

THE INTRODUCTION OF THE RAM AS A WEAPON IN ANCIENT SEA WARFARE

(based on a paper delivered at the Fall Meeting of the Classical Association of the Atlantic States in Annapolis, Maryland, U.S.A. on October 22 1993, being an extract from M.A. thesis "Aspects of Seafaring in the Eastern Mediterranean from the end of the Bronze Age to 480 BC").

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Ramming tactics altered the whole strategy of sea warfare in the ancient Mediterranean, changing warships from mere troop transports into a sort of oar propelled guided missile designed to split open the hulls of its enemies.

However there is a considerable difference of opinion as to when this important transition occurred.

Rams feature prominently on Greek grave vase paintings of the Geometric and Archaic periods, that is from about 850 to 480 BC, but there is no mention of a ram on any of the ships described by Homer in his two epic poems the *Iliad* or *Odyssey*. This leads one to believe that this weapon was unknown in the Bronze Age and probably made its debut in that obscure period around 1000 BC at the start of the Iron Age in the Aegean (Casson 1971:49).

To revert to the Bronze Age, certain ship representations show the hull ending at one end in a lofty vertical post while the other trails off into a low horizontal extension at the waterline. Examples include a ship portrayed on a fan-shaped terracotta object from the Cycladic island of Syros, called a "frying pan" by the archaeologists (see fig. 1) dating from around the third millennium BC where one notes the protrusion at the opposite end to the fish motif, and the picture of a galley on a vase found at Asine on the east coast of Greece dating from around 1200-1100 BC (see fig. 2).

In this picture it is not clear whether the protrusion on the left is a steering oar or a ram, in other words whether the high or low end is the prow.

Some scholars (Barnett 1958:225; Kirk 1949:117; Morrison & Williams 1968:10) are of the opinion that the protrusion depicted on the vase from Asine is an extension of the keel line, possibly a ram. They argue that it appears more like an extension than a steering oar set over the gunwale. Another argument put forward is that the higher end must be the stern to enable the steersman to see over the heads of the rowers (Morrison 1972:230). Casson (1971:41) refutes this vigorously, claiming that in the Bronze Age representations the high end of both pictures must be the bow, backing this theory with the Syros "frying pan" drawing which would show the fish emblem pointing backwards (in the wrong direction) if the low end was the bow (see again fig. 1).

Another excellent pictorial example is that of a Mycenaean ship on a vase painting of c.1450 BC found at Pylos in the Peloponnese (see fig. 3) with the fish emblem on the bow pointing ahead and the steering oar clearly portrayed at the stern. Also note the short keel extension at the bow. Though these crude drawings have caused some scholars to believe

that Mycenaean warships were equipped with rams, ramming tactics were unknown at the time and this invention is in complete contrast with contemporary methods of shipbuilding and imply an entirely new form of sea warfare. Also there was little distinction between oared merchantmen and warships at this period, the latter being basically troop carriers as one recalls from Homer's descriptions of the siege of Troy and the so-called first battle of the Nile in 1190 BC when the Sea Peoples were repulsed by Ramses III in a sea fight between two parties of soldiers in which ships grappled one another as marines engaged in hand to hand combat, in fact a sort of land battle at sea. This battle is depicted on a temple relief at Medinet Habu near Thebes in Egypt where none of the ships are equipped with rams (figs. 4a-b). Another excellent example of Bronze Age ships c.1500 BC are those portrayed on a wall painting from Akrotiri on the Aegean island of Thera (Santorini). They are probably ceremonial craft (Casson 1975:7), though one of the friezes, unfortunately badly damaged, does portray a battle scene (Casson 1975:6). The ships certainly have no ram. The slight keel projection is quite obviously at the stern with the helmsman at his steering oar (note drawing - fig. 5).

