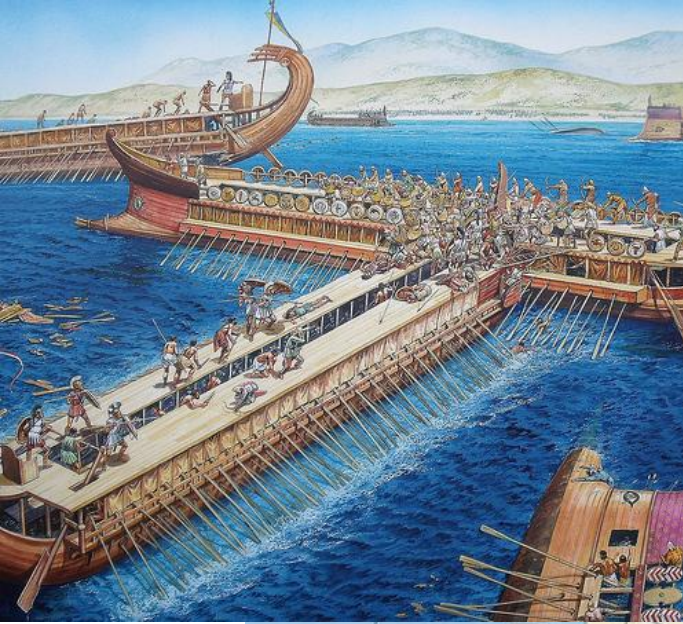
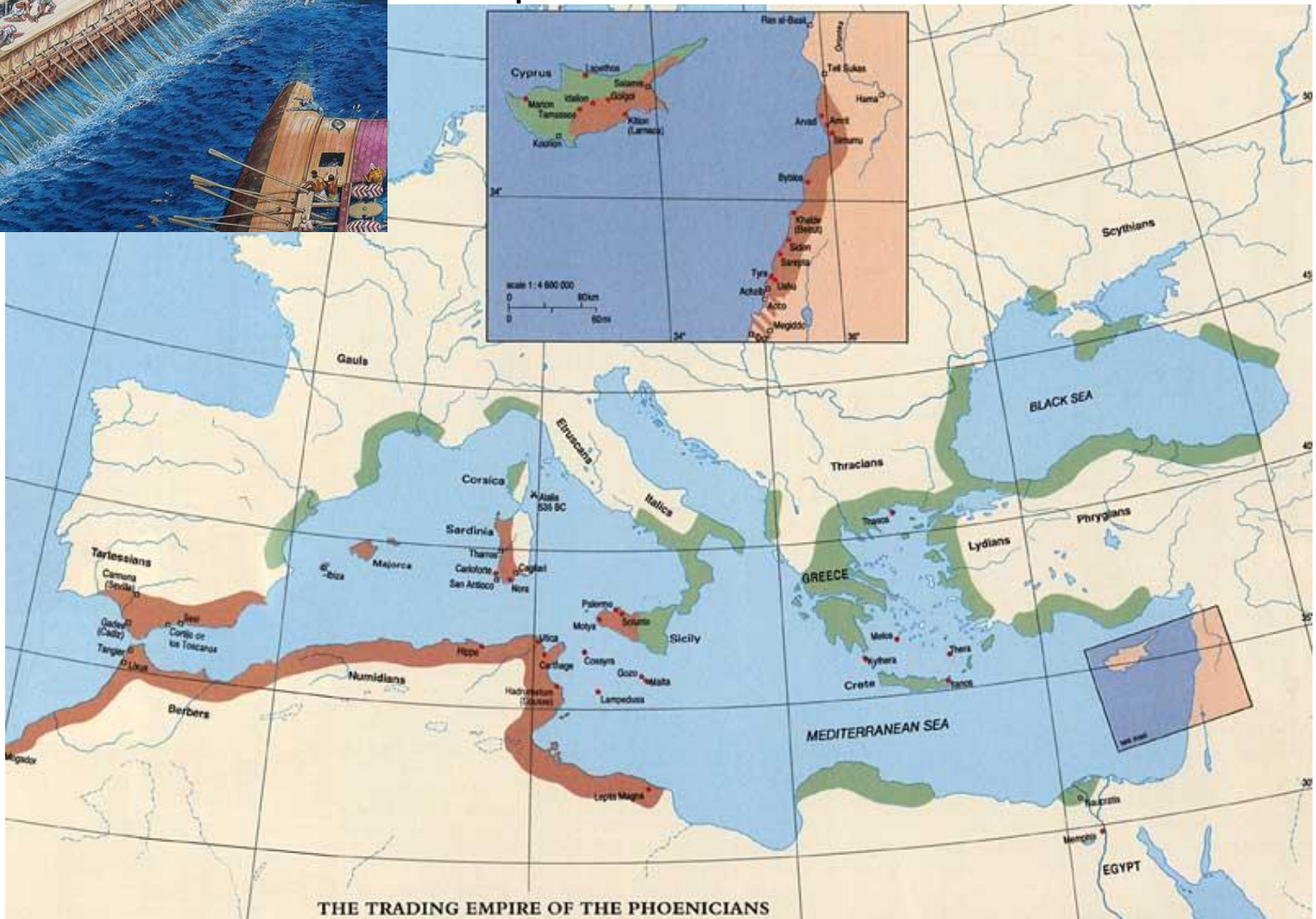


