could be sourced or that different woods were used originally. Both ideas are conjecture, however, as we have little formal evidence in support of either⁶. In the heroic age, as mentioned previously, ash is described as being used, but during the classical age, it is believed that cornel became in vogue, and later both olive and pine are thought to have been used⁷.

⁴ *Bardunias, Ray* (2016). P. 13-15

⁵ “... with godly spear of ash.” Perseus Digital Library. Retrieved from <https://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0134%3Abook%3D4%3Acard%3D1> (August, 2020).

⁶ *Fink* (2014).

⁷ *Fink* (2014). P. 34.

The spearhead of the dory was cast in metal, often from iron or bronze, depending on the period and the convenience of what metal was available, and had a leaf-shaped blade. The sockets on the spearheads were roughly 20 to 25 mm in diameter, but the overall length of the spearhead varied considerably, from 15 to 30 cm, perhaps longer. The socket was fixed to the wooden shaft using a resin or rivets or some combination thereof. If the dory were to be a thrusting-only weapon, a butt-spike (*sauroter* or "lizard killer") was installed on the rear of the spear's shaft.

The sauroter generally came in two shapes, pyramidal or cylindrical, and it served three primary functions: 1) to allow the spear to be planted in the ground (Hom. *Il.* 10.153), having it in a "ready" position for a warrior to grab easily as well as to prevent the rear of the shaft from rotting; 2) it would alter the spear's center of gravity more to the aft, increasing the distance that the spear could be thrust toward an adversary; and 3) it could be used as an offensive weapon⁸, hence how it earned its moniker of "lizard killer." Using the sauroter as a secondary stabbing weapon, especially if the spear had been damaged or fractured into two or more pieces, would have been effective for injuring a foe, and an excellent tool for delivering the *coup de grâce* on a not-yet-deceased, yet downed, opponent⁹.

Although, the dory was the main offensive weapon of the hoplite — used typically as a thrusting weapon for stabbing and slicing his foe — ultimately to gain an advantage and to win in hand-to-hand combat. The dory, too, could have been used secondarily as a throwing weapon, similar to the athletic javelin, or (*akontion* or *akon*). Ammonios tells us that the two implements, while different, could be used as missile weapons.

Akontion is different from dory. The *akontion* is smaller than the *dory*, while the *dory* is the largest missile that is thrown by hand¹⁰.

We have long known that missile weapons were part of the arsenal of the ancient Greek warrior. Tyrtaeus, the Spartan lyric poet, describes where "light-armed" soldiers, being protected with shields, used rocks and spears to pelt their foes (*Tyrtaeus*, 8.28; 11-13; 35-38). The warrior

⁸ *De Groote* (2016). P. 204

⁹ *Murray, Sands, O'Roark* (2011). P. 139.

¹⁰ *Ammonios* (2004). P. 48.

to which Tyrtaeus is referring, however, is different from the hoplite, but very much an integral part of the phalanx, and not just a supporting figure¹¹. The differentiation between these types of warriors was not always clear¹², especially during the Archaic period, and this is best depicted in a drinking cup, called a *kylix*, from the Athenian Agora (see Figure 1. P. 82). On the inside of the *kylix*, a painting portrays a Greek warrior, running, carrying a shield and two spears, while wearing greaves and a leather cap. He is similar to a hoplite, but the absence of a bronze helmet is telling, suggesting that he is one of the “light-armed” warriors that Tyrtaeus described because he carries a shield, providing him cover. Further, the depicted warrior carries two spears, of unequal length, with differing spearheads. These differences, however, are key in distinguishing the *dory* from the *akon* or some similar, missile weapon.

Of the two weapons, the one on the top is shorter, with a smaller spearhead, suggesting that it could be used more effectively as a throwing-implement rather than a thrusting-weapon. Snodgrass¹³ suggests that the size of the spear is but one criterion for signaling that a spear is for throwing and that the slenderness of the spearhead is, too, an important criterion, provide it is light in weight. The pictured warrior’s spears have shafts of roughly the same length, similar to his height, sleek in appearance, and look to be light enough to be used effectively as missile weapons. Neither weapon has a sauroter to serve as a counter-weight to its spearhead, but this is consistent with the period and archaeological record. The sauroter is known to have “disappeared” at the end of the Bronze Age, especially in southern Greece, and possibly came back into favor during the seventh century B.C.E.¹⁴, but according to Snodgrass¹⁵ was still considered to be rare. The characteristics of the spears would make them useful for throwing, especially the absence of the sauroter. The butt-spike would weigh down the tail of the spear, meaning it would fly awkwardly, with its tail much lower than its spearhead. In all likelihood, the spear would land on its tail rather than its forward tip, making the weapon quite limited in its effectiveness as a throwing implement.

