

Eneolithic Battle Axe Culture Grave from the Czech Republic - Bohemian Burial Rites, and European BAC Group Gender Symbol Connectivity



Cajus G Diedrich*

PaleoLogic, Private Research Institute, Petra Bezruce 96, CZ-26751 Zdice, Czech Republic

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***Corresponding author:** Cajus G Diedrich, PaleoLogic, Private Research Institute, Petra Bezruce 96, CZ-26751 Zdice, Czech Republic

Abstract

The intrusion of the ancestral early Eneolithic Battle Axe Culture (=BAC), so-called "Yamnaya Culture" population around 5.100 BP from the West-Asian northern Black Sea region steppe with small horse riding battle axe or bowmen warriors caused a first large-scaled Central European war period. It ended in new heterogenic local group developments of Shepard's life style and settlement pattern in smaller cabins and inventory mix. In the BAC maximum extension with oldest ages in the Mediterranean Adriatic of Croatia (5.226 BP), West Black Sea Romania-Hungaria (5.094-5.059 BP), to Scandinavian North-East Sea coasts (4.880 BP) ended in Central Europe such as Bohemia 3.870 BP isochronously to the early Bell Beaker Culture (BBC) rise. Similar BAC pottery forms of amphora, beakers and jars and herein distinguished their European-wide gender symbols decoration connect a strongly gender separating way of life, even after death. The strictly gender related different single grave burial rites have only few local variations (northern-southern hill - central ringed tombs or with internal constructions - eastern pit graves).

Battle drill-hole stone hammer axes from men graves are group related different and important for presenting a demographic map of the BAC groups and understanding of their trade and battles. To those weapons a peak of cranial trauma in the Neolithic and several trepanation centres correlate to. Reviewing the main phase of the BAC of Bohemia (mainly Middle BAC 4.880-3.870 BP) burial practices with newer tomb examples including herein a new early BAC grave discovery west of Prague, the orientation of corpses was always in lateral sitting position both facing south, but strictly gender related opposite headed: man, to West, woman to East. The typical single grave types (98.8%) of the early Baden to Bohemian Groups (Early to Late BAC) are known for different aged children, men, "gay or transgender", and women. A typical Bohemian Group man burial includes a faceted Saale, Baden or Bohemian Group battle axe (warrior) proving group territory changes within the BAC times. Other gifts are a working adze (worker), a regular blade (shaving blade), sometimes arrow tips and arm protecting plates (bowman), such as generally two typical ceramics: a beaker (for drinking) and larger amphora (for beverage storage).

Women burials also include the large amphora and cups or jugs, but also in early BAC times, southern originating ovoid jars, or another daily houseware. They mostly differ in presence of jewelry such as chert or flintstone daily working tools: pointed blades or scrapers. Especially in the Middle to Late BAC, pottery was decorated strictly gender - related either by male or female symbols, solitary or with both combined on the same ware. Similar gender symbols are present already in the Bandkeramik (LBK) and are found in many line and triangle variants over 4.600 years long reaching from Early Neolithic (6.800 BP) to Pre-Roman Iron Age (2.800 BP) times. The so-called "Strichbuendel", "Branch" such as "Fish bone" décors are interpreted as male symbol. Those developed to abstracted forms: simple diagonal and finally parallel vertical lines (four, five, or many) or their combined variants. The typical feminine triangle symbol has been found few different already in the Early-Middle Neolithic, and is the most connective BAC symbol for all European BAC groups and even later. The parallel diagonal line or cord band such as sometimes dotted line filled triangle was finally abstracted in the late phase to an open V or multiple v-zigzag line. These symbols were further used over 2.900 years over the Late Eneolithic BBC to Late Bronze Age feminine figurines and on some of their pottery all over Central Europe.

Keywords: Eneolithic; Battle Axe Culture (BAC) groups; 5.100-3.850 BP; Gender related burial arrangement and gift types; Review Bohemia (Czech Republic); Amphorae and battle axe types; European-wide gender man-woman symbols; Oetzi's masculine tattoo symbols

Introduction

Early Eneolithic intruders and beginning of the BAC

The Central European early Eneolithic battle period was obviously caused by the intrusion 5.100-4.900 BP of the ancestral Battle Axe Culture (= BAC [1]) of the Ukrainian-Romanian Black

Sea region "Yamnaya Culture" [2-6] (= "Pit grave Culture", "Ochre Culture" [4]). The Yamnaya DNA is found in high percentage within the northern BAC of Middle German and Bohemia BAC groups, but also in southern Europe [6]. The intruders came from the West-Asian steppe [2-6] rapidly by steppe horses, most

probably the small Mongolian Przewalski horse [7]. The newly suggested BAC expansion from the East over North-Europe [6] is one of a parallel and older dated southern Balkan-Mediterranean S-N migratory model presented herein (Figure 1).

In this demographic map, the Hvar Group [8,9] is included with oldest ages 5.226 BP [9] similar such as the early Yamnaya reaching back 5.300 BP in the Ukrainian Pontic region [2]. Yamnaya people are recently described also from the Lower Danube region (Romania, Moldavia, Bulgaria, and Serbia) [4] reaching 5.094 BP, which age continued to correlate with the Hvar Group [8-10] along the Mediterranean coast of Dalmatia to Istria [9]. Pottery decorative elements from the Yamnaya [2-5] and the Mediterranean Dalmatian coast Hvar Group [8,9] compiled in this article, will connect those groups now, also to other BAC groups. Possibly those are even synonymous in their early phases supporting an older 5.300-5.200 BP aged southern West migration of the earliest BAC people along the Black Sea to Dalmatian Adriatic Ocean coasts to Hungary-Slovenia from two sides (Figure 1).

The BAC riding warriors of the Yamnaya were equipped with bows, first copper, but also copper axe imitating shaft-hole stone battle axes [2-5]. Those group related perfect polished different shaped drill-hole stone hammer axes became the most famous and characteristic weapon of the Early Eneolithic "Battle Axe Culture" all over Central Europe [1-5,10-24]. The battle of the BAC with those stone axes caused the skull trauma appearance peak in Neolithic prehistory of Europe, which detail study within the Saale Group let think about trepanation centers [25] (Figure

1). Cranial hit damage trauma was tried to surge by brain case openings and are found in all stages of the healing process [25]. In contrast to the brain case damaging hammer axes, the working adzes or small jadeite adzes remained very similar in their forms within all BAC groups [1-5,10-24].

BAC groups had a similar life style as shepherds and settlement pattern with smaller cabin house constructions, such as Mediterranean *Spondylus* rodel buttons or other shell bead such as dog teeth necklaces, or first copper spiral jewellery and first copper adzes and battle axes or decorative jadeite adzes [1-47]. Based on literature review, battle axes and amphora (Figure 1) and in this contribution added gender symbols as pottery decoration are the connective BAC, but also relevant distinctive group elements.

BAC burials in North (Denmark), Central (Germany, Czech Republic) and South (Hungary, Croatia) and East (Poland, Bulgaria, Romania, Ukraine) Europe are represented in 98,8 % by single inhumation burials ("Single Grave Culture") [1-6, 10, 11-23, 28, 31-36, 41, 42] (Figure 1). In general, there are three different main types of single grave forms changing from the North to the South which in all cases sometimes have internal stone or wooden constructions (Figure 1). The northern groups buried under hills, which mostly were built up by stones, sand or soil. Those hill graves are typical all-over northern Germany, Denmark or Scandinavia [1,11-14]. In Central Germany, those are stone-covered and mainly ringed mound graves, where in the centre only sometimes wooden or stone house imitate constructions are found [15, 44, 46].



Figure 1: BAC European single grave burial forms, trepanation centers, and selected connecting important tomb gifts: amphora types and battle stone hammer axe forms. Exchanges between the South Hvar and Central European Bohemian groups are supported by presence of traded West-Bohemian hammer axes (selected redrawn axes, amphora and C14 data composed from [1-51]).