The archaeology of ships of war in the ancient Mediterranean

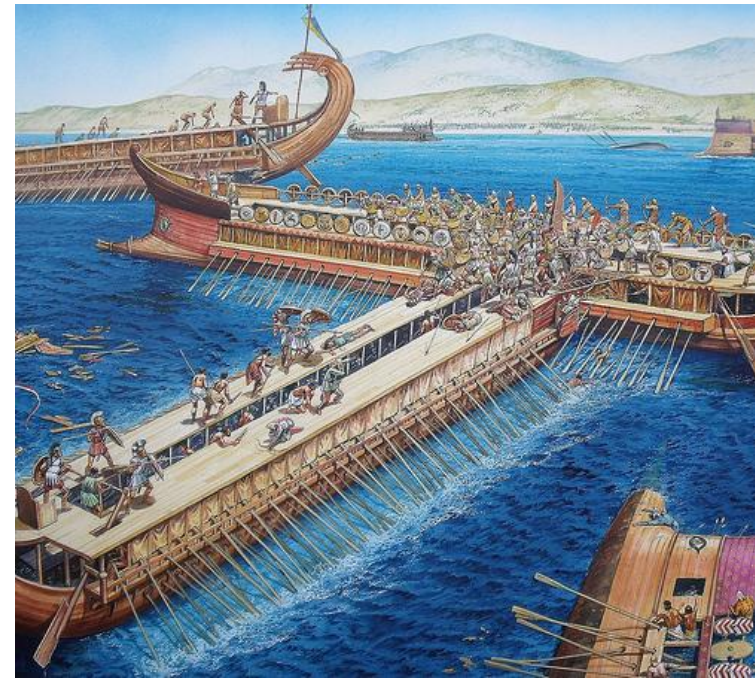
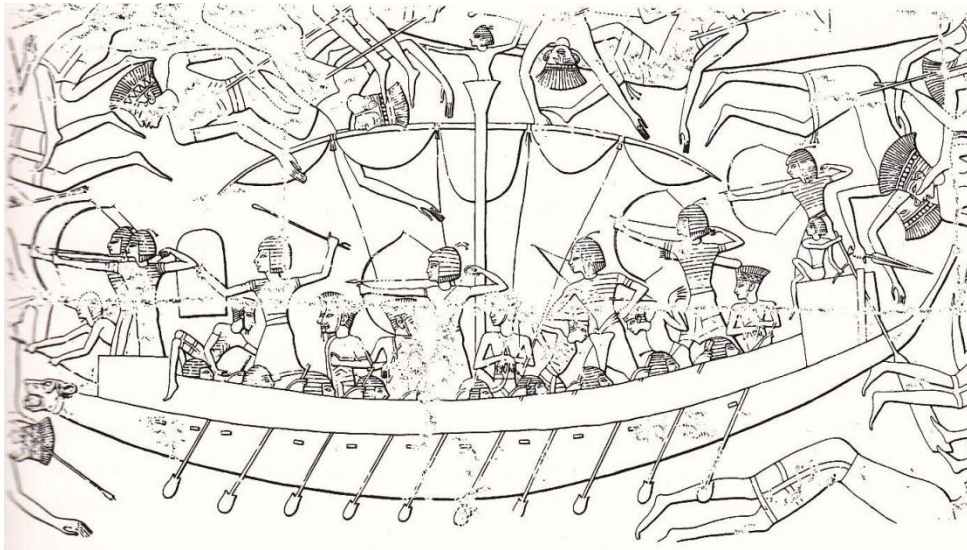
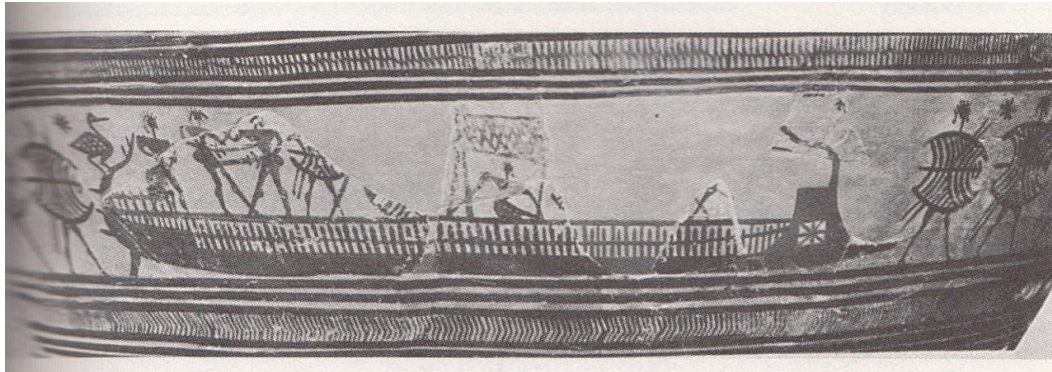




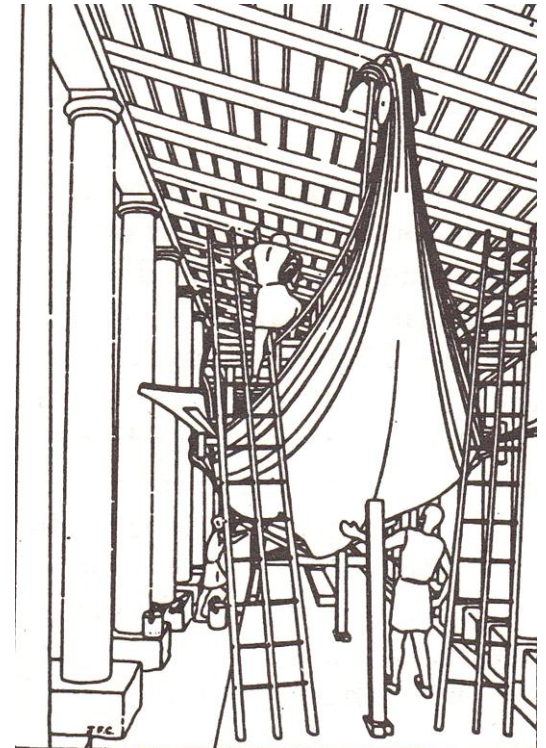
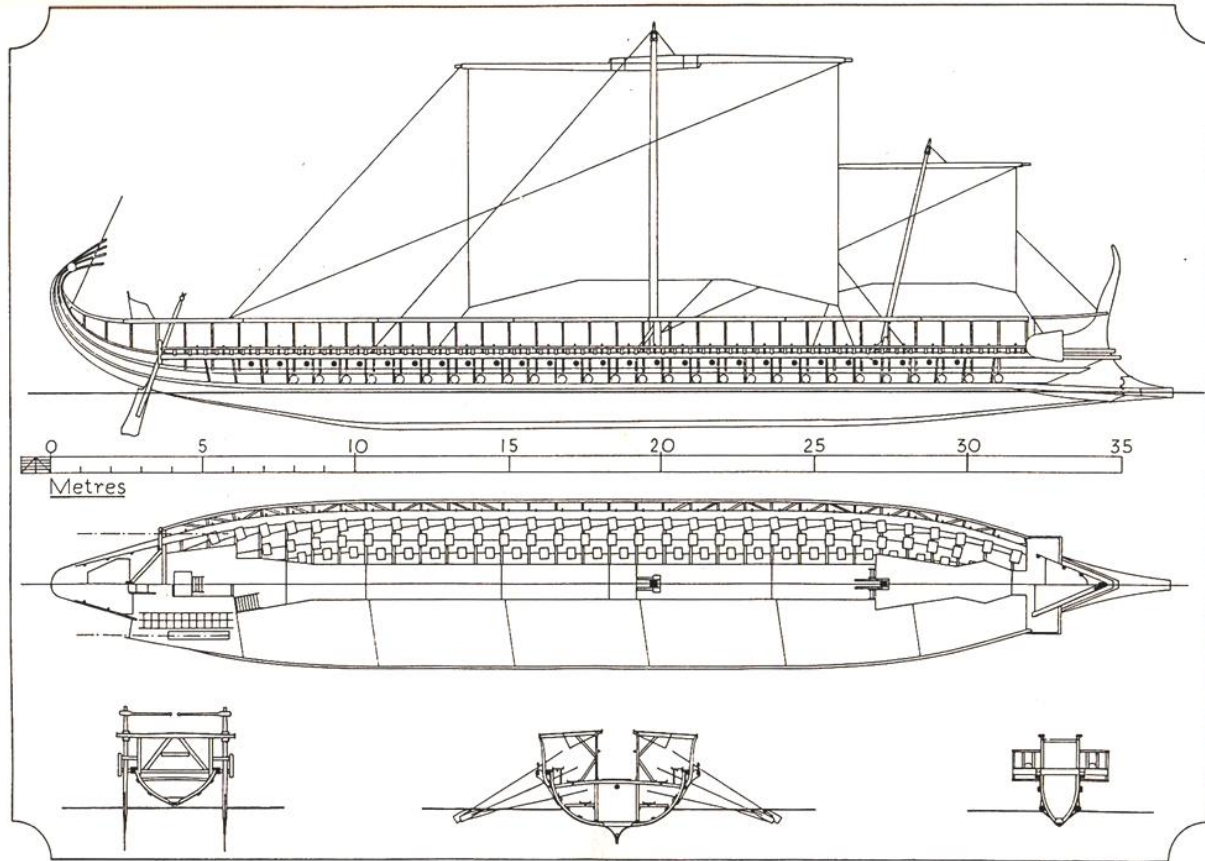
By the 7th century BCE the Mediterranean had become a contested sea, with conflicts inherent in the commercial and imperial interests emanating from the Levant, and from the Aegean and the Italic peninsula



