BRONZE AGE SWORDS
&
THEIR USE

A BRIEF, AMATEUR, INTRODUCTION TO SOME BA SWORDS – A SCOTTISH/BORDERS FOCUS.
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SOME EARLY EASTERN EUROPEAN/AGEAN SWORDS

13. Bronze sword from Hajdusamson, Hungary 1600 BCE
14. Pair of Mycenaean Bronze swords with gilded handles 16th Century BCE, a similar sword was illustrated at Medinet Habu in 1200 BCE
15. Mycenaean Sword with Gold Handle 1600 BCE, Composite illustration of blade and handle from Pylos created in Photoshop.
16. Short Bronze Sword, Luristan Culture of North Western Iran 15th Century BCE.
17. Persian Sword with double pommel handle 900 BCE.
18. Amlash Culture Iran Bronze Sword 13th Century BCE
19. Sardinian Sword blade with Mycenaean Handle Circa 1600 BCE
N.B. Dates of some may be questionable due to doubts regarding the conventional chronology.
FURTHER BA SWORDS.
1) V-Butted Leaf Blade – n.b. central ridge and bronze pommel – atypical Wilburton-Wallington, or possibly Ewart Park? (1000 – 700 BC)
2) ‘Wessex’ rapier (Type 1)? Around 1400 BC at the transition time from dirks (<35 cm) to rapiers (>35 cm)
3) Egyptian Khopesh.
FROM THE AEGEAN.
1) Ci: used from around 1400 BC but a long lasting style of weapon that persisted to 1100 BC at least (N.B. Merneptah stele) 74 cm to >100 cm long. Sometimes used with a dagger (possibly type B short sword 45 cm long).
2) G type ‘Horn Sword’ found in Mycenae Acropolis 45 cm long.
ROUGH OUTLINE OF RELEVANT PERIODS.

- **EARLY BRONZE AGE:**
  - 2100 – 1900 Late Beaker, knives, early tanged spears. Bush Barrow, Overton.
  - 1900 – 1500 Bedd Branwen period. (1600 – 1300 approx. BA halberds.)

- **MIDDLE BRONZE AGE:**
  - 1300 – 1200 Knighton Heath period rapiers, large variety of socketed spearheads. First addition of lead to tin bronze.

- **LATE BRONZE AGE:**
  - 1000 – 900 BC Late Urnfield and also later Hallstatt phases, socketed axes, palstaves remain in use. Atlantic culture with Carps Tongue (continues after 900 BC)
  - 900/800 – 700 BC Ewart Park and Llyn Fawr phases. Ewart Park type swords become widespread followed by Guendlingen and possibly some Mindleheim types. Toward the latter part of this period Witham and La Tene types become common on the continent.
  - 700 BC and beyond – Witham type forms retained but Naue II profile becomes most common as swords are increasingly made in iron during the La Tene and onwards. N.B. gladius-sized (and even smaller) British short swords alongside the longswords (from 26 inches (spatha sized) to over 30 inches). Also atypical swords such as the Iberian falcata (n.b. lineage from kopis?) are developed.
RAPIERS – THREE EXAMPLES NEIL BURRIDGE VIA JUROEN ZUIDERWIJCK
In Scotland from >1400 BC and possibly up to 1000 BC? Up to and overlapping with Ewart Park style swords (around 800 BC)?
N.B. Type IV – Rosnoen influence? Drumcoltran Hoard & Glentrool Hoard – amongst others, some blades type IV and one similar to Lissane rapier. Does this imply some increased trade with Ireland.
SIX SWORDS – FROM VISIT TO GLASGOW MUSEUMS DEPOSITORY. THE RAPIERS LOOK TO BE TYPE IV WITH A THICK CENTRAL RIDGE. BELOW: GUENDLINGEN ‘SECOND’? AND TWO EWART PARKS.
URNFIELD (60 CM OVERALL)
HEMIGKOFEN AND ERBENHEIM LEADING TO BALLINTOBER (connect to English Clewer and Chelsea types also possible Rosnoen influence re: hilting) AND LIMEHOUSE TYPE N.B. RIVER TAY/MUGDRUM VARIANT (77.3 CM LONG, Reproduction below 75 cm).
N.B. APPARENT TRADE ROUTES IBERIA/FRANCE – THAMES – IRELAND.
Some trade up the East Coast at least as far as the River Tay but some evidence of communication to the far north of Scotland.
N.B. Evidence of balancing pommels extremely rare up to the Mediaeval period.
POST PENARD
WILBURTON-WALLINGTON (1000 BC TO 800 BC APPROXIMATELY?) No Ballintober and perhaps only one or two Wilburton-Wallington type swords in Scotland. Does this indicate a period of relative isolation for Scotland up to the Ewart Park period?
EWART PARK (AFTER 900/800 BC TO REPLACEMENT BY IRON WEAPONS?) Fairly common in Scotland – Minch type, tend to be larger and overall heavier/more robust in structure than their English counterparts. (N.B. Alnwick collection.) (Note U and V butting in the two swords.)
IN THE SOUTH – ‘ATLANTIC’
CARPS TONGUE – ANASTASIE SWORD (76 cm overall’ FRANCE) AND WOODEN HILTED CARPS TONGUE.
N.B. Mainly in Thames valley region. (Late Penard to Ewart Park period, up to replacement by iron weapons during the La Tene period?)
LATE HALLSTATT – LA TENE.
WITHAM – IMPORTS, ONLY TWO IN BRITAIN, ONE OF THESE IS AT ALNWICK CASTLE.
MINDLEHEIM – HALLSTATT C 85 CM ‘CAVALRY SWORD’
AFTER 800 BC?
GUENGLINGEN – THE MOST BEAUTIFUL AND AGILE (EUROPEAN) BA BLADE?
(Possibly originating in Ireland? – Ian Colquhoun personal communication.) HALLSTATT C – contemporary of the MINDLEHEIM.