¹¹ *van Wees* (2000). P. 146-156.

¹² *Krentz* (2002). P. 29.

¹³ *Snodgrass* (1964). P. 137.

¹⁴ *Anderson* (1991). P. 25.

¹⁵ *Snodgrass* (1964). P. 133.

A warrior having two spears, with one being shorter and perhaps lighter, would be a sound tactic in battle. The shorter spear could be used as a missile weapon, perhaps injuring and weakening a warrior's adversary, while the longer, heavier spear could be used in hand-to-hand combat as a thrusting-weapon. Anderson states: "But the two spears of the epic hero are used indifferently for throwing or for thrusting; it is the use of the first spear for throwing that renders a second spear necessary for thrusting at close quarters"¹⁶.

Further, van Wees writes¹⁷, "hoplite equipment regularly included two spears, at least one of which was normally thrown before the soldier engaged in closer combat".

Three distinct iconographic examples are found in the archaeological record supporting that the ancient Greek hoplite carried two spears, of unequal length, into battle. The first example is a seventh-century B.C.E. Protocorinthian flask (*aryballos*), used to carry oil (see Figure 2. P. 83). The second artifact is an alabastron from Corinth, from the seventh century (see Figure 3. P. 84). The last piece of evidence is a Protocorinthian olpe, today referred to as the Chigi vase, dating from 640 B.C.E. (see Figure 4. P. 85).

The *aryballos* pictures warriors with two spears, but the detail of the artwork is limited and provides modest features of the spears themselves. On the left, a warrior is depicted carrying two spears, one in his right hand, at the level of his waist, with his arm bent so that he could use the spear in an underhand-thrusting movement; the other spear is located wedged between the warrior's left hand and his shield. He faces four opponents. Two of them also are armed with two spears, but they hold one spear over their heads, with their right hands, and the other spear is drawn by their shield-carrying left hand, near their wrists. Another combatant and archer are depicted to the rear of the hoplite, but we cannot be certain if they are his friend or foe. The battle-scene seems to mimic Tyrtaeus's description of battlefield tactics. Anderson writes,

...it seems to portray the state of affairs already deduced from Tyrtaeus — the intermingling of armored and unarmored men and the use

¹⁶ Anderson (1991). P. 16.

¹⁷ van Wees (2000). P. 148.

of missile weapons, including the bows and arrow, which Tyrtaeus does not mention. The hoplite's spear may be for throwing...¹⁸.

Unfortunately, the limited artistic detail informs of little of the specifics of the spears, but it does suggest that hoplites used two spears.

A hoplite's battlefield equipment is shown on an alabastron from Corinth (see Figure 3). Of particular interest are the two spears pictured. One spear is longer, with a broad spearhead and thicker shaft, providing evidence that it would be a thrusting-weapon, while the other spear is shorter, with a thinner shaft, and is fitted with a throwing loop. The throwing loop, called an ankyle (Greek: ἀγκύλη, Latin: *amentum*), was a leather strap, affixed to the spear to allow the thrower to increase the distance of his throws. Modern research has shown that the ankyle can increase the distance that the dory is thrown by 50.5 percent¹⁹, a significant improvement. A similar study examined the effect the ankyle made on throws of the athletic javelin, or *akon* or *akonition* — a lighter implement, designed for throwing — and an increase of 58 percent was noted²⁰.

The ankyle differed on the *akon* versus the dory in that the former was “free” — indicating that the leather strap was wrapped around the javelin, back on itself to temporarily secure it to the *akon*, with no knot used — while the dory had the ankyle attached permanently. Miller states:

...it is clear that the ankyle was not tied to the shaft of the *akon*: it would fall off after unwinding completely. Indeed, the vase paintings clearly show that no knot was used on the ankyle²¹.