Local Battle Axe Culture groups

After first BAC mix with local populations in the Balkan, Lower Danube and West Black Sea [4] such as Dalmatian coast regions (Figure 1), the “Yamnaya-Hvar” people developed further in a second younger “classical” phase (Middle BAC: 4.880-4.580 [4]) such as many other groups (Figure 1) [4,48-52]. Europe split at that time into several smaller territories ranging from the southern E-Italian-Croatian Mediterranean Adriatic and Ukrainian-Romanian Black Sea coasts to the northern Scandinavian East and North Sea coasts [cf. 1-52] (Figure 1). BAC groups were therefore first locally named in Scandinavia, Baltic Denmark and northern Germany to Latvia as “Single Grave Culture” (German: Einzelgrab-Kultur) or “Battle Axe Culture” (German: Streitaxt-Kultur) [1,11-14]. The BAC was also called after the cord band decoration on pottery “Corded Ware Culture” = CWC (German: “Schnurkeramik-Kultur”) first in Middle Germany, which cord bands even reach to the Ukrainian Pontic northern Black Sea and Balkan such as to Hungary regions [2-5, 22, 23]. The northern “Corded Ware Culture”, “Single Grave Culture”, southern “Baden Culture”, “Hvar Culture” or “Yamnaya Culture”, etc., are in most regions distinguished further into early (mixing with local groups), classical (typical BAC inventory), and final phases (relation to Bell Beaker Culture development) [1-52]. Several former “culture” names of the BAC are used herein therefore as “group” names (e.g.: Hvar Culture [8] = Hvar Group), whereas the Yamnaya are also included herein. The BAC is seen in wider N-S extension as suggested before [1,6,8,11], connecting the Mediterranean Sea Adriatic eastern up to the North-East Sea coasts groups (Figure 1).

BAC should be used instead of “CWC”, which latter comprises only one pottery decoration line type [cf. 15], that is in other regions made of dotted or simple lines [4,16,30], or in their combinations (Figure 1). The main differences in BAC ceramic decorations are found between the North, Central and South European regions, whereas those overlap to each other’s from the North to the South. In North-Central Europe, the cord band decoration is not the only line type and often combined with simple line ornaments which latter persisted even longer [cf. 1, 4, 11-17, 30, 41, 42]. The cord band decoration between the Swiss and Yamnaya groups all over northern Central Europe is rare in the South European Baden and absent in the Hvar Group ware [4,5,8-10,26,30]. BAC pottery is found decorated with crest decors or thick-line or depression such as knob decoration in the South to Central Baden Group (Figure 1) [19-23]. Early Hvar and Yamnaya lack both large henkel amphora (Figure 1) which had instead bowl and ovoid-like ware or large vessels without henkel [2-5, 8-10-26]. In all BAC phases and groups, the gender related pottery decoration, its variants and style change are presented in this contribution.

Czech Republic BAC groups and new Grave

The Czech Republic BAC “Kultura se šňůrovou keramikou” or CWC [16-18] or “Bohemian and Moravian Schnurkeramik”

(herein BAC Bohemian and Moravian groups, Figure 1 were reviewed in comparison to the Middle German “CWC” long time ago [17]. Further descriptions of partly absolute dated pit graves or small house cabins at different sites in and around Prague followed the past decades [18,27-29,31,32,34,37-39,41,42]. Especially one tomb with Baden and Bohemian group pottery gift mixture was 2011 in the media, because of its interpretation as “transgender burial” [43]. Herein, a new BAC single grave with internal wooden construction Baden Group style [19-23] west of Prague is added (Figures 2-5). An overview of the newer BAC pit graves of Bohemia is presented with most important examples (Figures 6-8). In Czech Republic Bohemia, the genetically, inventory or life style mix started similar as in other regions before 4.880 BP with the former latest Middle Neolithic “Rivnač” people which are included now into the older Baden Group, 5.500-4.880 BP, according to [22-23]. Typical crest band relief decoration is found in the developing still more similar Bohemian and Moravian early BAC. This Baden Group style disappeared somehow at the beginning of the Middle BAC maximum extension [cf. Vikletice, Klučové and Vliněvsi graveyards: 28,41,42]. The former decorative elements [e.g. Klučové: 41] and their mix with new decoration styles [cf. Vliněvsi: 28] combine the southern-central European Baden and the northern Saale BAC groups (possibly also imported or traded ware [28,41]) before 4.880 BP, which split after in the classical BAC times. Some of the traded objects of the Bohemian early Baden into the Mediterranean Hvar group are green amphibolite battle axes, which were recently reported from the eastern Italian and Istrian Adriatic coast [24]. Bohemian BAC people instead imported from the South Hvar Group Mediterranean Ocean Spondylus shell rondels or from the North Baltic group amber buttons [24] and share similar pottery decorations in the Middle BAC mainly with adjacent northern groups [17,28,41,42] (Figure 1), but as presented herein also the typical BAC connective gender symbols which appear in all Central European groups.

Material and Methods

Field prospecting in January 2015 at the few known prehistoric settlement area west of Zdice, Central Bohemia, northwest Czech Republic (Figure 2A) [53,54], resulted in a variety of material from different Neolithic to Bronze Age periods: Early-Middle Neolithic Band- (LBK) to Stichbandkeramik (SBK), Late Neolithic Cham Group, Eneolithic Battle Axe (BAC) and Bell Beaker (BBC), Early to Middle Bronze Age, and Late Bronze Age Urnfield Knoviz Culture (URN). It is one of the few long-term used settlements in the Bohemian region and in Czech Republic.

A new BAC single grave reported herein is situated on the southern slope of a harder marlstone crest-like chain that is E-W oriented which is also the southern boundary of the multiple used settlement area west of Zdice (Figures 2A&2B). Those Palaeozoic marlstones built good platform-like settlement conditions. The loess-like soil was originally deposited on Palaeozoic marlstones during the Late Pleistocene all over the

region, which allowed farming. This prehistoric area is today situated about 6 meters above the nearby Stripinsky and Červery Potok streams. The gravel terraces along these streams indicate much closer connections in prehistoric times to the Neolithic to Bronze Age settlement.

The first 2015 discovered grave contents were a modern damaged tibia and humerus shaft lying on the freshly groomed field surface (Google Earth coordinates of the grave: Lat.: 49°54'9.93"N, Long.: 13°57'32.31"E). A one-day rescue excavation over 6 square meters uncovered already after removal of 30-35 cm modern turned sediment the grave level. The burial, which central pit and pit holes were dug by Neolithic not deeply into the marlstone rock, was found already plow scratched and half damaged, especially in its southwestern part (Figure 2B). The 5-10 cm thick black soil was sieved in 1 mm fraction. It contained smallest bone fragments and smallest shard pieces of the amphora, and the blade fragment. No prehistoric botanic remains or charcoal was obtained using additional floating sieving technique.

Most of the cranium, mandible and nearly the complete the thorax is missing, such as several other bones resulting of modern farming (Figures 2A,3). The tibiae and other damaged bones were replaced into the prepared grave surface for the photo documentation (Figure 2B). The completely compacted amphora was found behind in the northeastern deepest and best preserved grave area. The shards allowed refitting a nearly complete large amphora (Figures 2,4). A beaker was found more

incomplete in two larger fragments nearby the teeth and skull fragments in front of the arms (Figures 2,4). There, also a Nordic flintstone blade fragment of an originally larger regular blade was saved (Figures 2,4).

Results

Zdice Tomb Type

Three preserved post-hole pits are arranged at the corners of the shallow pit grave. All were dug about 5-10 cm or few deeper into the marlstone, which best preserved part is north-eastern (Figure 2B). The post-holes of an obvious former intern wooden construction are 2.5 meters in E-W distances and 2 m in N-S distances. No stone circles or stone cover was present. At Zdice, the skeleton surrounding post-hole pits must originate from a wooden "house-like-replica" construction, which is found always under hills (tumuli, mounds) [19,31,44]. Compared to the Central German or Hungarian to Swiss graves, similar toms have been described from Orlamünde near Jena which is a combined wooden stone ringed mound grave of 10 m in diameter [44]. In Czech Republic, there are no Zdice-like tombs reported for the BAC e.g. at Klučově, Vliněvsi, Prague graveyards or other sites [28,31,41,43]. Only an early BBC male burial was similar with four post-hole pits surrounding (chambered tomb) in Holubice of Central Bohemia [38]. Compared to the Baden burials [18-20], the Zdice grave has most affinities to this group concerning its internal construction-pit grave combination style. Vikletice, Klučově and Vliněvsi graveyards: 28,41,42].