Part 1 of lecture: the 'evolution' of the warship from a troop transport and fighting platform to a weapon



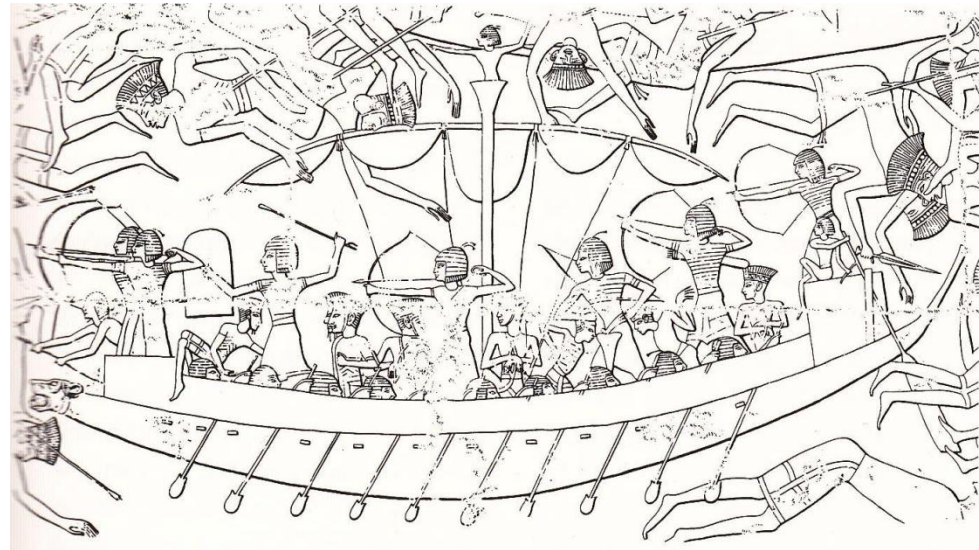
Part 2 of lecture: the iconic *trireme* as an archaeological and historical case study



Earliest representations and records of ships in martial contexts: evidence from Egypt

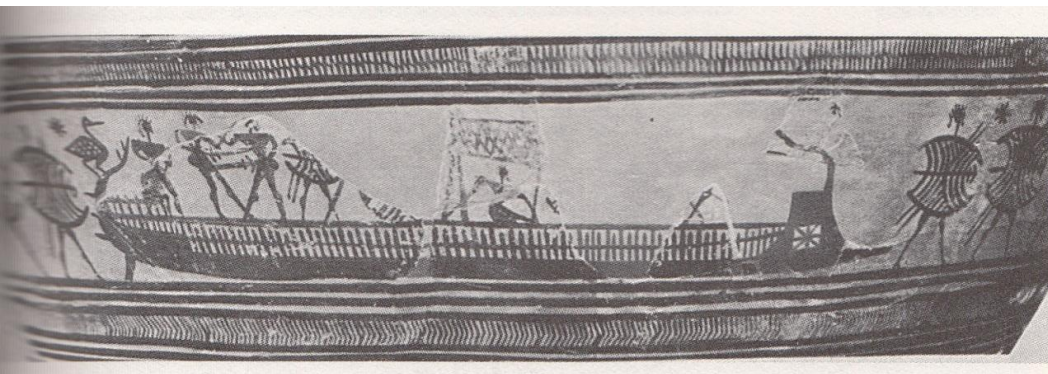
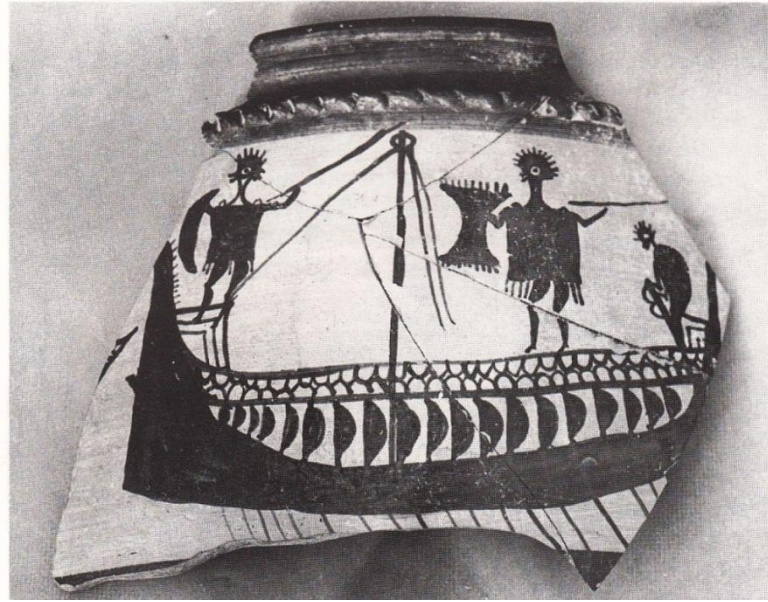


Campaigns of Thutmosis III
into Syro-Palestine (ca. 1450 BCE)
included mobilizing ships
(earliest unambiguous use of ships
in a military campaign)



The navy of Ramses III decimating the
Sea Peoples' fleet (ca. 1200 BCE)

Homeric epithet for ships: 'chariots of the sea'