Modern reenactments with the javelin show that it was, indeed, the case, and that three wraps around the javelin, with the ankyle, would work well (see Figure 5. P. 86)²².

The military spear would require immediate readiness. Hence, the rationale for the ankyle being firmly and permanently attached to the dory. Harris²³ asserts that because military tactics required “instant ac-

¹⁸ Anderson (1991). P. 17.

¹⁹ Murray, Sands, O'Roark (2011). P. 137-151.

²⁰ Murray, Sands, Keck, O'Roark (2010). P. 43-55, 329-333.

²¹ Miller (2004). P. 69.

²² Murray, Sands, Keck, O'Roark (2010). P. 43-55, 329-333; Murray, Ross, Sands, A. O'Roark (2012) P. 143-154.

²³ Harris (1963). P.29.

tion," "...the thong [ankyle] of the military javelin must obviously have been permanently attached to the shaft." Plutarch (*Plut. Vit. Phil.* 6.4-5) tells us this indirectly when he describes where an ancient warrior, named Philopoemen, had his thigh pierced by a spear during battle and that the weapon could not be removed because the ankyle prevented it. With that being the case, it is obvious that the ankyle was firmly attached to the spear. Another ancient writer, Livy (*Livy* 37.41), describes where the ankylai on spears of soldiers before the Battle of Magnesia in 190 B.C.E. were softened and stretched after being in the rain, reducing their effectiveness. If the ankylai were easy to remove, no experienced soldier would allow them to get wet to the point where they would be ineffective. Further, the iconography completely confirms that the military spears used fixed ankylai; the shorter spear on the Corinthian alabastron is depicted with an ankyle, and the spears on the Chigi vase have attached, throwing loops clearly displayed. The historical evidence, both literary and pictorial, demonstrates that spears were thrown by the ancient Greek warriors. Snodgrass states:

It seems an inescapable conclusion that the early hoplite often, though not invariably, went into battle carrying two or more spears; and it is very probable that one at least of these was habitually thrown²⁴.

The evidence is clear. The ancient Greek warrior used the dory as a thrusting weapon, in close combat, and his adeptness with it led to many successes. The battle strategy and tactics of the ancient Greek phalanx are beyond the scope of this article, but there is no doubt that using thrusting and throwing weapons led to great success of the ancient Greek warrior. The adage, "won by the spear" denotes just how important the dory was to the Greek hoplite, but not only as a thrusting weapon, but as a missile weapon, too, with the appropriate modifications. The use of an affixed ankyle on a throwing spear most definitely increased the range of the weapon. Modern research indicates that an improvement of 50.5 percent is realistic, depending on the style of the spear. With that kind of increase, it is easy to see how victory was "won by the spear."

²⁴ *Snodgrass* (1964). P. 138.