QUITE WIDESPREAD IN BRITAIN.
THE SHAPE OF THINGS TO COME?
NAUE II – A SWORD PATTERN THAT WAS TO LAST LARGELY UNCHANGED FROM AROUND 1200/1100 BC TO THE HIGHLAND BROADSWORD.

FROM CENTRAL EUROPE (DANUBE) TO THE EAST AND GRADUALLY TO THE WEST. (Note similarities to the Spatha and Anglo-Saxon blade forms.)
N.B. AMBLESIDE HOARD.
Type IV Rapier, Rosnoen type swords, n.b. bronze hilts. Long socketed basal loop spear. N.B. missing ‘ferrule’ (butt spike?) and palstave axe head. PENARD, LBA 1 after Mathews 2011.
SOME DISCUSSION POINTS RE: BA COMBAT.

- Neolithic to Early Bronze Age – Beaker to Tumulus – Amesbury Archer, massed archery (flint arrow heads), clubs, axes and knives. Some tanged spears/flint spears? The ‘war axe’, copper then bronze.
- Rise of a Warrior Elite? The ‘Halberd’ – Tumulus. Focus on individualised ‘heroic’ combat, a long ‘club’ with a blade at right angles? N.B. edge damage on halberd blades.
- The Spear, the *dirk*, the ‘war axe’/palstave and the buckler.
- Spearmen and elite warriors – Type I to III rapiers (Glentrool) and the first of the bronze bucklers. The premier weapon being the spear. (PENARD?) ‘Swarm’ tactics and open combat N.B. Drews.
- The influence of the Urnfield culture and the ‘Atlantic’ region. Not so much in Scotland?
- N.B. Sword edge damage indicating rarity of sword on sword contact damage (some suggestive of deflection) and also other weapons (buckler rims and palstaves?)
Some Discussion Points re: BA Combat Continued

• Why the (apparent) gap? (N.B. ‘Atlantic’ – Carps Tongue?)
• Limehouse – Mugdrum variant. (Few and far between.) The eclipse of the bronze buckler? (N.B. long history of organic bucklers.)
• Wilburton-Wallington – even rarer.
• Ewart Park – bigger and heavier in Scotland, Minch style.
• The Guendlingen – from Hallstatt to La Tene, widespread across Britain.
• Witham type and increasing move to Naue II type blade styles (La Tene) that remain more or less stylistically unchanged through the Iron Age to the 11th Century AD!
• What was the effect of no quillons (and weighted/balancing pommels being extremely rare) on combat styles – n.b. the use of the buckler (Probably not similar to MS I 33?) and the eventual rise of the shield?
• From open combat and swarm tactics to mass combat and the ‘linden shield wall’ at the very end of the Bronze Age? (N.B. the Hjortspring Boat) An Aegean/Doric influence?
Combat Focus: 1200 – 800 BC
Northumberland and the Scottish Borders.

- A range of weapons with the primary weapon being the spear in one or two hands (N.B. Yetholm Spear) and palstaves.
- Sword used with a light ‘shield’ used as a buckler and very dynamically, at very acute angles to the attack for deflection in defence and striking with the edge in offence (N.B. Cuchulainn panoply).
- Extended target has to be in range for the minimum possible time suggesting a punch-like attack and a fighting stance similar to a boxer. (The arm movement being slightly modified from Type IV ‘rapier’ to Ewart Park and Guendlingen.)
- Sword edge damage suggests that swords were rarely used to parry and that ‘opposition’ would normally be avoided. (Personal discussions with Trevor Cowie (Curator of the BA NMS) and Ian Colquhoun (Expert on British and Irish BA swords).)
- Defence primarily via ‘avoidance’, deflection (pommel first action) if the sword had to be used defensively, probably not transportation. (N.B. body-mechanics and ‘the materiality of gesture’.)
- Possibility of ‘organic’ armour (N.B. Cuchulainn Panoply) – n.b re: ‘hacking’.
A methodology for reconstructing Pre-Historic Bronze Age Combat?