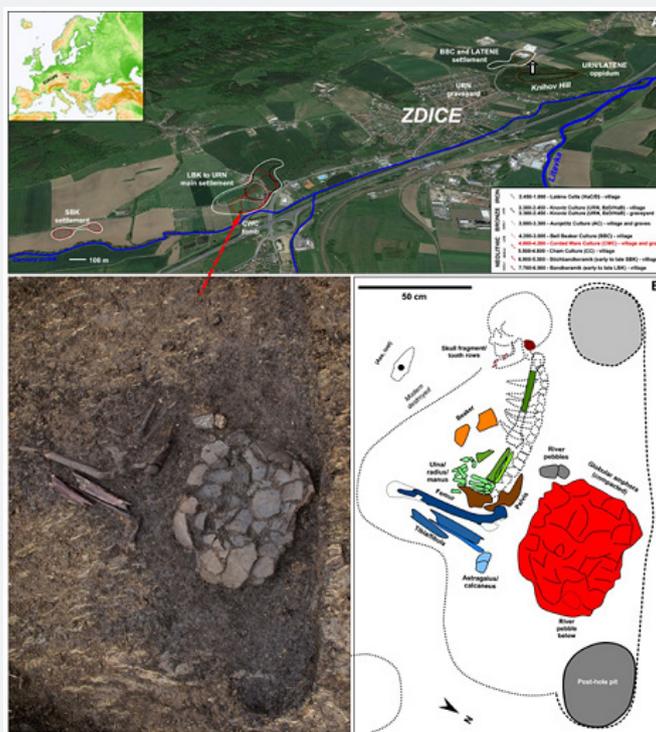


Figure 2: A. Prehistoric sites around Zdice. B. New Early Eneolithic BAC single grave site west of Zdice (new industrial area west of DAGO) (cf. Fig. 1).

Man skeleton

The buried man was placed in seated inhumation flexed position of the right side, west headed, looking south. It is identified indirectly by its burial gift situation as man. His

individual age and sex such as size can be determined based on the larger teeth and postcranial bone sizes (Table 1). The large width of the radius (34 mm), and proximal femur joint (52mm) let calculate according to [55] a larger male with body height of around 185 cm.

Table 1: Material of the 40-50 years old man skeleton with pathologies of the BAC tomb in Zdice, west of Prague, Central Bohemia (Czech Republic).

Bone type	Remarks
Skull: occipital fragment, and some small non-identified pieces, right maxillary dentition with P ⁴ -M ³ , left mandible dentition I ₃ -P ₃ and M ₁₋₃ . M ¹ length = 11mm, width =9.5mm; M ² length = 11.15mm, width =10.5mm; M ³ length = 10mm, width = 9 mm; M ₁ length = 11mm, width =10mm; M ₂ length = 11mm, width =10mm; M ₃ length = 8mm, width = 10mm	Medium tooth use, only M ² more used, M ³ non-used, similar in mandible
Right arm: humerus shaft, fragmented radius, complete scaphoid/lunatum/trapezoid/pisiform and incomplete mc II and III.	Humerus with mice bite damage proximally, metacarpalia all complete, metatarsi all proximally and distally damaged.
Left arm: scapula fragment, distal ulna and radius, incomplete scaphoid/lunatum/capitatum/hamatum/lunatum/trapezoideum, incomplete mcII-V and three incomplete phalanx I. Distal radius width = 34mm, length = 24mm	All bones incomplete, mcV with pathology.
Axial skeleton: pelvic fragments with right and left ilium acetabulum areas and anterior sacrum fragment.	Sacrum, vertebra centra with pathologies
Right leg: femur, without distal joint, tibia and fibula shaft. Proximal femur joint diameter = 52mm	All modern damaged.
Left leg: Tibia shaft and fibula shaft fragment	All modern damaged

Cranial material: The skull is preserved only by a possible parietal fragment. Non-fused sutures let exclude an elderly age [55]. Teeth are represented by two tooth rows of the upper right P4 to M3, and lower left I3-P3 and M1-3 (Figure 2). The molar teeth are worn on the buccal areas, most in the M2, lesser in M1, but unworn in M3 (Figure 2). Considering, that tooth wear of this culture was food depended and a result of softer meat-rich dominated diet [43], the few uses allow determining an age between 40-50 years. Such predominance of meat intake within mixed diet culminated in Eneolithic periods as confirmed by BBC from the Czech Hoštice site [44].

Postcranial skeleton: Whereas most of the diaphyses are damaged, except one proximal femur one, such as the distal radii and one undamaged at the ulna, those were fused completely with the shaft which indicate a full grown up in age over 20 years [55]. Non-fused are the sacral such as the cranial sutures, which let exclude an elderly age over 70 [55, 58]. The pelvic material is fragmentary, but the preserved ileum part is similar in shape of the inner lateral margin to those typical for men [55]. Also, the larger metrics of long bone joints (Table 1) fit to larger man compared to other Eneolithic graveyards [56].

Palaeopathology: Pathology is observed at the last two or three lumbar vertebrae (? L3-5) and the sacral lumbar vertebral articulation disc. All preserved surfaces have intervertebral osteochondrosis which is characterized herein according to [40,41] by the narrowing of the irregular disc contour associated with bulging and endplate erosions with reactive osteosclerosis (= deteriorated disc, chronic discopathy, osteochondrosis). Such similar lumbar osteochondrosis (at even the last four) is also reported e.g. for the Eneolithic Bell Beaker Culture

English “Stonehenge bowman” or “Scottish man” [45,46]. These pathological manifestations are often found in individuals over 45 years of age [45-48]. Normally, those appear later in elderly ages [45-48], but also can appear earlier due to hard work or intensive riding, which latter was suggested to be typical for Eneolithic BAC or BBC horse riding warriors [48].

Grave Gifts

Large two henkel Amphora: The only decoration of the new Zdice amphora is a sharp crest band beneath the bend and another parallel crest in the middle part, which latter connects the henkel (Figure 3.1). A similar complete newer find is figured from the large BAC Bohemian Group graveyard in Vliněves nearby the Elbe River [28], which as A16 classified amphora were mapped for several sites in the surrounding of Prague [17], to which the newer finds (after 1986) are added herein (Figure 5).

Beaker: It is in typical shape and parallel cord band decoration lines (Figures 3.2A-B). It has three bands (Figure 3.2C) being separated with 3 and 6 cm non-decorated zones. The upper band has four, the middle seven, and the lower six parallel lines. Such types with highly variable amounts and with, or without non-decorated zones, are typical for the early BAC and similar found in several northern-middle German, such as in Bohemian Czech man or boy graves [12-13,15-17,28,30,32,41,42].

Flintstone Blade: Only a fragment (proximal part, Figure 3.3) of a Nordic flintstone blade was found by sediment sieving. Typical of the Bohemian BAC, Middle German Nordic flintstone was imported for small tool production or traded as tools with the Middle German Group, which is supporting the exchange

knowledge between the Central German and Bohemian Czech BAC groups, expected via or along the Elbe River. Such regular blades are mainly found in man graves in northern-middle

Germany or Central Czech Republic, whereas in woman graves pointed blades dominate [12-13,15-17,28,30,32,41,42].

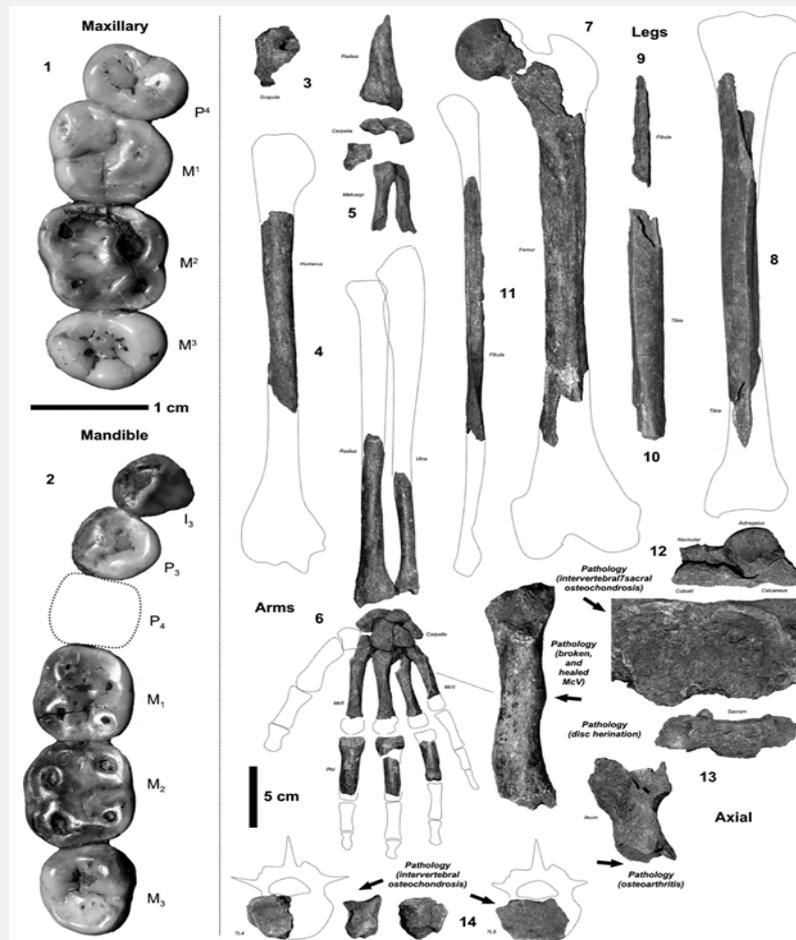


Figure 3: BAC Zdice burial site skeletal remains. Bones from a 45-50 years old man with few-worn teeth and its osteopathologies. 1. Right maxillary P4-M3, occlusal. 2. Left mandible I3-P3 and M1-3, occlusal. 3. Left scapula fragment, ventral. 4. Right humerus shaft, cranial. 5. Right distal arm elements: fragmented radius, complete scaphoid/lunatum/trapezoid/pisiforme and incomplete mc II and III, all cranial. 6. Left distal arm elements: distal ulna and radius, incomplete scaphoid/lunatum/capitatum/hamatum/lunatum/trapezoideum, incomplete mc II-V and three incomplete phalanx I, all cranial/dorsal. 7. Right femur, ventral. 8. Left tibia, cranial. 9. Left fibula shaft fragment, cranial. 10. Left tibia shaft, cranial. 11. Right fibula shaft, cranial. 12. Articulated incomplete astragalus/calcaneus (osteometric data in Tab. 1).