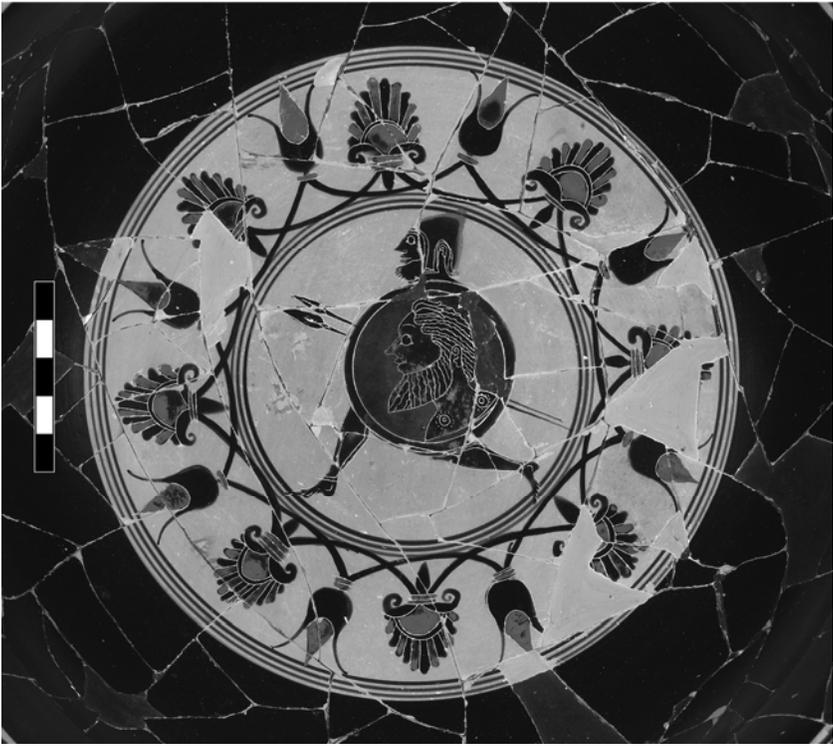


Figure 1.

Detail of the interior of a black-figure Siana cup found in the Athenian Agora, ca. sixth century B.C.E., depicting a Greek warrior, running at full stride, carrying two spears of unequal length and a shield. See M. B. Moore and M. Z. Philippides. *The Athenian Agora, Volume XXIII: Attic Back-Figured Pottery*, Princeton, 1986, 299-300, no. 1678. The photograph is the courtesy of The American School of Classical Studies. The image and description were published previously in S. R. Murray et al. Throwing the Ancient Greek *Dory*: How Effective is the Attached *Ankyle* at Increasing the Distance of the Throw? *Palamedes* 6 (2011), 137-151.



Figure 2.

Protocorinthian Aryballos, c. 690–680 B.C.E., from Lechaion (Corinth Museum CP-2096); see Snodgrass, *Early Greek Armour and Weapons: From the End of the Bronze Age to 600 B.C.*, Edinburgh 1964, pl. 15. The images are the courtesy of the University of California Press. The image and description were published previously in S. R. Murray et al. Throwing the Ancient Greek *Dory*: How Effective is the Attached *Ankyle* at Increasing the Distance of the Throw? *Palamedes* 6 (2011), 137-151.

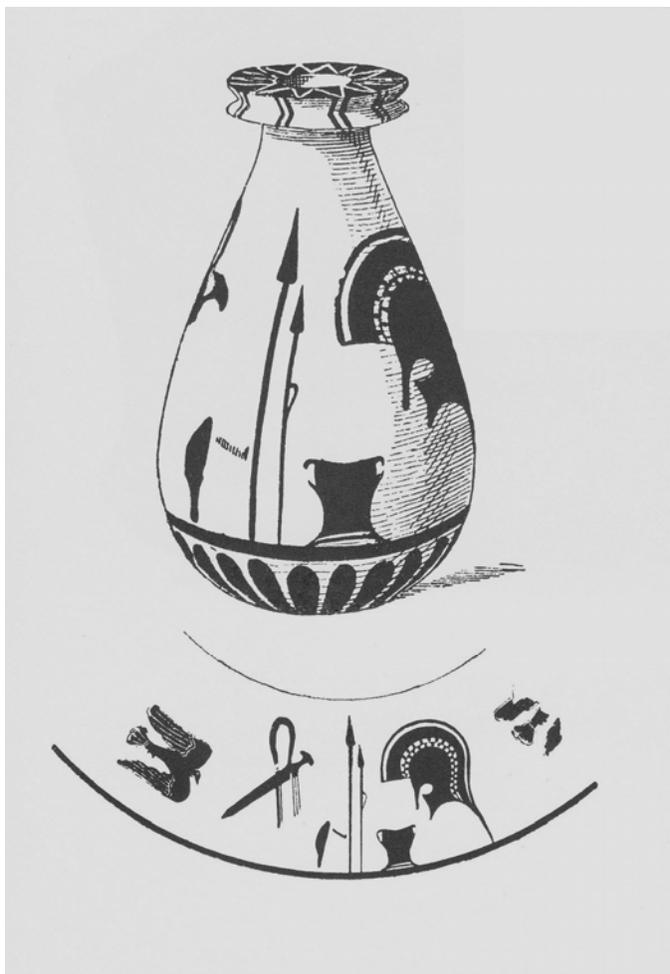


Figure 3.