- BAYESIAN type methodology.
- Implications of the best objective evidence.
- Trained weapons use/handling via experienced Western Martial Artists who have a high level of theoretical knowledge and practical skills and who have spent months working with the weaponry. These would form the experimental group.
- Add in a ‘naïve’ control group.
- Results compared with the archaeological evidence; e.g. edge damage.
- Ongoing review via a ‘local’ steering group.
- Practical application, training and combat, peer reviewed via an expert panel provided through the British Federation for Historical Swordsmanship.
Informed Assumptions.

- Human body mechanics are universal and constant over time.
- Human psychology is rooted in our ‘animal nature’ and thus is fundamentally universal and constant over time, modified via the other factors in this list.
- ‘Facework’, relating to ‘self-concept’ (n.b. ‘pride’ and ‘shame’) and social roles within specific hierarchies and also interaction rituals (Goffman) are universal within human societies and differ only in detail.
- The ‘environment’, particularly the psycho-social environment, is ‘embodied’ affecting the individual physiologically to the cellular level.
- When people want to improve at an activity they formalise the training in that activity via the skill acquisition process (direction, coaching, support and delegation). This includes ‘mindfulness’ as a skill, developing ‘muscle memory’ via neuromuscular adaptation through practice to reflexivity. (N.B. Iliad)
- The material environment influences the details of movement. This includes footwear, other clothing – inclusive of ‘armour’ in a combat context – and the nature of the strengths and weaknesses of the structural properties of the weapons. In archaeology this is referred to as ‘the materiality of gesture’.
- The formal skills training is influenced by all the factors listed above.
- The ‘low chronology’ outlined by James (and Rohl etc.) eliminates the morphological ‘lag’ between ‘east’ and ‘west’ and suggests ‘west’ to ‘east’ influences (n.b. the Penard period Yetholm Shield pre-dating Troy!).
Underpinning Concepts.

- **Convergent Evolution** – if it looks just like a partisan and handles just like a partisan it was probably used just like a partisan.

- **The ‘Inherent logic’ of the weapon/‘INTUITION’** – Metallurgy, morphology, hilting/shafting, handling characteristics, ‘in the hands of the skilled user’ relating to Kuhn’s concept of informed ‘intuition’, N.B. appropriate non-WMA analogues (e.g. Shastar Vidiya?).

- **Physical evidence** – edge-damage etc. N.B. also application of ‘muscle specificity’ to skeletal remains (as done with the Mary Rose archers).

- **Materiality of gesture** – appropriate footwear and clothing etc.

- **Trained warriors** – pre-historic Bronze Age warriors were trained up to ‘expert’ levels for combat with the weapons of the time.

- **Tradition** – historic texts are built upon tradition. From the late Neolithic through the Bronze Age to the Iron Age society seems to have been conservative. Generally military/warrior elites are particularly conservative. Textual sources from the late BA and the IA, such as the Iliad in the eastern Mediterranean and the Tain in the ‘Atlantic’ European west, may have relevance to BA warfare and individual combat.
SOME REFERENCES.

• BRONZE AGE CRAFT (Neil Burridge) AND LINKS. Useful website with articles. (The world’s premier producer of replica BA weaponry.)
• Bronze Age Living in the Netherlands Jeroen Zuiderwijk. (website with lots of pictures of reproductions.)
• Bronze Age Warfare – Osgood, Monks and Toms.
• Ancient Warfare – Carmen and Harding.
• Warfare in Prehistoric Britain – Heath.
• Bronze Age Military Equipment – Howard.
• The End of the Bronze Age – Drews.
• Bronze Age Warfare: Manufacture and Use of Weaponry – Uckelmann and Modlinger (Eds).
• The Function of Bronze Age Shields – Uckelmann.
• A weapon of choice – experiments with a replica Irish Early Bronze Age Halberd – O’Flaherty.
• Scottish Middle Bronze Age Metalwork – Coles
• Middle Bronze Age dirks and rapiers from Scotland: some finds old and new – O’Conner & Cowie.
• Daggers, Dirks and Rapiers of the Scottish Middle Bronze Age – Trump.
• Scottish Late Bronze Age Axes and Swords – Henderson.
• Scottish Late Bronze Age Metalwork: Typology, Distribution and Chronology – Coles.
• Developments of cognitive capacities for violence in Bronze Age Ireland – Molloy.
• The Cutting Edge – Molloy (Ed). (N.B. his website.)
• Martial Arts and Materiality: a combat archaeology perspective on Aegean swords of the fifteenth and fourteenth centuries BC – Molloy.
• BM Occasional Paper No.39 The Ambleside Hoard A Discovery in the Royal Collections - Needham
• The Tale of the Sword – Swords and swordfighters in Bronze Age Europe – Kristiansen.
• The development of warrior identities in the European Bronze Age – Harding.
• Introduction to British Prehistory – Megaw & Simpson.
• Bronze Age Greek Warrior 1600-1100 BC – D’Amato & Salimbeti.