Discussion

Bohemian Group Graveyards

The south faced orientation in all male and north faced female graves may have a certain symbolic significance relating to the location of some cemeteries within the landscape. A common location of BAC cemeteries is therefore found on the edge of terraces or slopes, mostly orientated to the south-east which graves are arranged in small groups or on larger graveyards with up to 80 graves [cf. 28, 31, 41, 42]. The southern slope position was also chosen at the Zdice grave site (Figure 1).

Bohemian Group grave types

The Czech Bohemian Group graves are similar as in the Yamnaya [2-5] and in most cases also the Baden Group [19-

23], pit graves ("Pit Grave Culture"). Pit graves obviously were introduced from to the East, whereas internal constructions, such as found in Zdice, and within the Swiss to Baden Groups have megalithic grave type tradition relics of the West European Eneolithic [30] (Figure 1).

In Czech Republic, multiple burials within a single pit grave contain in nearly all cases only two humans: dual male-male/female-female, antipode man-woman, two children, or rarest three to four persons of a family: adult man, woman with one or two children [16-18, 28, 31-36, 41, 42] (Figure 7). At Slany, there is a single record for a combined multiple used inhumation (two men, one child) and crematoria (four burned adult persons) grave, which burn grave is one of the few examples in the BAC of Europe [32] (Figure 7). In Bohemia or Moravia, nearly

only simple pit graves with East BAC tradition are known [16-18,28,31-36,41,42]. Others have wooden construction signs in form of four grave corner placed post holes [31]. To the group of wooden intern house imitating constructions, the grave of Zdice belongs to, whereas it must have been in former times a mound grave, that was flattened by more recent farming.

In the South, along the Mediterranean Coast, the Croatian Hvar Group also constructed hill graves, there named tumulus

(e.g. Starigrad tumuli group on Hvar Island) [10]. Also, there, they were made of collected stones, similar as in North Europe [1-5]. The different use of stones or wood resulted primary from the presence of abundant easy surface collectable stone material: Northern Europe erratic block landscape and Southern Europe Dinarid limestone block landscape. In Central Europe, lack of abundant stone material obviously caused wooden constructions.

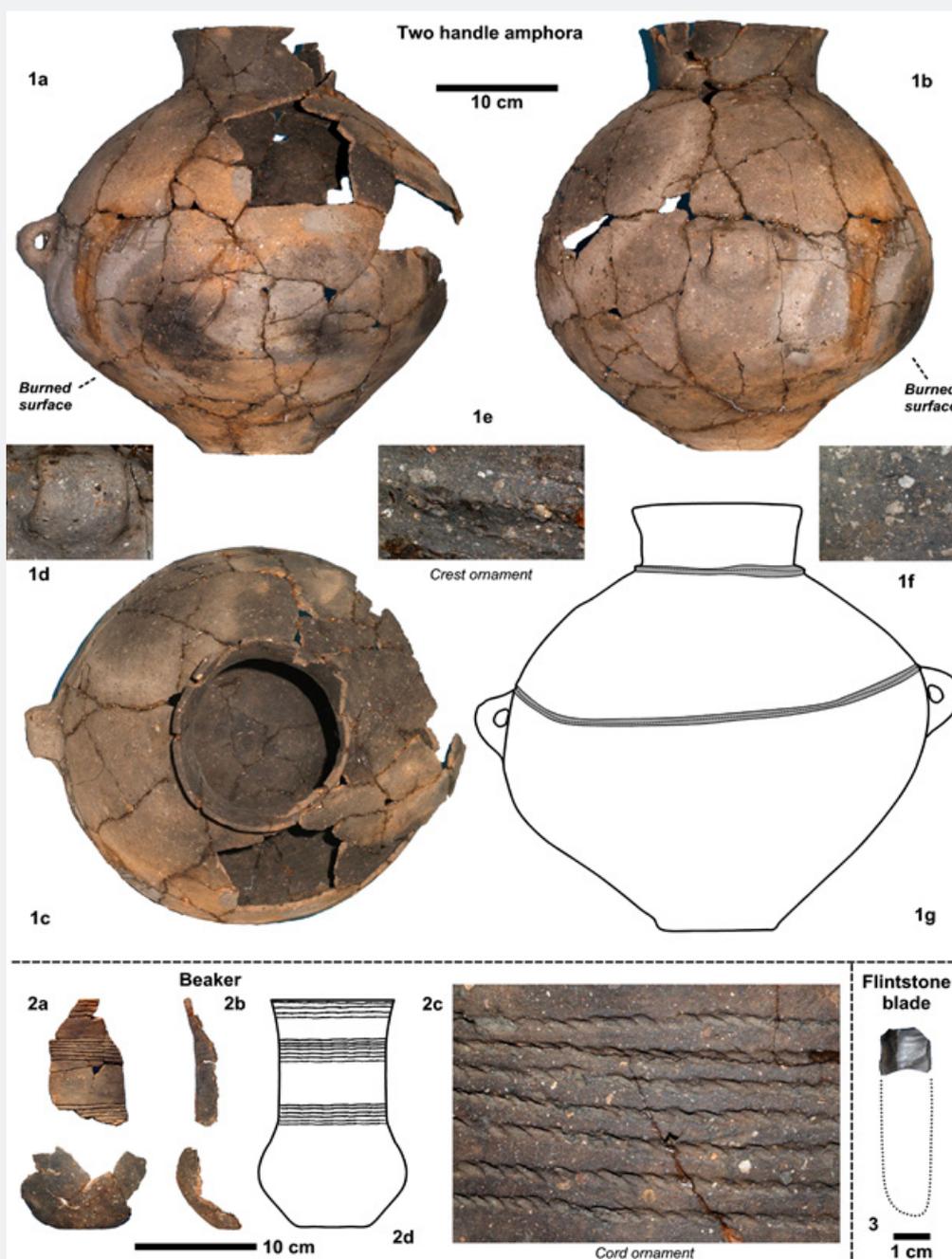


Figure 4: BAC Zdice burial site gifts. 1. Two henkel amphora, a-b. Lateral views, c. Dorsal view, d. Reconstruction of the A16 amphora type, e. Enlarged detail of the temper material. 2. Corded ware beaker fragment, a-b. Lateral views, c. Detail of corded impression rows in the middle row part, d. Reconstruction. 3. Nordic flintstone regular blade fragment (proximal part).

Typical BAC male burials

For male BAC burials, the typical orientation is to the West (Figures 5-7), with the body placed on the right side looking South [16-18,28,31-36,41,42], which is also present at the Zdice tomb (Figure 1). In man and woman, the arms are crossed different mostly over the sternal area, which is also found at the Zdice skeleton (Figure 1B). Large amphorae appear typically in ceramic gifted male graves, where additionally cord band decorated beakers are the second pottery [16-18,28,31-36,41,42]. Therefore, mostly only two ceramics are found in BAC man graves. This assemblage of a large amphora and cord band decorated beaker in the Zdice tomb supports with the body orientation and osteological implications a typical man grave (Figures 2-4). Especially the drilled battle-axes in man or mace heads in boy graves seem to reflect the social status of a warrior [16-18,28,31-36,41,42]. Flintstone tools are generally regular blades. A man received for its afterlife a set of: beverage amphora, drinking beaker, battle-axe or working adze, in few

cases bow and arrows such as arm protecting plates, such as barb shaving flintstone blade (Figure 7).