An alabastron from Corinth, ca. 625 B.C.E. (Berlin 3148), depicting hoplite equipment, especially two spears, with one being shorter and having an attached throwing loop, or *ankyle* (Greek: ἀγκύλη, Latin: *amentum*). The image and the description were published previously in S.R. Murray et al. Throwing the Ancient Greek *Dory*: How Effective is the Attached *Ankyle* at Increasing the Distance of the Throw? *Palamedes* 6 (2011), 137-151.



Figure 4.

Protocorinthina olpe, now known as the Chigi vase, ca. 640 B.C.E., depicting Greek warriors outfitted with spears and shields; note that each spear on the left of the image is fitted with a throwing loop, or *ankyle*. The photograph is the courtesy of Dr. Jeffrey M. Hurwit of the Department of Classics and the Department of Art History at the University of Oregon. The figure and description were published previously in S. R. Murray et al. Throwing the Ancient Greek *Dory*: How Effective is the Attached *Ankyle* at Increasing the Distance of the Throw? *Palamedes* 6 (2011), 137-151.



Figure 5.

An athlete holding a javelin, with a leather thong (Greek: ἀγκύλη, Latin: *amentum*) fastened around the shaft. Detail from an Attic red-figure cup, ca. 470 B.C.E. Paravey Collection, Louvre Museum, Paris, France. Photograph by Maria-Lan Nguyen. Used with permission.

REFERENCES

- Ammonios (2004) — Ammonios, On Similar and Different Words 23, from the translation of S.G. Miller // *Arete: Greek Sports from Ancient Sources*. Berkeley: University of California Press, 2004.
- Anderson (1991) — Anderson J. K. *Hoplite Weapons and Offensive Arms // Hoplites: The Classical Greek Battle Experience* / Ed. V.D. Hanson. London: Routledge, 1991. P. 15-37.
- Bardunias, Ray (2016) — Bardunias Paul M. and Ray F.E., Jr. *Hoplites at War: A Comprehensive Analysis of Heavy Infantry Combat in the Greek World, 750-100 BCE*. Jefferson, North Carolina: McFarland & Company, Inc., Publishers, 2016.
- De Groote (2016) — De Groote K. R. 'Twas When My Shield Turned Traitor'! Establishing the Combat Effectiveness of the Greek Hoplite Shield // *Oxford Journal of Archaeology* 35(2). 2016. P. 197-2012.
- Fink (2014) — Fink D.L. *The Battle of Marathon in Scholarship: Research, Theories and Controversies Since 1950*. Jefferson, North Carolina: McFarland & Company, Inc., Publishers, 2014.
- Harris (1963) — Harris H.A. *Greek Javelin Throwing // Greece & Rome, Second Series* 10. 1963. P. 26-36.
- Krentz (2002) — Krentz P. Fighting by the Rules: The Invention of the Hoplite Agon // *Hesperia* 71. 2002. P. 23-39.
- Miller (2004) — Miller S.G. *Arete: Greek Sports from Ancient Sources*. Berkeley: University of California Press, 2004.
- Murray, Sands, Keck, O'Roark (2010) — Murray S. R., Sands W.A., Keck N.A., O'Roark D.A. Efficacy of the Ankyle in Increasing the Distance of the Ancient Greek Javelin Throw // *Nikephoros: Zeitschrift für Sport und Kultur im Altertum*, 23. 2010. P. 43-55.
- Murray, Sands, O'Roark (2011) — Murray S. R., Sands W.A., O'Roark D. A. Throwing the Ancient Greek Dory: How Effective is the Attached Ankyle at Increasing the Distance of the Throw? // *Palamedes* 6. 2011. P. 177-186.
- Murray, Sands, O'Roark (2012) — Murray S. R., Sands W.A., O'Roark D.A. Recreating the Ancient Greek Javelin Throw: How Far Was the Javelin Thrown? *Nikephoros: Zeitschrift für Sport und Kultur im Altertum*, 25. 2012. P. 143-154.
- Snodgrass (1964) — Snodgrass A. *Early Greek Armour and Weapons: From the End of the Bronze Age to 600 B.C.* Edinburgh: Edinburgh University Press, 1964.

van Wees (2000) — van Wees H. The Development of the Hoplite Phalanx: Iconography and Reality in the 7th Century // War and Violence in Classical Greece / Ed. H. van Wees. London: Duckworth and the Classical Press of Wales, 2000. P. 125-166.