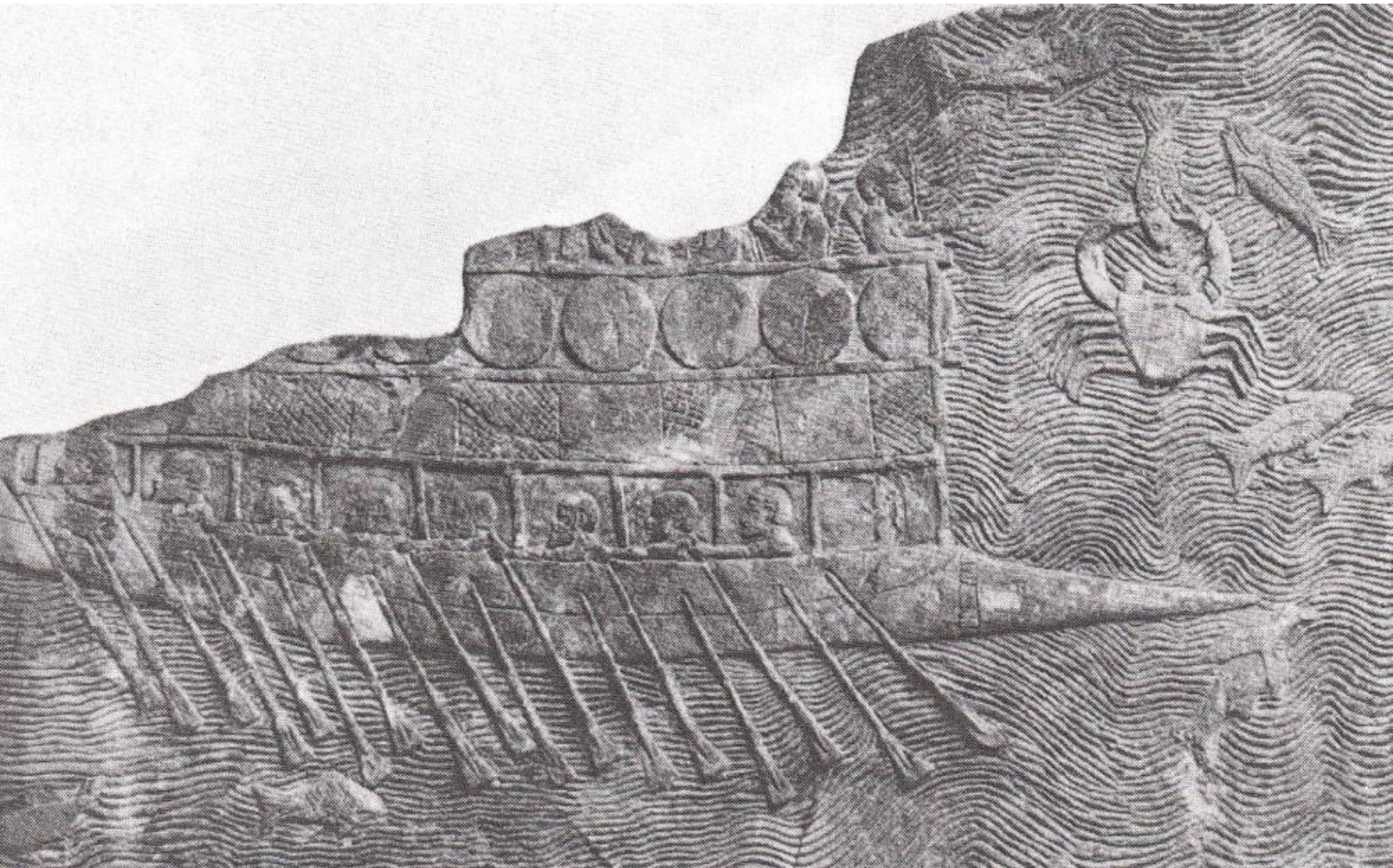


From the Aegean: Late Bronze Age and Early Iron Age galleys in martial contexts



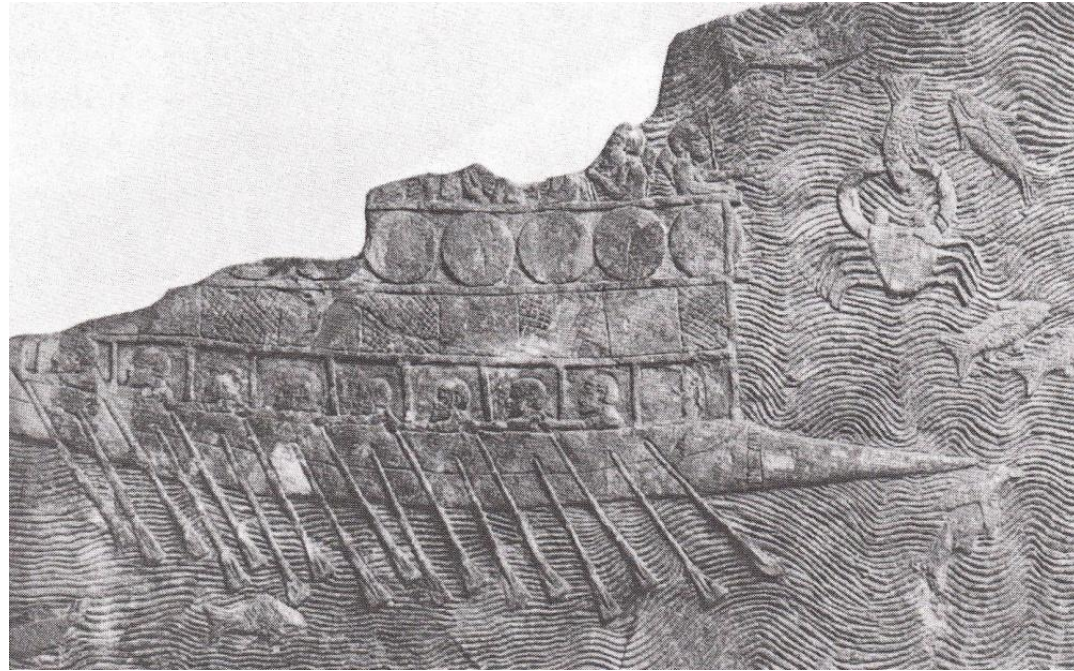
Reconstructions of Hittite and Egyptian chariots from the Battle of Qadesh (ca. 1270 BCE)

When did the ship itself become a weapon?

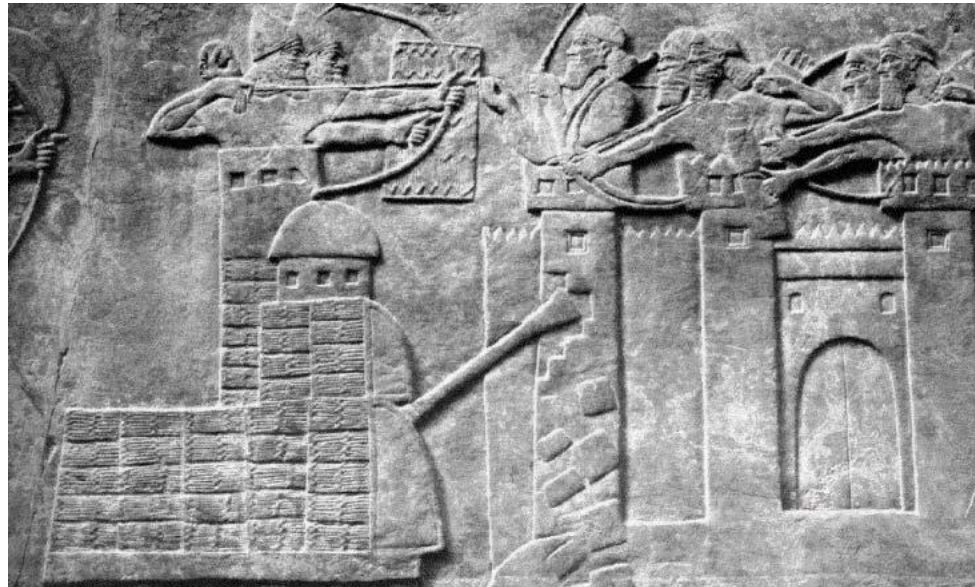


A Phoenician warship from a relief in the Assyrian palace of Sennacherib (701 BCE)

This (Phoenician) innovation in military technology...