By the beginning of the first millennium BC we have the positive evidence of the ship pictures on Geometric vases (c.850-700) in which rams are clearly shown (figs.6 & 7), one depicting an aphract galley on a mixing bowl dating from around the mid-eighth century BC and the other of a two-banked warship about to sail off, also of about the same period. The earliest Geometric period representation of a warship with a ram to date appears on the catchplate of a bronze fibula from a grave in a cemetery in Athens of around 850 BC (fig. 8), which pre-dates the earliest representations of Greek warships on Geometric vases (Van Doorninck 1982:283). The slender forefoot tapering to a point with the fish pointing in the same direction is clearly shown. Also of interest is additional evidence provided by Van Doorninck (1982:277-286) who worked on a Protogeometric krater now in the Bodrum museum in Turkey, one of six vases found in a chamber near Dirmil on the Halicarnassus peninsula which has been dated to the late phase of the East Greek (Carian) Protogeometric period c.950-900. On the vase is a picture of a ship with a fairly substantial forefoot projecting from the base of the stem (see fig. 9). Van Doorninck also refers to the strange looking pair of ships in silhouette shown on a bowl from Fortetsa in Crete (fig. 10), which date, as does the Dirmil tomb picture, to c.950-900.

They present the same problem as earlier examples: in which direction are the ships facing? Kirk (1949:118-119) says that they are facing right since the small protrusion can only be a steering oar. He therefore concludes that the ships "have no ram, but a curved, rather high stem" and that they are merchant ships. Casson agrees (1971:67.n.116), deciding that the vessels are round-hulled merchantmen. Van Doorninck therefore believes (1982:285) that at present, available evidence suggests that the probable date for the first appearance of the ram-bearing warship in Greek waters is around 900 BC or shortly thereafter. The great maritime rivals of the Greeks, the Phoenicians, who controlled the waters of the eastern Mediterranean and beyond from about 1200 BC until the Greeks re-appeared on the scene at the end of their Dark Age around the mid-ninth century, appear to have developed their war galleys with rams along the same lines, as we note from the sketch of a relief from the palace of Sennacherib (705-681 BC) in the British Museum (fig. 11). The picture shows a war galley (bireme) going right, characterised by its two decks and a clearly portrayed pointed ram. It can therefore be fairly safely observed that by the beginning of the first millennium Greek and Phoenician long ships definitely had rams. So in this period of transition from the Bronze to the Iron Age in the eastern Mediterranean warships developed from being mere troop carriers as we note from Homer's descriptions and Ramses' battle of the Nile into a sort of oar-propelled guided missile designed to cleave into the sides and flanks of enemy ships, as well as driving along the side of another vessel to sheer off its oars. The first evidence of a sea battle in which the participants used

ramming rather than boarding tactics occurred in the mid- sixth century BC when a fleet of Phocaean pentekontors (50-oared galleys) engaged a superior combined fleet of Carthaginians and Etruscans near Alalia (Corsica) in 535 BC. It was a "Pyrrhic victory" as the Greek casualties were heavy "with their rams twisted off" as they were probably in an experimental phase. This battle is described by Herodotus in Book 1.166 of his *Histories*. With the advent of the ram ships had to be more heavily built, particularly in the bow area where the blows hit first, and hardest. This also led to the war galley with a raised deck and screened sides, and later to the development of the two-level ship, the bireme. The objective now was not to transport the maximum number of men to the scene of action on land but to keep the manpower the same but halve the length of the ship, the target to be rammed. The next step, it is not certain exactly when, was the invention of the perfect fighting machine, the trireme. With this new weapon ramming tactics were brought to a fine art, especially by the Athenians, whose prowess at sea led to the defeat of the Persian/Phoenician fleet at Salamis and to the birth of their seaborne empire.

During this period the ram also changed in design from one that ended in a point as depicted on the Phoenician bireme to one with a blunt face (see fig. 12). This made the prow resemble a boar's snout which in fact became a general form of decoration as one notes from a picture of a two-level ship on a coin of Zankle-Messana of c.489 BC (see fig. 13).

This heavy, two-pronged ram made of bronze was designed to cleave into the sides and flanks of opponents' ships and was a vast improvement on the single-pronged version which drove a hole in the hull but could also lock the two ships together, thus causing damage to the attacking ship as well as its victim, also leaving it open to boarding by the enemy.