Typical BAC Female Burials

BAC female burials are usually placed on the left side, orientated by the head to the East also facing to the South [16-18,28,31-36,41,42] (Figures 4-6). The pottery assemblage commonly found in women burials include ovoid pots and a single large amphora, such as smaller or daily ware [16-18,28,31-36,41,42] (Figure 6). Most recent excavated female graves in and around Prague contained the BAC female jewellery: dog teeth or shell bead necklaces, *Spondylus* shell rondels, and copper spirals [28, 39, 41-43]. Flintstone tools are commonly pointed blades, such as rarely scrapers [16-18,28,31-36,41,42]. A woman received for its afterlife a set of: beverage amphora, drinking cup, ovoid jar, and other daily ware, jewellery, and a pointed flintstone-chert blade or scrapers (Figure 7) [16-18,28,31-36,40-42].

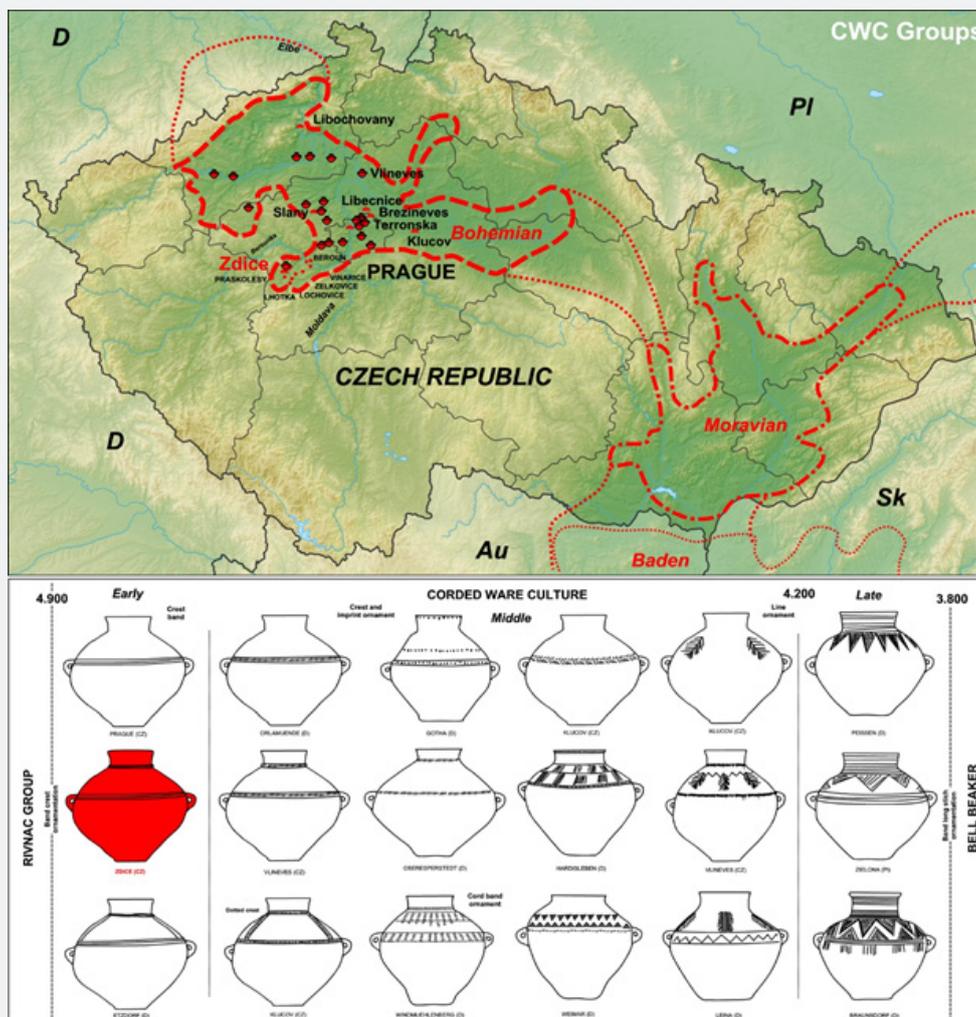


Figure 5: BAC large two henkel amphora types and possible chronological style change from crest band-cord line over male-female gender symbol and line styles within (composed sites and amphora from [7-9, 17-19, 23-33, 35, 41, 43, 44]) including herein discussed new burial sites in the surrounding of Prague, Central Bohemia (Czech Republic).

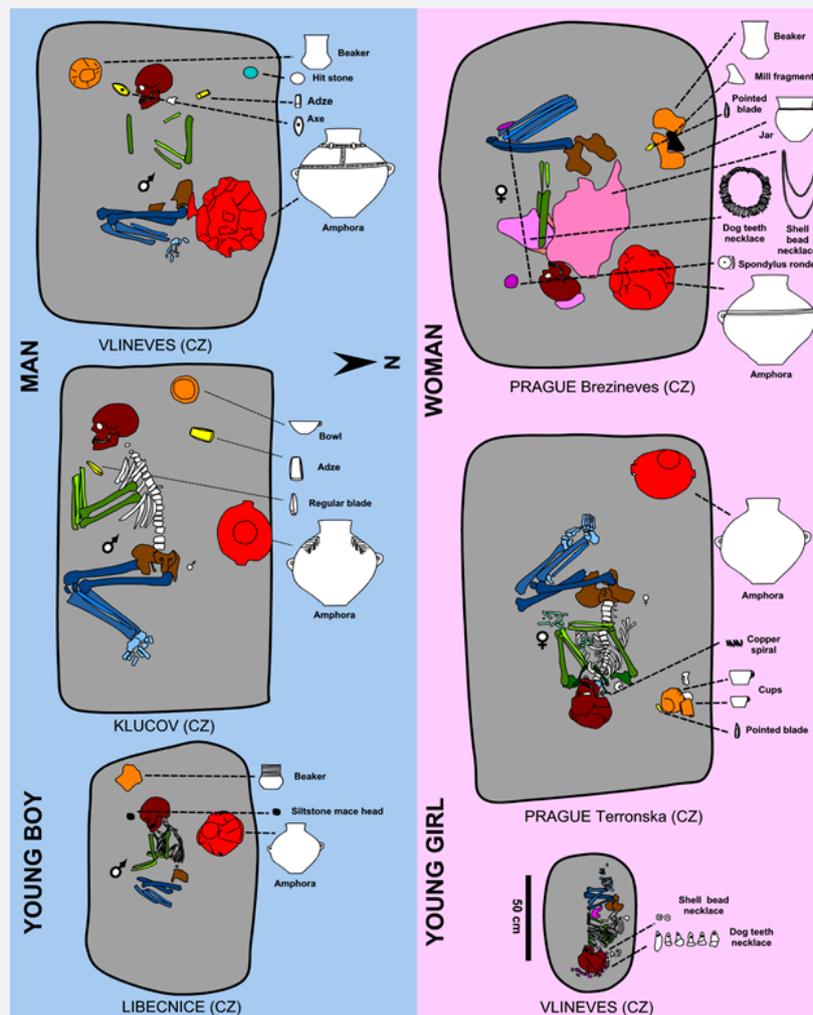


Figure 6: BAC typical male and female burial arrangements and gifts from grave sites of the Bohemian Group, central Czech Republic (graves and gifts redrawn from [17, 18, 23-25, 27, 29, 31, 32, 35]).

Double Parallel or Antipode inhumation adult, Children and Crematoria graves

In most cases of double burials, two adults were placed in case of similar gender parallel with similar head orientation (Figure 7). Such a double grave of man-man is present at the combined inhumation-crematoria grave of Slany (Figure 7) [32]. The position in the woman-woman grave of Vliněves is an exception and not full antipode but mirror symmetric placed burial (Figure 7), which bodies were anyway placed not at the same time [28]. In man-woman-children graves, such as presented here for a Middle German Saale Group grave, those were placed in gender related antipode position, whereas their gifts were also gender related different (Figure 7) [15].