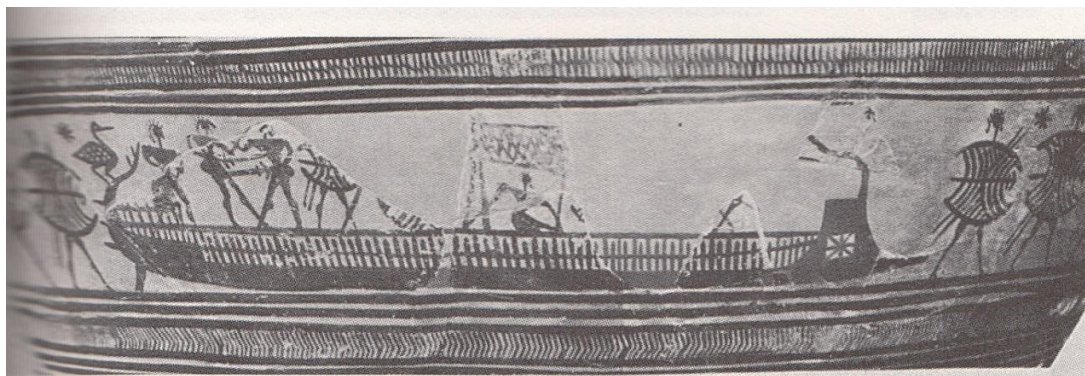
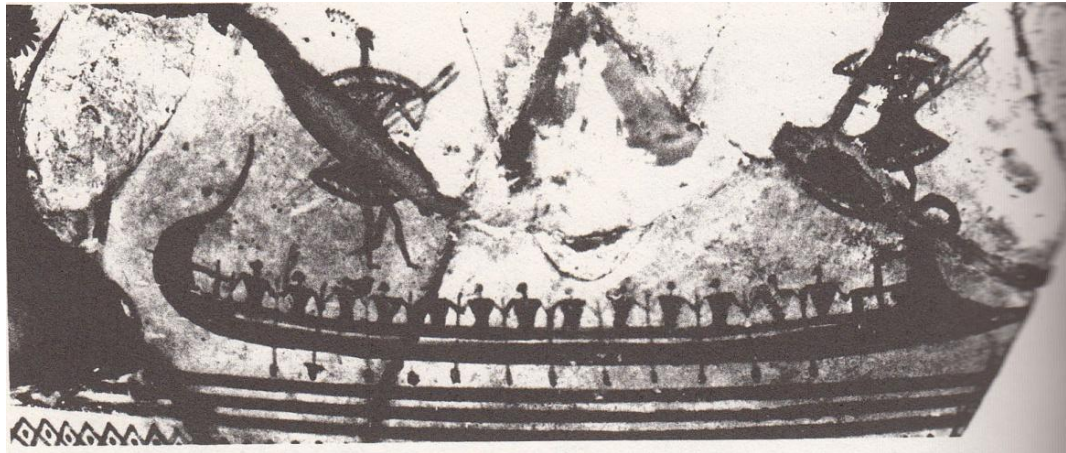
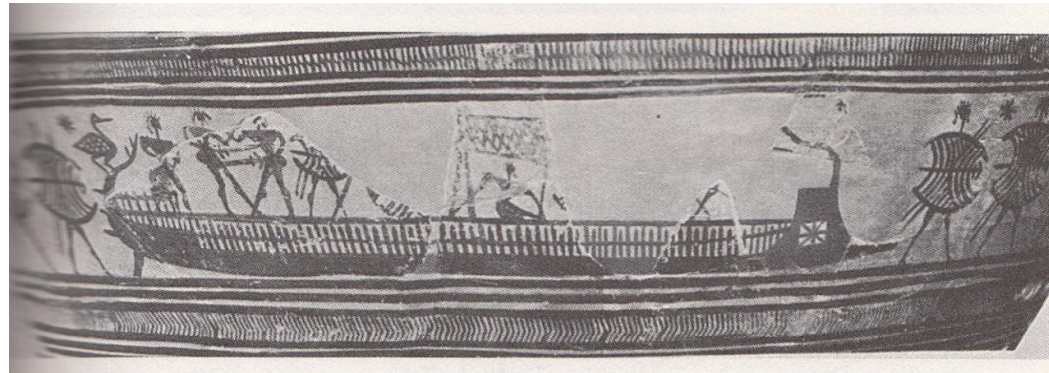


may well have been inspired by this (Assyrian) one



From the palace of
King Ashurnasirpal II
(ca. 880-860 BCE)

Roughly contemporary evidence from the (late) Early Iron Age Aegean:
Are these accentuated bow projections rams or not?



The earliest conclusive representation of a ram (from the Aegean): the Attic 'Sirens Vase' (ca. 480-470 BCE)



Herodotus in *Histories* (ca. 450-430 BCE) describes the earliest use of the ram by Greek warships