So far we have only dealt with iconographic and literary evidence for the ram. It was not until 1980 that an actual warship ram was discovered on the Mediterranean seabed. This was found off Athlit, near Haifa, Israel, and is thought to date from about the first half of the second century BC. The heavy three-finned bronze ram is now housed in the Haifa Maritime Museum (see fig. 14).¹ The few hull timbers attached to the ram have been removed and are being analysed at the Center for Maritime Studies at the University of Haifa. A preliminary analysis dates the wood to the second century BC which coincides with the symbols on the ram's surface, still clearly visible. As mentioned the Athlit Ram is three-finned, a further improvement on the blunt-end two-pronged version. The three-finned ram, like the blunt-faced that preceded it, delivered a pounding blow but one that was even more effective than its predecessors. It is thought to have been introduced around 400 BC or even earlier. This date is derived from two representations of around that date, one a relief on a tombstone dated the beginning of the fourth century BC and the other from a Cypriot coin dated around the end of the fifth century (Casson & Linder 1991:68). A novel use of a ram in this period occurred during Alexander's siege of Tyre in 332 BC. In his assault from the sea Alexander's engineers constructed a number of naval battering rams, each mounted on a large platform lashed across two ships. The great rams smashed their way through loose blocks of masonry and managed to breach the walls (Green

¹ Viewed by the writer on a recent visit. The ram weighs 465 kg. and is 2.26 metres long. Its weight, double that of one considered appropriate for a trireme, leads on to believe it was attached to one of the larger types of warship built in the third or second century, this date confirmed by carbon-14 analysis of the wood. The ram itself, which had been immersed in a specially built fresh water tank for cleaning and conservation, is still in superb condition.

1992:257; Hammond 1980:115 from Arrian 2.21-22; Quintus Curtius 4.3-4). The three-pronged ram remained the principal warship weapon for centuries, right up to the Battle of Actium in 31 BC and beyond. In fact after the battle, when Augustus undertook to establish a permanent navy, its ships were equipped with three-finned rams (Casson & Linder 1991:69). Rams were later superseded by fire and cannon, though ramming tactics emerged again briefly in the age of steam with many incidents recorded of warships intentionally ramming each other.

As can be seen, the dating of the advent of the ram as a weapon in ancient sea warfare is still extremely inconclusive and the subject remains wide open. Perhaps one day the underwater archaeologists will be able to solve the riddle by unearthing a Bronze Age warship, with or without a ram, though this is considered extremely unlikely.²

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² Light cargoless unballasted warships seldom sank, even after ramming. They usually broke up and were either beached or towed away (Morrison & Coates 1986: 128). This fact emerges from a number of naval engagements. In Thucydides' (1.50) account of the action at Sybota in 433 BC, for instance, he states that "after their victory the Corinthians, instead of taking in tow and dragging away the ships that they had put out of action, turned their attention to the men".

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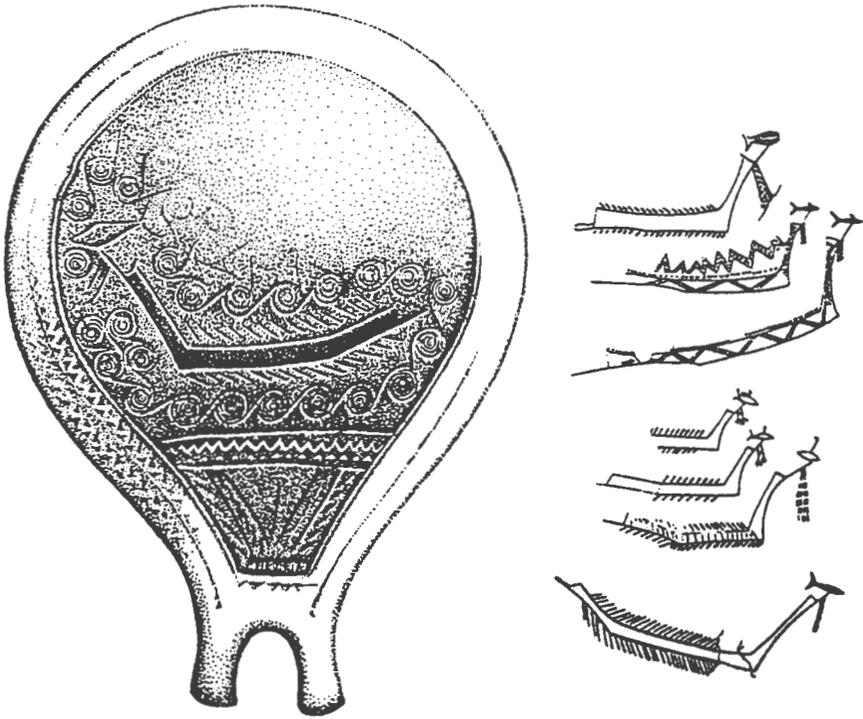