Single or double children graves are known from the Bohemian Group, but included mostly no or only few gifts, which were mostly age related in ages over four to six years [28,41,42]. E.g. the burial of a six-year-old boy at Vikletice was gifted with a small mace head (Figure 7) [32] (“playing battle weapon”),

whereas at the same graveyard another older boy about 12 years in age was accompanied already by a typical man burial gift, the battle axe (battle weapon) [42]. A girl of four years in age from the graveyard Vikletice received already the woman typical jewellery; in this case a smaller domestic animal teeth necklace [42] (Figure 7). In young children graves rarely the large amphora or beaker are gifted [28,41,42]. In the present case of the older boy from Vikletice he received a smaller drinking ware set (Figure 7) [42]. In the boy grave within a rare double men inhumation (gifted by: each a regular blade, but only one battle axe) and four women crematoria grave of Slany, only fragments of one long bone were preserved besides the gifts (Figure 7): a beaker with the cord bands on the neck, a jug, and a small two henkel amphora also with cord band decoration (Figure 7) [32]. This Late BAC grave of Slany contained furthermore 4 cremated persons in a separate pit within the grave. The “unusual” large amount of pottery (23 pots) was mainly arranged besides the crematory grave [32], which amount is not “unusual” calculating 5 ceramics per woman. The cremation burial was surrounded by

other typical woman gifts, a shell bead necklace, shell rondels and ovoid jar, such as pointed blades or scrapers [32].

Untypical man - "gay or transgender" grave in Prague

According to the described different way of gender related body orientation and gift assemblages, a male of a single grave in Prague-Terronska (Figure 7) implies, that he was possibly of a different sexual persuasion, either "gay or transgender" [36]. The man corpse was placed indeed in typical women orientation (Figure 7). Whereas in both genders, a large amphora and henkel jug appear, the other gifts are typical woman related: three more potteries including two ovoid jugs in Baden Group style and another henkel jug of Bohemian Group style decorated with

feminine triangle cord band line symbol [cf. 36] (Figures 7&9). Typical man axes, adzes or blades or typical woman jewelry is absent, which implies a "neutral gender" position. The opposite oriented man and adds of woman related pottery gifts are recently unique in the BAC grave record of Europe and allow to think indeed about a possible "gay or transgender person" [36]. If female symbol decorated pottery (here the jug) is only related to female graves, this would support then this interpretation. The untypical man burial style might have also a different background, such as different burial of a man from a different BAC group and its combination of BAC group burial rites, which are few different in Baden [19-23] and Bohemian [28,41,42] groups.

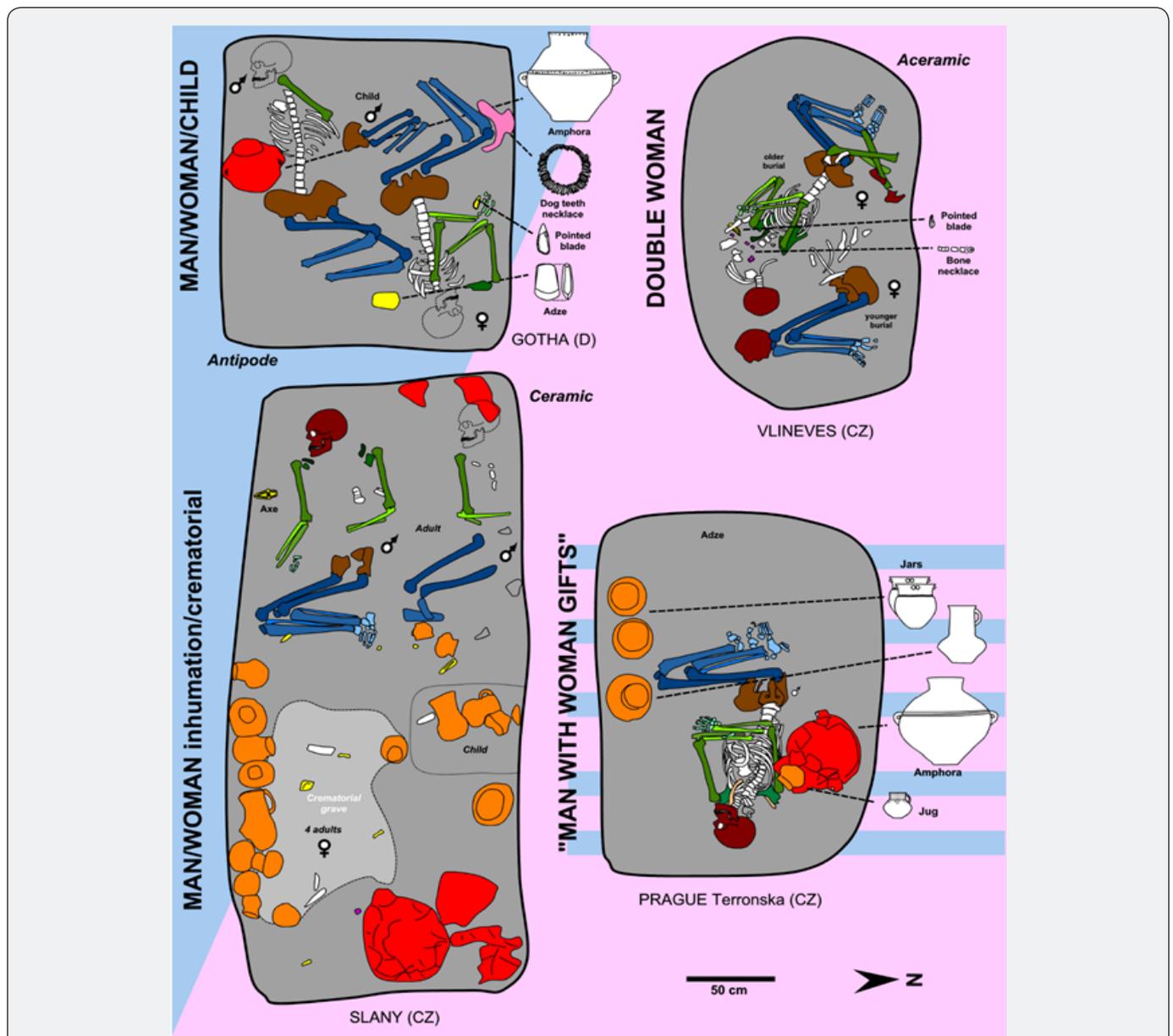


Figure 7: BAC double parallel and antipode children included family burial arrangements and gifts from sites in Central Bohemia, Czech Republic and Saale Region, Middle Germany (graves and gifts redrawn from [8, 17, 18, 20, 23-25, 27, 29, 31, 32, 35, 50]).