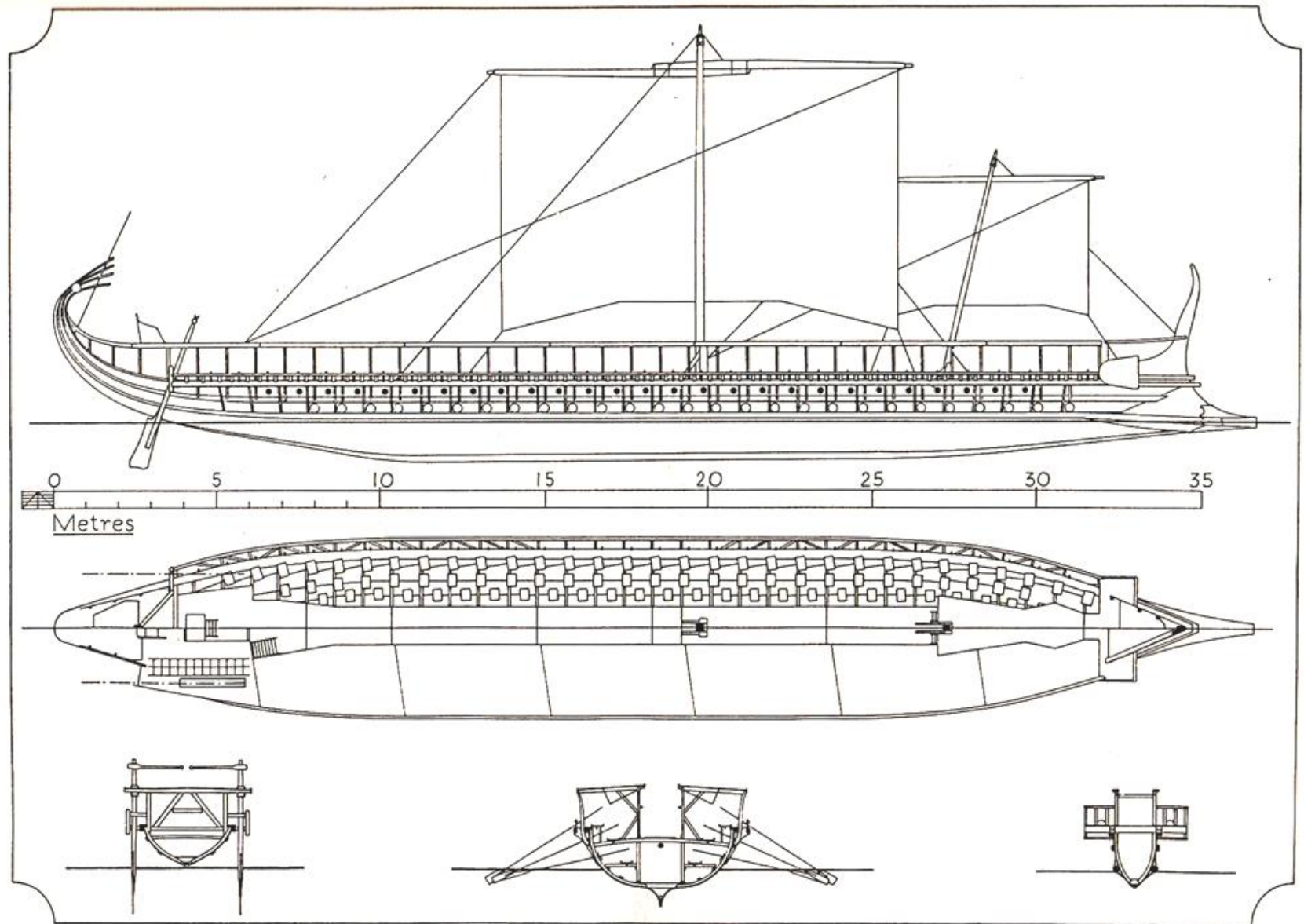


535 BCE: A Phocaean (Greeks from Asia Minor) fleet of *penteconters* engaged a combined fleet of Carthaginians and Etruscans: casualties included ships 'with their rams twisted off'

But it was the *trireme* in the Battle of Salamis (480 BCE) and not the *penteconter* for which the ram is most well known



The *trireme* is the most extensively studied class of ship from the ancient world



The elusive (field) archaeology of warships of the ancient Mediterranean



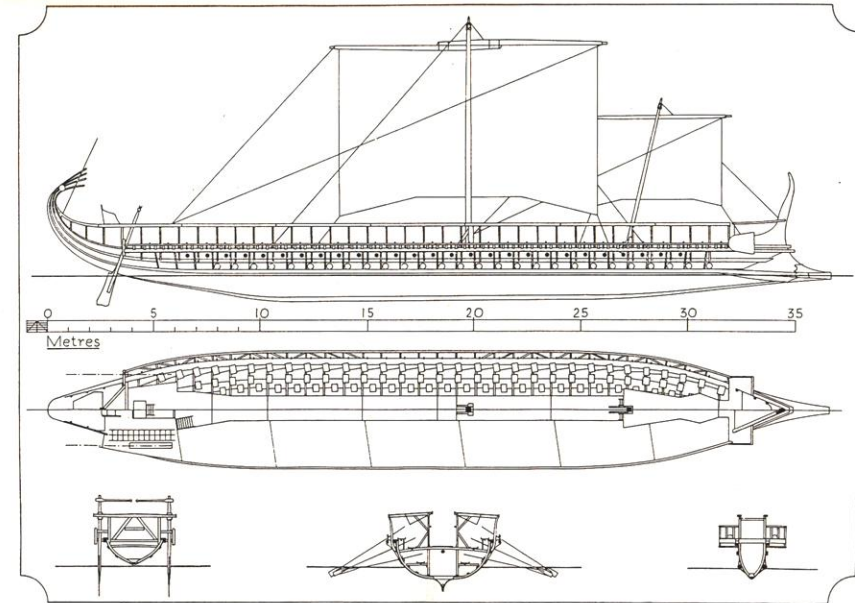
Where are all the sunken galleys?

One ram has been recovered from underwater contexts

Athlit ram (Israel, 2nd century BCE)



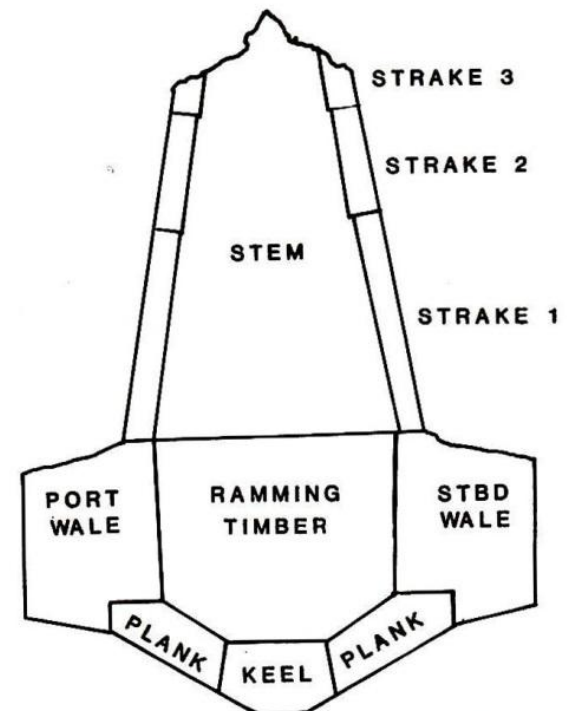
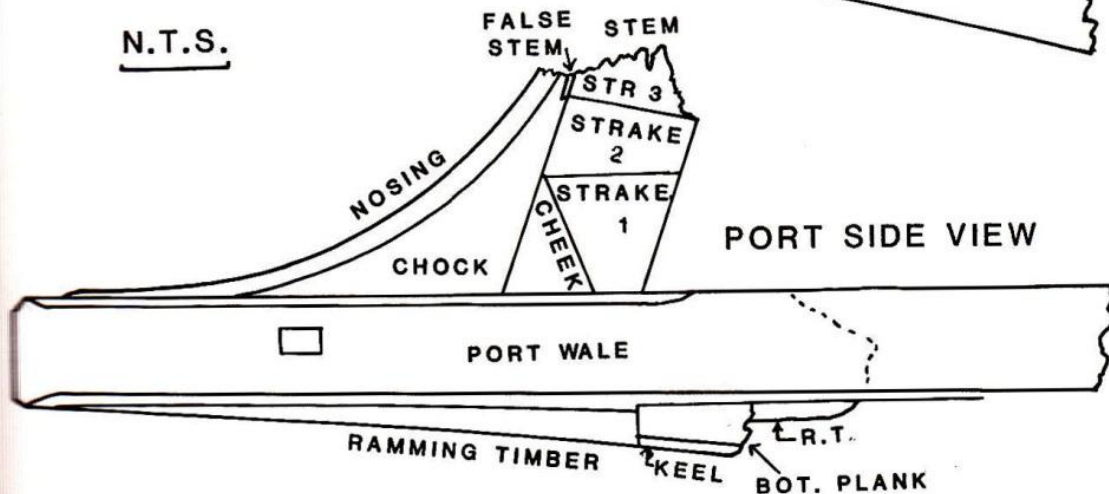
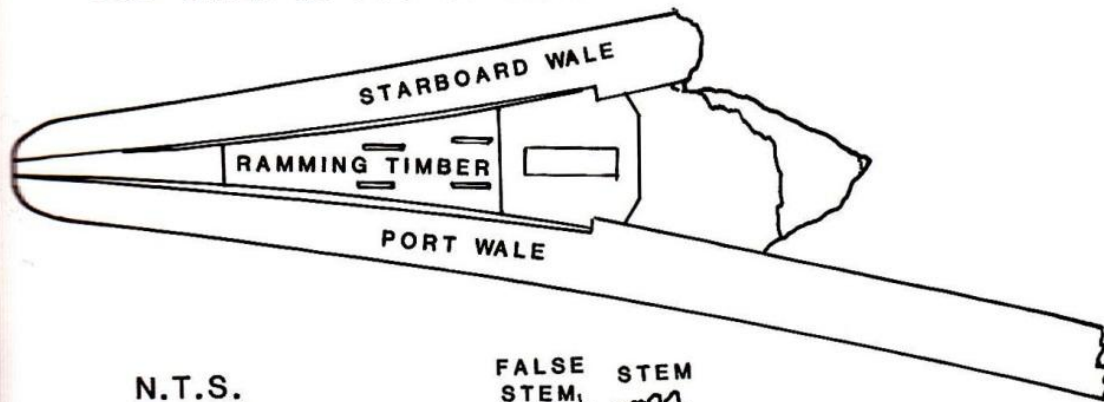
With very little shipwreck evidence how did John Coates and John Morrison (the naval architect and classicist of the *Olympias trireme* project) arrive at this reconstruction?