Fig. 1

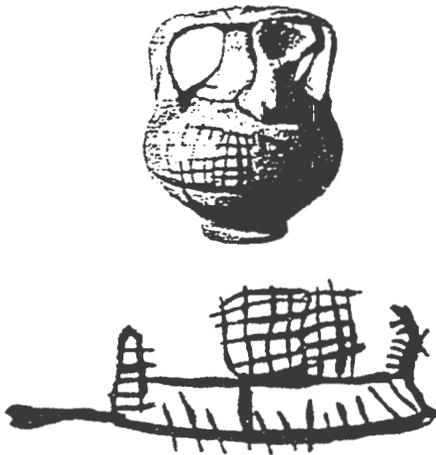


Fig. 2

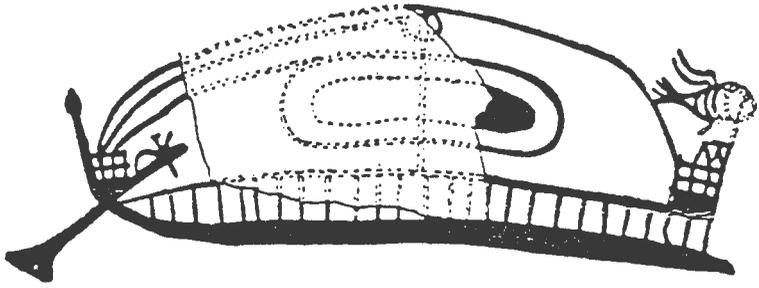


Fig. 3

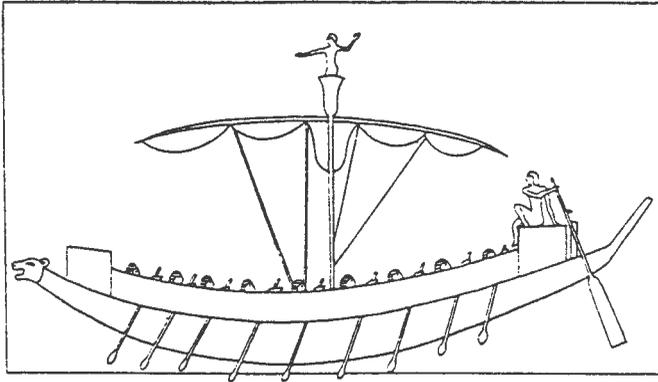


Fig. 4a

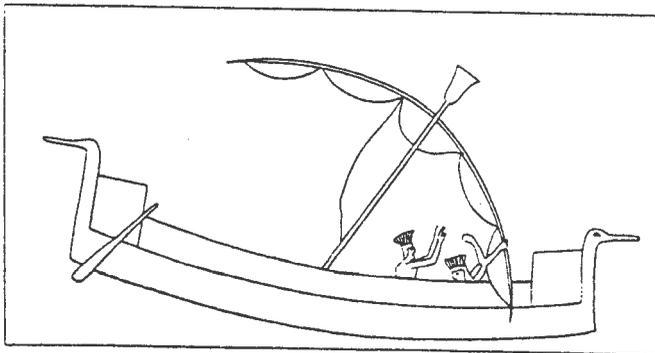


Fig. 4b

