



# Warfare in Mycenaean times: the Iliad as a paradigm and the emerging applications of experimental archeology

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# Abstract



- ▶ Read without prejudice, the Homeric poems present information on the Bronze Age warfare more elaborately than Egyptian, Hatti /Mycenean records / tablets.
- ▶ Geopolitics, alliances, armies' sizes, organization and deployment, troop types, tactics, chain of command are mentioned explicitly.
- ▶ Cross-examination with other literary and material evidence might prove enlightening.
- ▶ Some issues need reenactment and experimental archaeology/history approach to determine;
- ▶ such are the dressing of battle lines, the proper use of weapons, the fabrication of weaponry and the implicated metallurgy, a dark, debased but godly art.

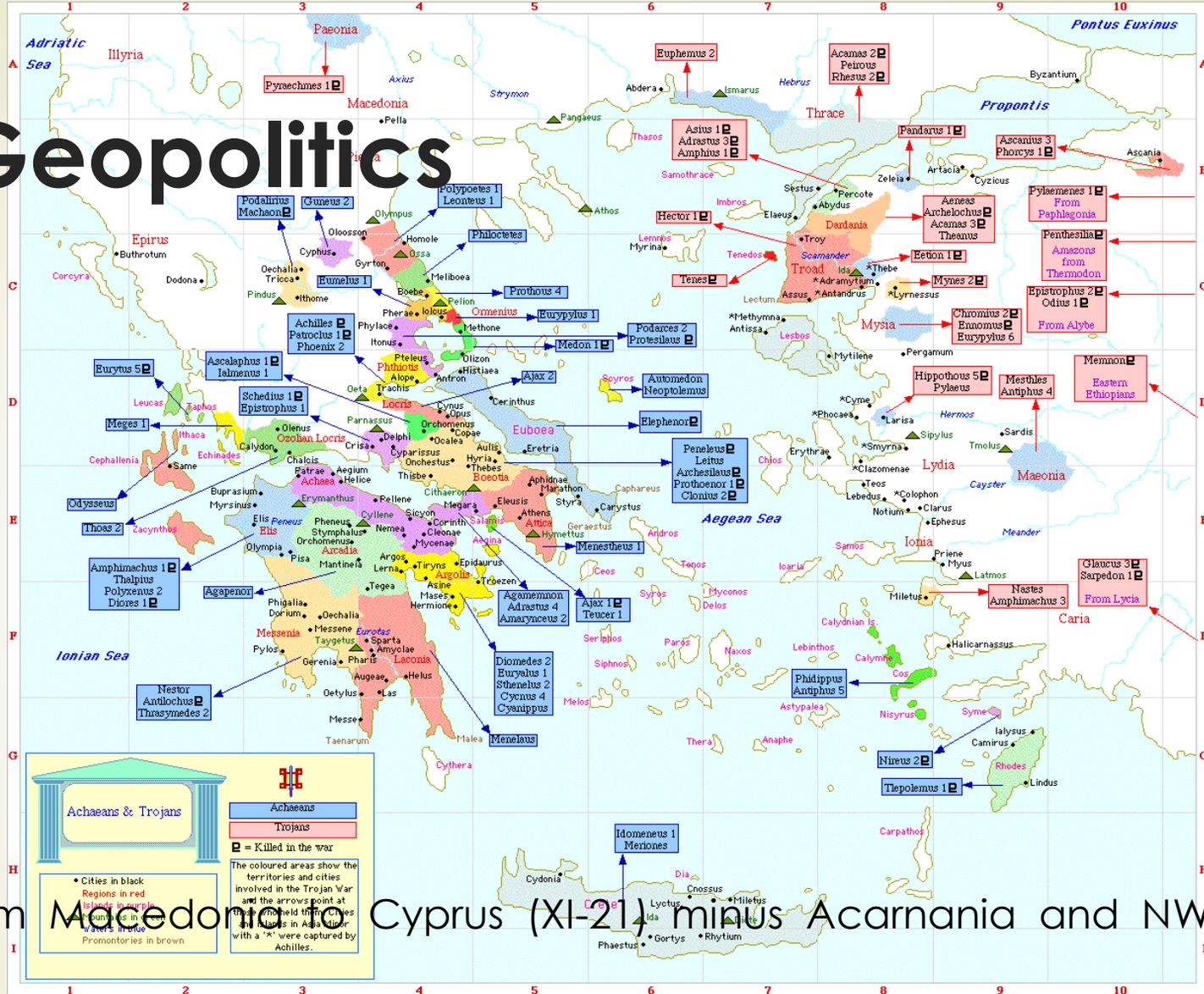


# Introduction



- ▶ The cohesion of military information indicates that the author of the Iliad had contemporary, accurate information as tactics and injuries cannot be imagined.
- ▶ Inconsistencies may be due to corruption through the ages-long oral transmission or forgery (i.e. XIII-685).
- ▶ Conventional Archaeology provides material evidence for verification of the claim; to the same end, Experimental Archaeology offers procedures.