A few fragments of timbers were attached to the Athlit ram; this much of the bow of a trireme can be archaeologically reconstructed

TOP VIEW at TOP of WALE



VIEW at AFTER END of RAM
N.T.S.

The remainder of the Olympias *trireme* was reconstructed with iconography, statuary, texts, ship sheds, architectural intuition and remarkable scholarship



A *rhyton* (drinking cup)



Lyndos rock relief (Rhodes)



Nike of Samothrace

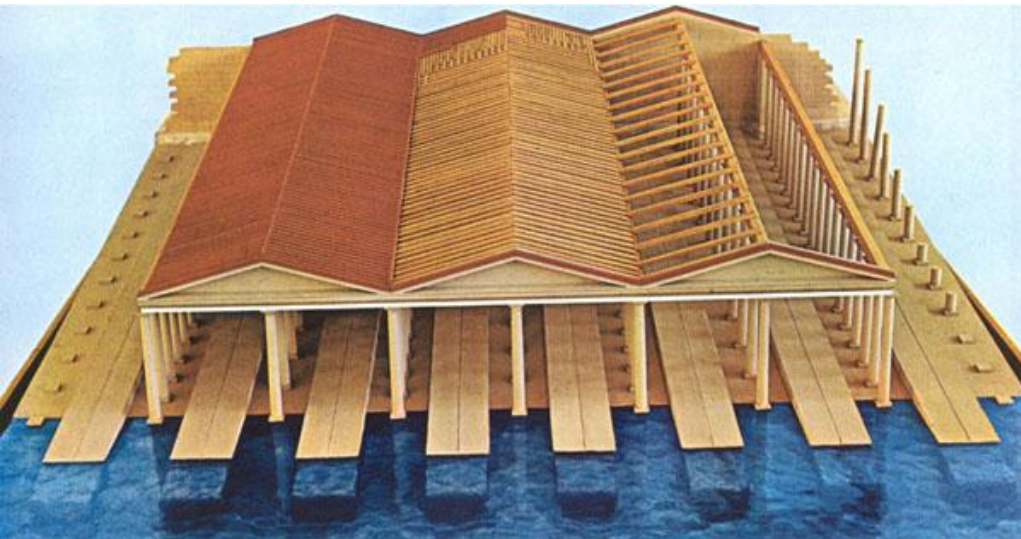
An example of how a text can inform the reconstruction of a *trireme*:
(there is no detailed description of what these ships looked like)



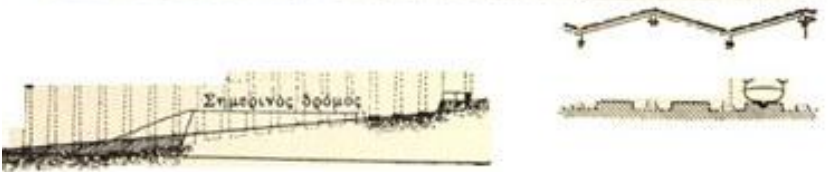
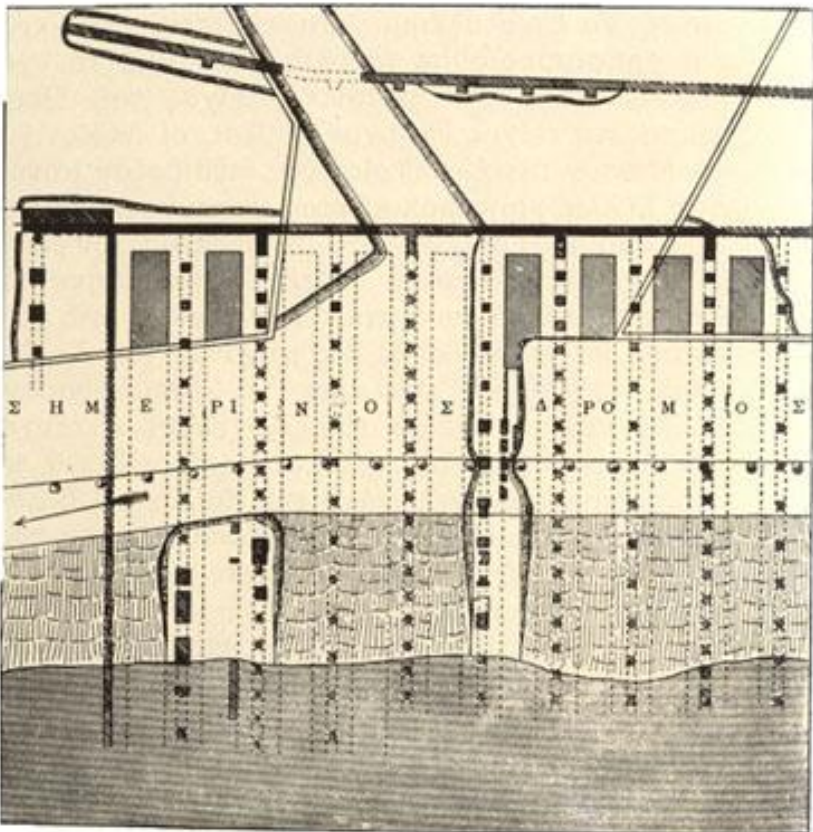
Herodotus (*Histories*) describing Xerxes voyage home on a Phoenician warship after his defeat at Salamis:

‘...he was rather severely tossed about, the ship being overloaded, with the deck packed by a large number of Persians in his entourage...for if the helmsman had really made this reply, the king would quite obviously have ordered the people on deck to go below...’