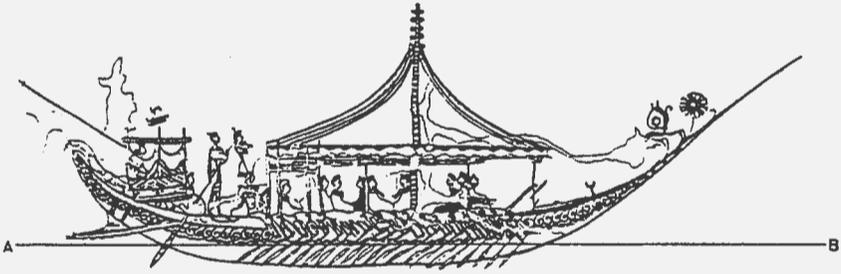


Fig. 5



Fig. 6

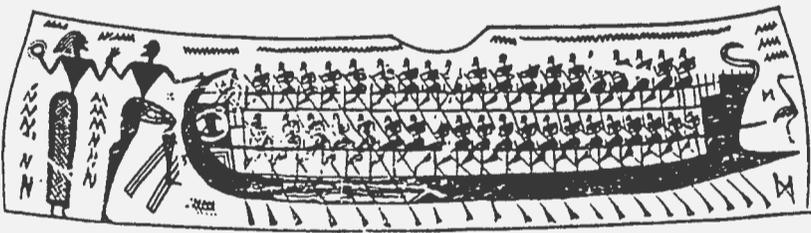


Fig. 7

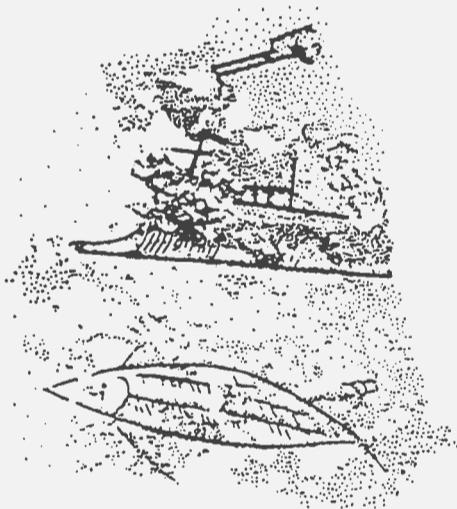


Fig. 8

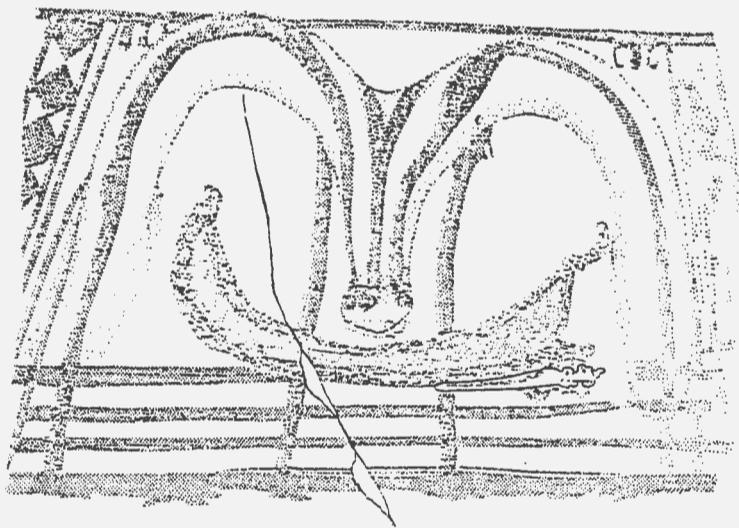


Fig. 9