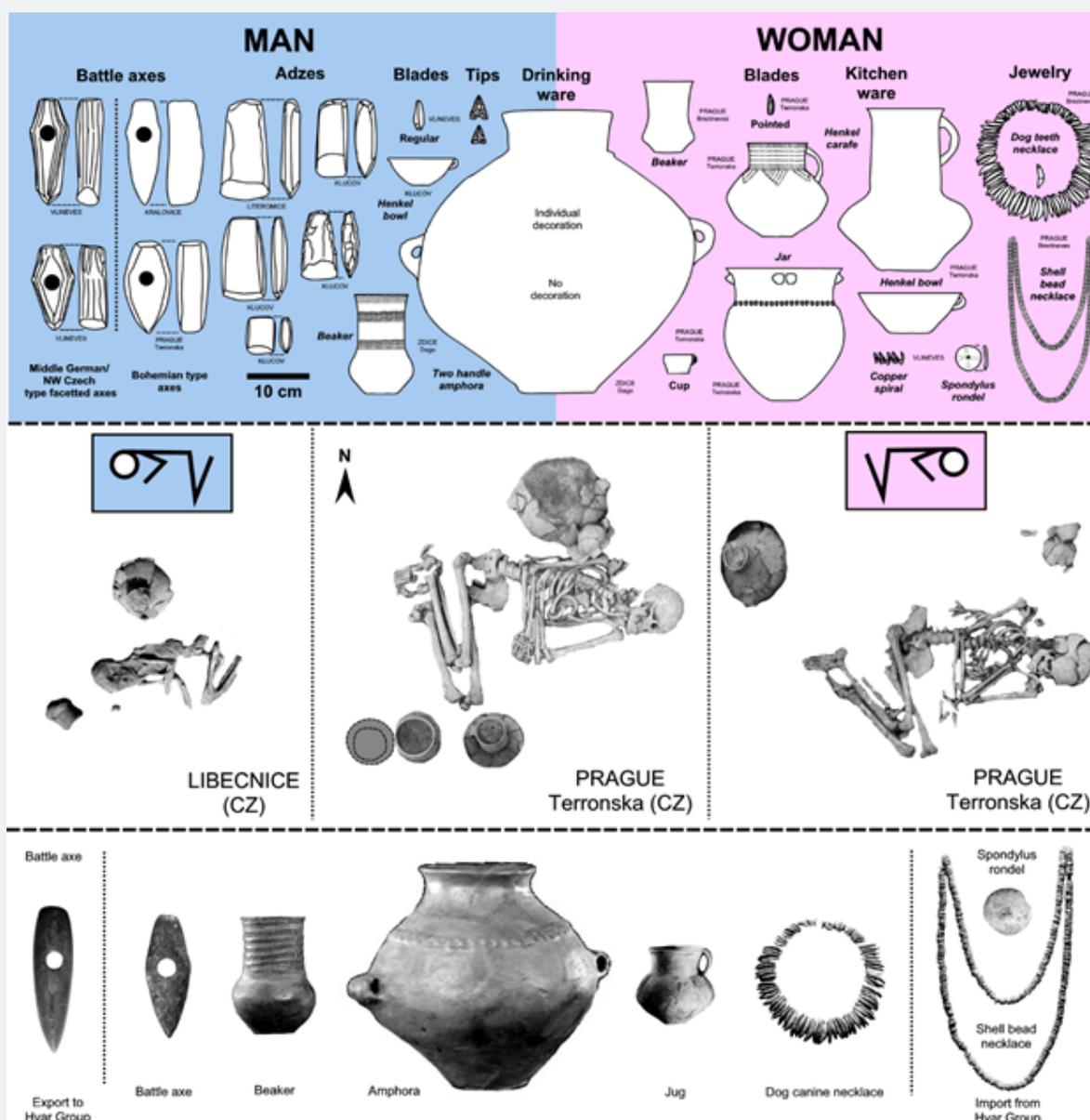


Figure 8: BAC Bohemian Group gender related composed burial gifts (graves and gifts redrawn from [8, 17, 18, 23-25, 27, 29, 31, 32, 35, 50]), photos compiled and modified from City Museum Prague and [24, 43]).

European BAC group connecting Gender Symbols

The BAC gender symbol originated obviously from much older Neolithic cultures, the Bandkeramik Culture (= LBK), which used already similar zigzag or triangle or line symbols [67] (Figure 10). Especially the Middle Neolithic groups, e.g. the Kugelamphora Culture of Central Germany but also the TBK groups of northern Germans have already the typically BBC feminine triangle and masculine Strichbuendel decoration style [cf. 67] (Figure 10). The gender symbols are found in Central Europe over 4.600 years in pottery and other inventory decoration between the LBK and Iron Ages [67] (Figure 10). Reviewing from the point of view of gender related burial rituals in the European BAC, pottery decoration styles and pottery shard

triangles, female and male symbols such as their distribution and their development in the BAC phases are presented as the following (Figures 9&10).

Feminine symbols: Two nearly complete Hvar Group pottery shard triangles are the key for the interpretation to represent compared to the pottery (Figure 9) and younger Eneolithic to Late Bronze Age dated abstracted figurine idol decoration (Figure 10), the feminine symbols (Figure 9). Compared to human anatomy, the triangle imitates the pubic hair triangle. In the TBK already [67], and further in the BAC this was first refilled with diagonal simple, cord band or dot impression lines [1,4,67], and herein (Figures. 9&10). As found in the triangle shard symbols of Hvar Island, it is also not refilled similar as in non-filled triangles

or the zigzag lines (Figures 9&10). In most northern BAC groups in the cord band decoration zone, the triangles are made of cord-bands. Baden typical only found along the Upper [67] and lower Donau [5], the Strichbuendel are with the outer line made of a dot row, whereas in female triangles those are filled with diagonal dot lines (Figures 9&10). Late Eneolithic clay figurines from the Lower Danube region of Hungary to Romania have the same feminine V-zigzag line [66] as found in the Late BAC (Figure 10). The triangle continued in the pottery decoration within the European Late Eneolithic BBC [67]. The female gender symbol at least survived further into the Late Bronze Age Urnfield (=URN) times of Europe, with most impressive example of the female figurine on a chariot from the Lower Danube region [65,66] (Figure 10). Even the pottery of some European URN groups has used the same triangle decoration symbol as 2.900 years before in the BAC (Figure 10).

Masculine symbols: The “Strichbuendel” (Figures 9&10) of the Early-Middle BAC times are found already in the Yamnaya

Group ware. There are many different variations with vertical lines (penis symbol) and besides diagonal short lines or dotted lines (pubic hair). The final abstraction of those is the “fishbone” or “branch” symbol in its most abstracted forms (Figures 9&10). The lines again are in the North either cord band or simple lines, in the South only simple lines. When the parallel vertical lines represent indeed the “abstracted masculine” symbol as found on the pottery of Oetzi’s time as presented herein, then his tattoos [68] can be well placed herein simply into the gender symbol context (Figures 9&10). His tattoos finally correlate to the results presented herein concerning the early Baden Group pottery abstracted masculine symbol decoration, which used those 1-7 vertical lines (Figures 9&10). Those lines have then nothing to do with “acupuncture points”, as suggested [68]. Those tattoo lines similar as pottery decoration lines simply reflect the “male symbol”. The unclear two parallel “skin damage lines” are even no tattoos [68] (Figure 10), but obviously come from the bands that were fixing tightly the arm protecting plate of a Bowmen at his left hand [68].

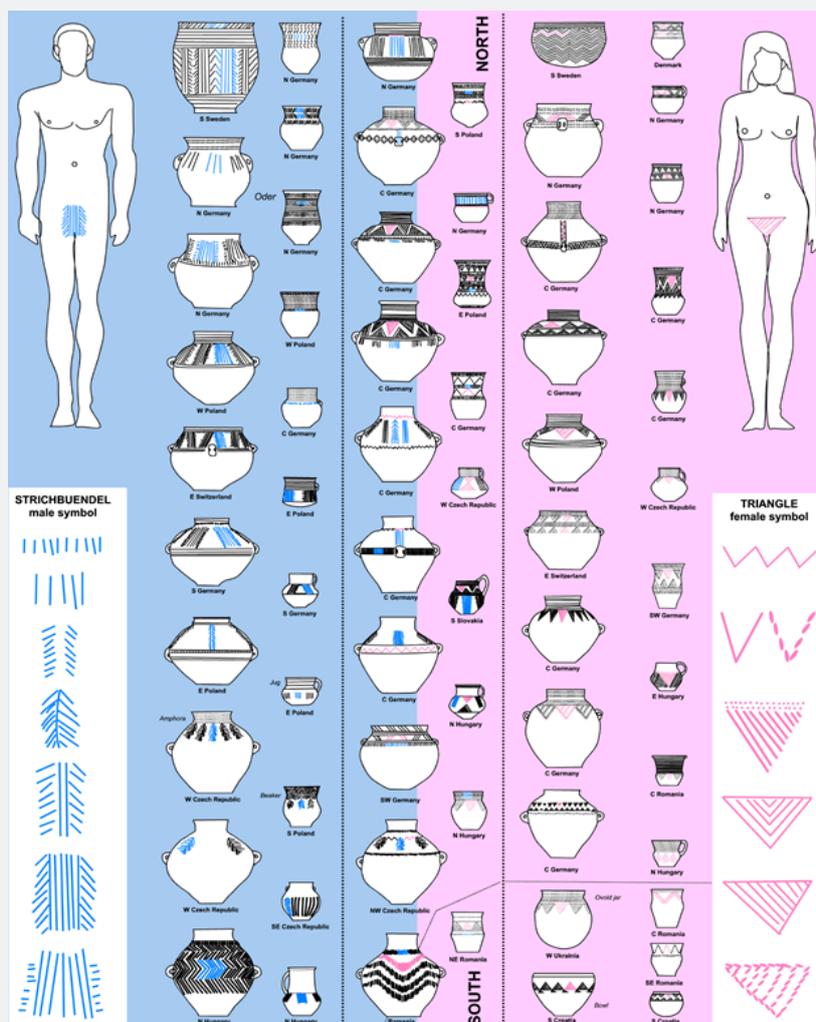


Figure 9: Female and male symbols within different BAC groups and their development to full abstracted lines (redrawn ceramics from [3-5, 14, 16, 19, 20, 25, 27, 28, 41, 42, 44, 44, 50]).



Figure 10: Early Eneolithic (5.094-3.880 BP) BAC group connecting similar feminine and masculine symbol ceramic decoration and modified pottery shard feminine symbols from the Mediterranean BAC Hvar Group. North and South pottery decoration elements of different groups are sometimes found singularly or both combined (redrawn ceramics from [3-5, 14, 16, 19, 20, 25, 27, 28, 41, 42, 44, 44, 50], see details in Fig. 9). Below, comparative feminine figurines from the Lower Danube Hungarian-Romanian Late Eneolithic and Late Bronze Age with similar feminine symbol decoration (redrawn ceramics from [65-67]). Tattoos of Oetzi redrawn from [68].