# Geopolitics



- Achaeans: from Macedonia, Cyprus (XI-21) minus Acarnania and NW Peloponnese.
- Trojans and allies: from the Axios River in Macedonia (II-848, XVI-288) to Lycia in SW Asia Minor (II-876), and to the river Sagarius (III-187) in Asia Minor.
- Central aegean isles (Chios, Samos, Kos, Cyclades): status unknown



# Armies' organization-I: Trojans

- ▶ Trojan and allied army: feudal conglomerate
- ▶ Commander: the Lord of the Hosts of Troy, Prince Hector
- ▶ Allied contingents arrived just before his offering battle (XIII-364, XXI-156), and continue so by the day (XXII-434).
- ▶ Basic unit of 50 men, size 50.000 (1.000 campfires, with 50 men around each; XVIII-558/9).

# Armies' organization-II: Achaeans

- ▶ Greek army: NOT feudal conglomerate
- ▶ Commander: C-in-C High king Agamemnon.
- ▶ Field commander: Achilles (indicated in XXIV-651/8 and directly stated in iii-106).
- ▶ Basic unit of 50 men (IV-393), as crew of basic ship (XVI-170).
- ▶ There are larger ships of 120 troops (II-510); and 20-oared (I-309).
- ▶ Tactical units (Lochoi) 500-strong in Achilles' own contingent (XVI-168/72).



# Tactics-I

- ▶ Opposing armies stop at a distance and exchange missile fire (XV-711); skirmishers, jump in between and strike targets of opportunity (XIII-559).
- ▶ After exchange has softened up the one opponent, the other one charges (XI-85/90).
- ▶ The advantage with the offensive weapons. Shields and armor are often penetrated (IV-133/5).
- ▶ Greeks can do tight phalanx formations (XIII-130/131, XVI-352/65); the Trojans cannot imitate, nor break them.
- ▶ Achilles favors charge and clash (XX-354/5).



# Tactics-II

- ▶ The “tower” (IV-334), is an offensive formation, similar to 18-19th century columns of Napoleon’s infantry for prompt assault. Minimizes exposure to fire, add momentum. Drill would allow transformation of infantry units between line and tower.
- ▶ Both opponents capable of massive kindling of fire for offensive use against enemy positions, ships or cities.
- ▶ Trojans intentionally aim low limbs: In XI-377/8 Paris’ arrow nails Diomedes’ foot to the ground, long before doing it with Achilles (proverbial “heel”). Agenor casts spear at Achilles’ shin (XXI-560), deflected by greave.

# Tactics-III

- ▶ Greeks despise archery but have good snipers (the troops of Philoktetes, II-720); Teukros and Ajax exemplify the pair of heavy shield bearer-archer (VIII-266/72); the Locrians fire *en masse* (XIII-712/22), from behind the storm troops' lines.
- ▶ The Trojans attacking under low visibility due to fog, mist and wind (XV-668/70, P-645/50) follows Sun Tzu.
- ▶ The Greeks perform better in good visibility, due to numbers and tactical efficiency discipline and drill.
- ▶ For the Greeks chariotry fighting in jousts (as Nestor advocates, IV-306/7) was outdated.



# Troop types-I

- ▶ Both armies depend on the heavily armored noble; either charioteer, the *hippotes* (XIV-52) “*eqeta*” of the tablets (knight), or on foot (Odysseus).
- ▶ The best warriors combine heavy armor with mobility; both Achilles and Hector are fleet of foot, excellent charioteers, big of stature.
- ▶ The Trojans have medium infantry, chariot runners (XV-517) *pryleis*, archers and chariotry (II-810) *hippeis*.



# Troop types-II

- ▶ The Greeks additionally field heavy shielded infantry for static defense, personified by Ajax the Great- a commodity never implied for the Trojans.
- ▶ Many Greek first-line nobles do not possess or use a chariot. They fight with javelin and heavy armor (Odysseus), or in ways unsuitable to and incompatible with chariotry, although from close range (Ajax the Lesser).

# Weaponry-I: Spears



- ▶ The warrior uses a general purpose spear (*dory*) for casting and thrusting (XIII-559), mostly carried in pairs (XVI-139).
- ▶ Trojans and Greeks use chariotry lances with massive warheads (*egxea*) for thrusting and cutting. Hector's at VIII-494 measures 11 cubits; Achilles', passed from from his father, can't be wielded by anyone else (XVI-140/3).
- ▶ Medium infantry: helmet, spear, shield, sword (XIII-714/5).
- ▶ The greek dense phalanx (XIV-372/3) uses long spears- the two-hand lances of the Hunting Dagger and the *egxeiai* of the tablets; better suited for intercepting chariotry.
- ▶ Mace primary weapon of 3 Greek lore characters: 1) Arithous, (VII-137/41); 2) one bandit killed by Theseus (Periphetes) and 3) Hercules.