Fig. 10

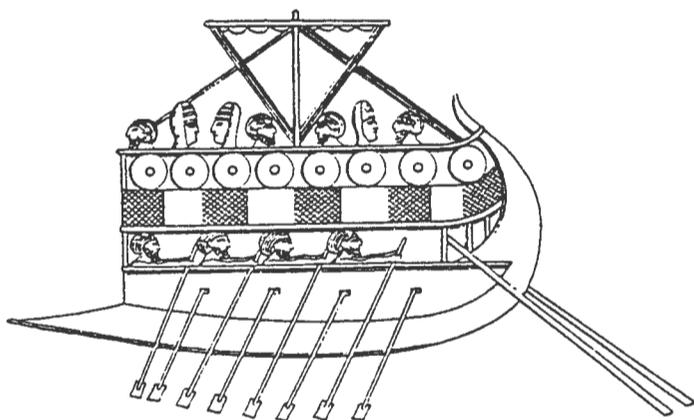


Fig. 11

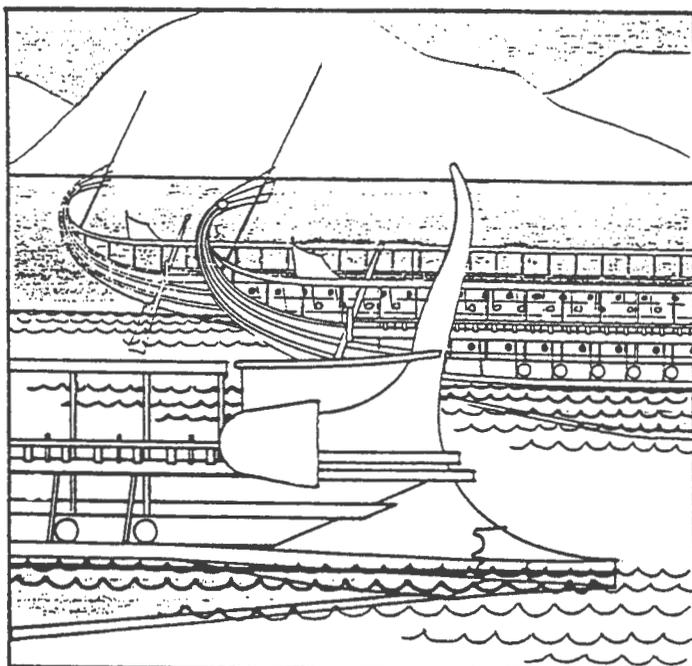


Fig. 12



Fig. 13

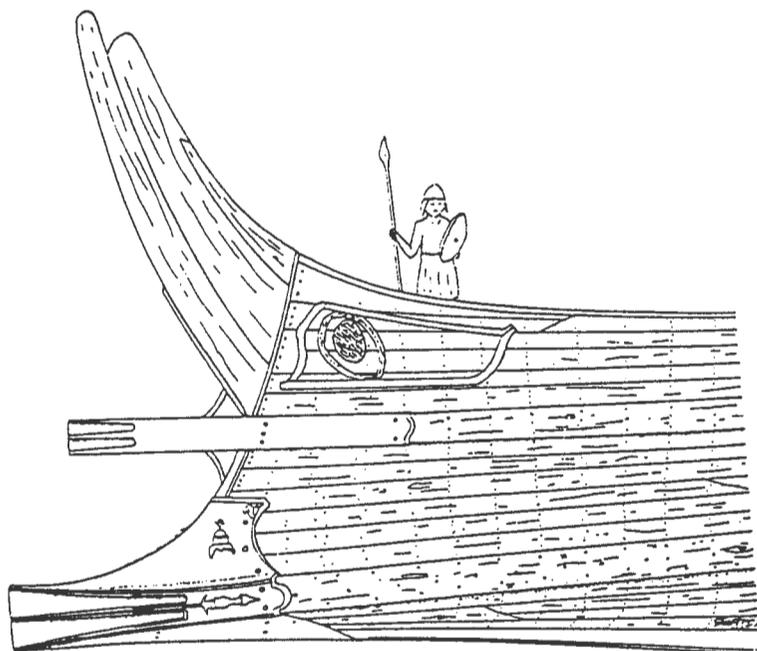
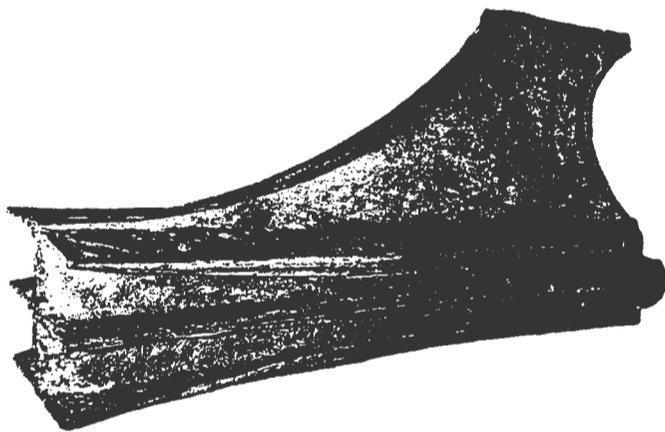


Fig. 14