Dimensions of ships sheds at Piraeus, the harbor of Athens: 37m x 6m
(length to beam 1:6)

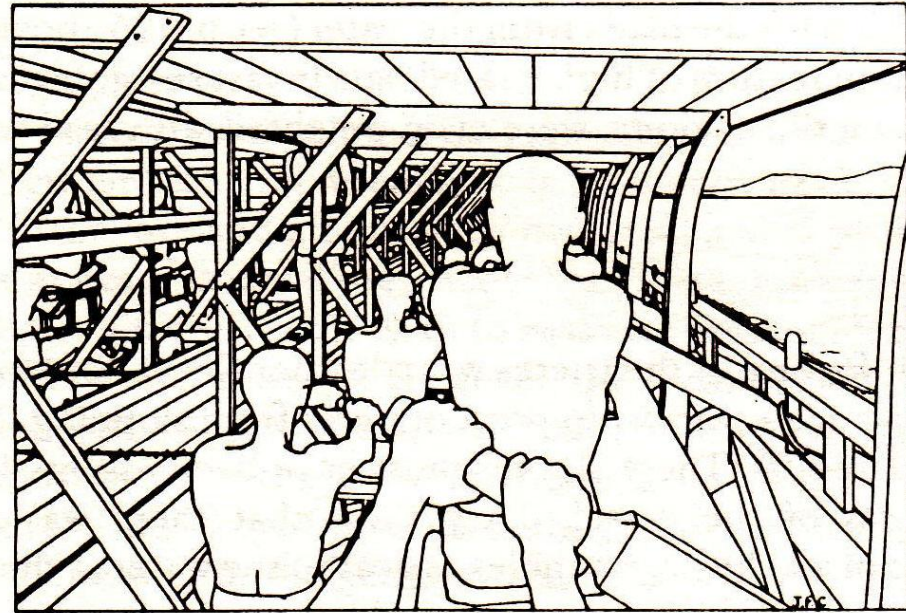
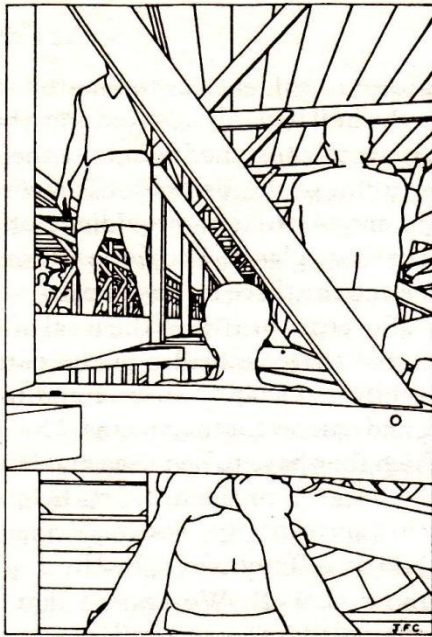


Reconstruction of ship sheds,
Piraeus, Athens (ca. 400 BCE)



Archaeological plan of ship sheds,
Piraeus, Athens (ca. 400 BCE)

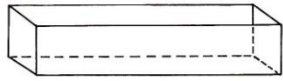
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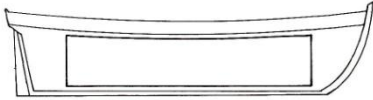
Additional evidence from texts to assist in reconstructing a *trireme*:

- **inventory of ship equipment (from the *Decree of Themistocles*, commander of the Greek fleet at Salamis): each *trireme* fitted with 170 oars, and extras)
- **two different classes of oarsmen (from several textual sources):
thalamioi (*thalamos*=the hold of the ship), *thranites* (position not clear, but above the *thalamioi*)

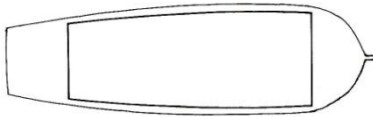
A floating cargo box under wind propulsion



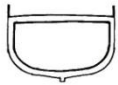
a



b



c



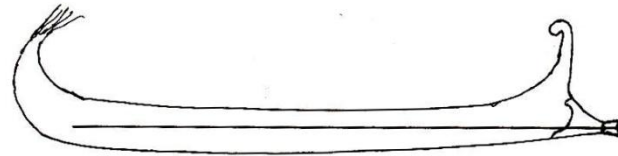
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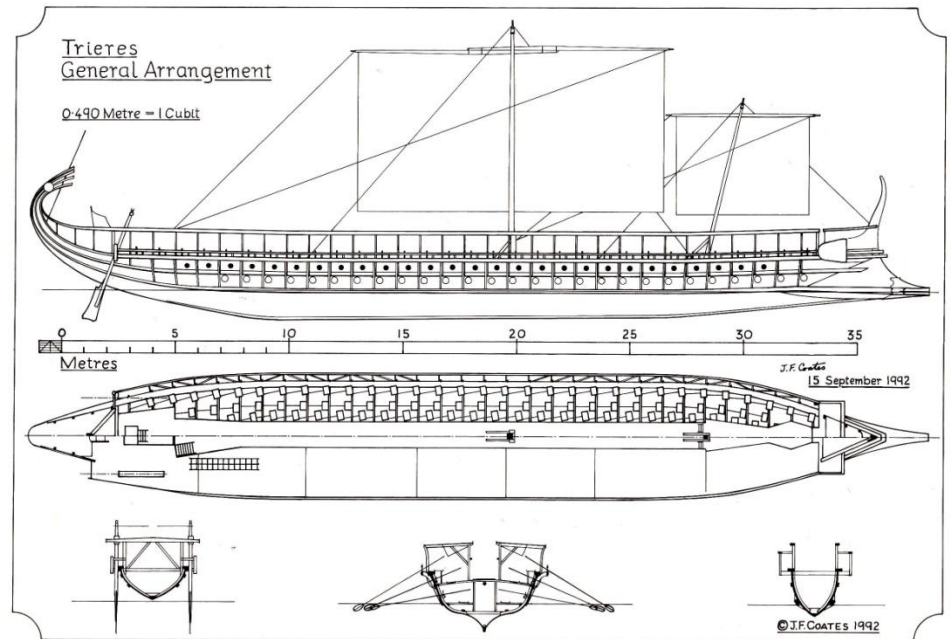
A floating (battering) ram and fighting force under wind propulsion (cruising) and oar propulsion (fighting)



a

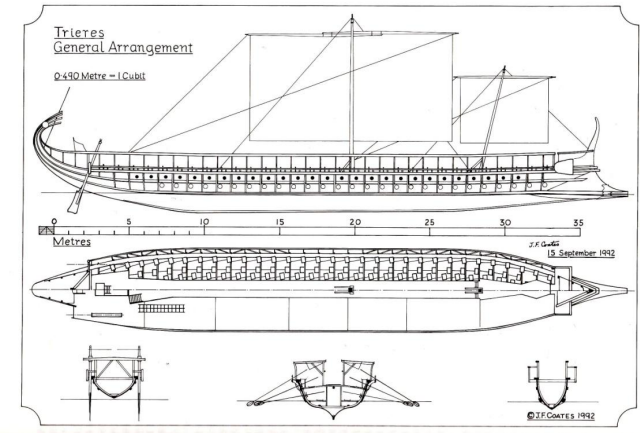


b

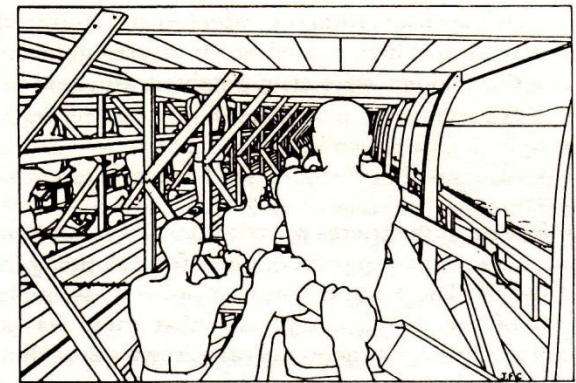


The three most important construction and design considerations when building a *trireme*:

1) Speed (light, narrow length to beam)



2) Accommodating the source of speed
(without compromising lightness
and narrow length to beam)



3) Accommodating the weapon