# Weaponry-II: Shields



- ▶ Both enemies use round shields (XIII-715) of hide or metal, possibly including double-grip ones reminiscent of later argive shields (Pylos frescoes).
- ▶ Crescent shields- *laiseia* (V-453) as in the “Warrior vase”-single grip, reminiscent of later *pelte*.
- ▶ 8-figure bodyshields of hide, covered by bronze or plain in use in both armies (Hector XIII-803, Menelaus XVII-7).
- ▶ The tower shield (*sakos*, greek for rectangular-ish) *par exelance* is of Ajax the Great (VII-219/22). Such shields are not mentioned for Trojans.
- ▶ Although panoplies are routinely penetrated, the shields are more resilient. Archery is never mentioned to pierce shields.



# Weaponry-III: Sidearms



- ▶ The use of secondary weapons is important, after the spear is cast or broken.
- ▶ One mention of the straight ax, in Trojan ally's use (XIII-612 *axine*). Regular axes (*pelekeis*) mentioned along straight ones in heavy fighting (XV-711) and lumbering (XXIII-114).
- ▶ The usual choice is the sword. Three models/words:
  - The heavy, long, sturdy, double use *aor*, which both pierces (XXI-179/80) and chops limbs and severs (XX-481/3) or splits heads through armor (XX-474/5).
  - The very long, thrusting *fasganon* (VIII-88), ("pakana" in the tablets) may reach through a bodyshield (a reason for copper-covered bodyshields (Hector's 8-figured, XIII-804 Ajax's tower VII-222/3).
  - The short weapon of light troops in frescoes: *Xiphos* (Y-284) ("kisiphe" in the tablets).



# Weaponry-IV: Panoply



- ▶ Helmet MIGHT be included in the basic kit in the Epics (XIII-714/5); IS included in the frescoes.
- ▶ The armor of nobles is plate bronze or copper,
- ▶ The "copper tunic" (XIII-439) of one elder Trojan implies scaled panoply being rare and obsolete.
- ▶ Greeks typically use greaves in frescoes and in epics (see XI-17: "well-made", "white").
- ▶ Trojans are seldom mentioned to using greaves.





# Medical corps

- ▶ Greeks: medical Corps, with two asclepiad brothers (IV-193), the surgeon Machaon and the Internist Podaleirios (XI-832/5).
- ▶ Some warriors (Achilles, Patroclus, Sthenelus etc) offer first aids, wound care (XI-830) and analgesic medication.
- ▶ Nothing divine or miraculous.
- ▶ Trojans: The Gods, in their temples or *ad hoc* offer miraculous healing (XVI-528/9, V-446/8)- healthcare at the hands of the priesthood, mostly of Apollo.
- ▶ A Trojan noble or follower can bandage a wound to stop the bleeding or deterioration (XIII-599/600) but no more.

# Experimental archaeology & history

Applicability in reenactment or simulation has absolute **positive** diagnostic power.

**Not** negative, **nor** indicative. The ancients may have done it otherwise and knew better....

Which verification procedure? Two available

- ▶ i) Sweating it out (imagination, open-mindedness and motivated people are needed)
- ▶ ii) Hammer/bake it out (more elaborate skills, schemes and equipment are needed).

# Experimental archaeology & history

## Sweating it out



- ▶ Deployment of body-shields with extra-long lances (*egxeiae*). Close phalanx, vulnerable to chariotry onslaught, open deployment to skirmishers. Teamwork of lances, individual protection?
- ▶ The follow of the fighter to his spearcast, to retrieve the weapon (in XIII-512 Idomeneus can't do it) or switch to sidearm. Practice reminiscent of current air combat.
- ▶ A kind of martial art with weapons is implied in Achilles' rampage (XX-455/89) and in Tudeus killing all alone a unit (50 men) ambushing him (IV-393).
- ▶ The usual choice is the sword. Though, swords often break (III-363). Flimsy thrusting *fasganon* implied instead of the heavy *aor*? During the middle ages the main kind of straight sword was triangular and long but still excellent cutting weapon. Why *fasganon* can't be?



# Experimental archaeology & history

## Hammering it out

- ▶ Are the greaves copper/bronze? The Greeks are mentioned as "having white greaves" or as having "nice greaves". But the white argive greave, is it painted? What is the metal of Achilles' ones, staving off a direct spear-cast XXI-558/60)? Tin (XXI-558) does not convince. Is there any other, white metal?
- ▶ Mycenaean weaponry of copper or of bronze/brass? Copper is not durable, but this is for pure copper. Greek ore copper's admixtures provide readily a rather robust product. Chemical analyses of archeological findings may show tin was not needed for military-grade but for utensils to forestall poisoning.
- ▶ The restoration of the shield of Achilles. Copper, tin and gold used in 2/2/1 ratio (XX-270/2). In what order? Where was Gold? The layers of copper and tin where successive, palindromes or tandem?
- ▶ Is the 2/2/1 ratio by chance defining some alloy, instead of describing successive layers? This explains why no layer order is mentioned-and agrees with analysis of black parts of bronze weapons.