Combined feminine-masculine symbol combination:

Accepting both gender symbols as suggested above, all BAC decoration are then combined only of those (Figures 9&10), which correlate to the gender separated burial styles. This is so far important, as there is a possible interpretation distinguishing “singles” from “married” related pottery. E.g. the male symbolic amphora of the grave Klučov (Figure 7) might indicate that he was not married. Such interpretation must be tested in large-scaled grave analyses, if males have always male symbol decorated ware, and woman always feminine decorated - or in married status, combined symbols.

Absence of gender symbols:

This simply might reflect an early burial practice, but there are different situations in children grave pottery gifts. E.g. a burial of a very young child

of the Yamnaya in Romania is a corded beaker that has only horizontal cord band lines - but no gender symbols [4] (Figure 7). Going back to Bohemia, the grave of Slany contained also a very young child that was gifted similar only horizontal cord band lined beaker and undecorated jugs [32]. There is a third grave example with a 6 years old boy from Libenice, and again , the beaker has no gender symbols, nor has the amphora [32] (Figure 6). Young children had child and not grown up male-female status within the society, and obviously did not receive any gender symbol decorated pottery gifts.

How far the gender symbols on pottery decoration correlate to the gender or ware without symbols refer always or mostly to children graves, is a future project. It will bring further light into the question of “gay graves”, such as to a strictly gender and

children-adult separated thinking society in the time of the men gender symbol tattooed "Oetzi" [67] (Figure 10).

Conclusion

The intrusion of the ancestral Battle Axe Culture (= BAC) or so-called "Yamnaya Culture" about 5.300-5.100 BP from the West-Asian northern Black Sea region steppe with small horse-riding battle axe or bow men warriors caused a new heterogenic local group development by genetically, inventory or life style mix all over Central Europe. Those influenced or even originated from the Dalmatian Coast where the Hvar Group developed with oldest ages reaching back to 5.226 BP. After oldest dates of the Yamnaya graves along the lower Danube in Bulgaria of 5.094 BP, in Serbia, Romania and Moldavia 5.050 BP, the south Baden Group with its center in Hungary started somehow 5.016 BP. Oldest dates in the Bohemian or Saale Groups of Central Europe are younger with 4.880 BP. The BAC maximum extension between the West Black Sea, Mediterranean to Scandinavian coasts 4.900-4.600 BP had local group developments resulting in many names: Single Grave, Corded Ware, Lausitz, Small Poland, Baltic (North), East Swiss, Rhine-Main, Bohemian, Moravian, Donau (Central) and Baden or Hvar and even Yamnaya (South). Similar BAC pottery shapes and gender symbol decoration and their intergroup overlap, settlement pattern in smaller cabins or single grave burial rites with local variations (northern-southern hill - central ringed tombs - eastern pit graves) suggest fast cultural exchange. Local group characterizing are especially the different shaped battle hammer axes.

These perfect polished drill-hole stone axes are normally clustered within the group extensions but are sometimes found extra-group related in other groups either as result of battle or as traded object. Lausitz or Bohemian green schist amphibolite battle axes are found e.g. with similar shapes in the NE-Italian and Istrian part of the Hvar Group. The Yamnaya people used already mainly copper axes. Amphora, also common burial gifts, and their chronological change within the BAC, allow separating new the connected European BAC groups. The Bohemian Group mixed with the former local final Middle Neolithic "Rivnač" (early Baden). Its conservative pottery decorative elements were still in use within the early BAC. Such old decorative elements combined with new styles - corded band or linear decors with herein identified gender symbols - are reported for a new uncommon Bohemian Group tomb discovery, west of Prague. The hill-pit combined grave contained an internal 2.5 x 2 m wooden house-like imitating construction. The Bohemian Zdice grave in its most western group extension has a combination of Baden Group related tomb tradition. A single man skeleton was in seated inhumation flexed position of the right side, west headed, looking south. The two typical Central European BAC man grave pottery gifts are a corded band decorated beaker, and double crest band decorated large amphora dating into the Early BAC (4.900-4.600 BP).

These amphorae with two henkel and simple crest decoration of the Zdice grave type (A16 type) with relationships to the older Bohemian "Rivnač" are found at several places, but only within the Bohemian Group, which support the new demographic model. A Nordic Flintstone regular blade is preserved only fragmented. Most probably, a stone battle axe was present in the modern damaged part of the grave, which was surface collected before. The few tooth wear in the 185 cm tall and 40-50 old man supports a main low starch diet by higher meat consuming, typical of the shepherds of the Bohemian Group. He suffered from lumbar disc hernia caused osteopathologies, most probably caused by intensive riding, and a broken irregular healed left outer metacarpus. Central European BAC including the Bohemian Group buried in 99.8 % in single inhumation graves. Such single graves they arranged in small groups or graveyards mainly on southern directed slopes. In the European northern groups (N-Germany, Denmark, S-Sweden) BAC people were generally buried under stone hills or placed in the older megalithic graves. In the southern Mediterranean and Lower Danube region they were placed in tumuli-stone hill or so-called Kurgan graves (Croatia, Serbia, Bulgaria, Romania, Moldavia), in Central Germany in graves with stone rings or internal hill grave stone chamber constructions, and in Bohemia and Moravia (Czech Republic) in simple pits. The Baden group has mainly pit but also internal construction graves. This pit grave tradition was introduced obviously from the "Yamnaya Culture" (formerly "Pit Grave Culture"), which westernmost pit graves in Bulgaria date back in two phases between 5.100-4.500 BP. Reviewing the Bohemian Group (4.880-3.870 BP) burial types with newer tomb examples, the orientation of corpses was always in lateral sitting position both facing south, but strictly by gender opposite headed: man to West, woman to East.

There are several aceramic graves especially in the Early BAC times in the Bohemian Group, that contain either no, or only few lithic tool or jewelry gifts. There is a single exception in Bohemia with a crematoria four women grave, which was placed within a double man child combined body grave. A typical Bohemian Group man burial includes a battle axe (warrior) or working adze (worker), a regular blade (shaving blade), sometimes arrow tips and arm protecting plates (bowman), such as generally two typical ceramics: a beaker (for drinking) and larger amphora (beverage storage). Women burials also include the same large amphora or cups or ovoid jars, or other daily house ware and differ in presence of jewelry. This was made locally from bone pearls, but typically dog canine teeth or domestic animal teeth necklaces. Far imports are the Mediterranean connectivity proving imported copper spirals, such as marine shell bead necklaces, and especially the Mediterranean *Spondylus* shell rondels (large buttons), which latter are sometimes also made of Baltic amber traded by Baltic groups from the North. Tools were gifted chert or flintstone daily working: pointed blades or scrapers. The typical single grave types of the Bohemian Group (Early to Late BAC) are known for different aged children, men,

debated “gay or transgender”, and women. Dual parallel or mirror symmetric men/women and antipode burials of males-females or in very rare combination with children (family burials with max. four persons) are the exception (0.2%).

Young children in ages up to six years mostly lack burial gifts, which are in older children and teenagers already gender related and fewer gifted. Ceramic graves include generally the large two henkel amphora which gender symbols are typical of regional groups and decoration style changes within time. Especially in the Middle to Late phase some pottery types were decorated either by male and female symbols, either solitary or with both on the same ware. The typical feminine triangle symbol is the most connective pottery decoration for all European BAC groups. Its origin is followed back to the Yamnaya and the West Asian region. It seems to have been introduced to and from the southern Hvar Group as parallel diagonal line filled triangle which was abstracted in the late phase finally to an open V or zigzag line. The so-called “Strichbuendel” and “Branch” décors of the northern-central BAC are interpreted as male symbol that also developed to abstract forms: simple diagonal and finally parallel vertical lines (first four, later many).

Comparing the 1-7 vertical parallel line tattoos of the Early Eneolithic Oetzi from the Alps, those would simply fall into the men gender symbols, especially of those of the Baden Group. Both gender symbols are present with many variations in all N-S European to West Asian BAC groups. Considering those gender symbols, pottery is decorated only with the symbols of man, woman (as singles) or combined with both (probably married status). Those often do not appear always gender related in graves. Gender symbols seem to be always absent on only horizontal-lined pottery of young children graves. Within the Bohemian Group, the amphora crest band relief developed within the Middle BAC (4.600-4.200 BP) into gender décor stitched crests and then to stitch lines and more complex and variable ornamentation using triangles, lines such as cord band. In the Late BAC period (4.200-3.800 BP), line or short diagonal stitch and especially full abstracted feminine triangle-zigzag line or male vertical parallel line symbol decoration is found all over Europe. The triangle or zigzag feminine decor even reaches in some regions into the Late Bronze Age Urnfield and Late Iron Age times with most impressive find of the feminine figurine of the Lower Danube region.

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