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## **CONSIDERING THE RE-USE OF LATE BRONZE AGE BUILDINGS IN LIGHT OF CONTEXTUAL INFORMATION AND HUMAN REMAINS AT BEYCESULTAN**

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### **ABSTRACT**

Beycesultan was an important city located in Western Anatolia during the 2<sup>nd</sup> millennium BC. The complex political situation in the area caused conflicts between the Arzawan political entity and the Hitites in central Anatolia. Several episodes of destruction by fire at the settlement are thought to be results of these conflicts and the human remains found within the settlement were the victims. The site was resettled after these large fire destructions, believed to be by original settlers. The aim of this work to understand the nature of the deposition of the human remains within the settlement and whether these people were killed in the attacks and/or by the fires.

The study of human remains from one building reveals that the human bones within this space were deposited secondarily, which raises more questions about the identity of the new settlers.

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**KEYWORDS:** Arzawan, Hittites, fire, human bones, commingling, secondary deposition, identity

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## 1. INTRODUCTION

The double mound site of Beycesultan is located in the vicinity of the modern day city Denizli, approximately 4km from the town of Çivril in south-western Turkey (Fig. 1). The tell consists of different cultural layers beginning with the Chalcolithic period at the lowest level to the Ottoman-Seljuk period at the top (Table 1) (Dedeoğlu and Abay 2014: 2).

The site is surrounded by mountains and fertile plateaus, watered by the Meander River and is on one of the main routes between the Aegean coast and the central Anatolian plateau. The tell is 25m high and covers an area of 35 hectares, making it the largest known settlement in the region. S. Lloyd and J. Mellaart conducted the first excavations there between 1954 and 1959. Excavations were restarted in 2007 under the direction of E. Abay from the Aegean University.

Based on several factors such as size of the settlement, the strategic location, and the presence of two palaces, Beycesultan may have had an important political role in the region during the Middle and Late Bronze age (Lloyd 1972; Mellaart and Murray 1995; Hawkins 1998; Bryce 2010; Abay and Dedeoğlu 2009; Mac Sweeney 2010; Melchert et. al., 2011). During the 2<sup>nd</sup> millennium BCE, Hittites were a powerful state in central Anatolia and were striving to gain back power from the Arzawan political entity in the west (Gür 2012: 65). According to Hittite records and Arzawan letters, the Hittites eventually defeated the Arzawa rebellions and divided the region into vassal kingdoms (Akurgal 1995: 48; Gür 2012: 66).

The excavation of the Middle Bronze (1915-1745 B.C cal. earliest)<sup>1</sup> and late Bronze Age (1700-1595 B.C cal.) layers at Beycesultan has revealed significant fire damage in the settlement (Lloyd and Mellaart 1955; Lloyd 1972:5; Dedeoğlu and Abay 2014:4). The fire in the Middle Bronze age layer caused major damage to the palace building, and also affected buildings in the public domain (Lloyd, 1972).

In the Late Bronze Age layers, two episodes of fire were identified. The fire in the earlier phase 5b (1700-1595 BC cal.) caused extensive destruction in the settlement, some of the buildings at this layer were repaired and re-used in the later phase 5a (1600-1500 BC cal.) (Abay and Dedeoğlu 2013:313; Dedeoğlu and Abay 2014:4). The second episode of fire in this phase appeared to be more local, affecting a more limited area with a fewer number of houses impacted by the fire. It has been posited that these destructions might have been the result of Hittite attacks (Mellaart and Murray, 1995: 95).



Figure 1: Location of Beycesultan (after Dedeoğlu-Abay 2014)

## 2. BIOCULTURAL BACKGROUND

The site of Beycesultan was first settled during the Chalcolithic and consisted of a modest group of houses in the north bank of the river. Lloyd (1972: 3) reports that the settlement had started in two centers and continued to grow as separate clusters on either side of the road. The settlement grew in size northwards and westwards as the city gained importance. In the 19<sup>th</sup> century B.C. (see the new C14 dating in Table 1), the plan of a city became more distinct with the inclusion of a palace to the east and public buildings to the west along with a wall surrounding the city (Lloyd 1972:3). The city was destroyed by large fire “.....sometimes in middle of eighteenth century” (Lloyd 1972:3) and remained unoccupied until the original habitants returned (Level IVb and IVa; Middle Bronze Age) (Lloyd 1972:3).

According to the archaeologists, these layers of occupations were not arranged in a proper city layout until the Level III (Main Late Bronze Age layer). Changes in the pottery and small objects suggested that a transition in the cultural identity of the inhabitants occurred in this level, which was associated with the Late Bronze age (Lloyd 1972:4). The cultural changes had become more pronounced with a well-organized city plan in Level II (Level V according to the new stratigraphy Table 1).

The area continued to be occupied into the Iron Age (9<sup>th</sup> century AD), Byzantine period (11-12<sup>th</sup> century AD), and Seljuks principality periods (13-14<sup>th</sup> century AD), which represents the latest cultural layers. The tell was later used as a burial ground during both the Byzantine and Seljuk-Ottoman Principality period. These stratigraphically higher layers were heavily damaged through modern agricultural activities.

<sup>1</sup> Abay, Dedeoğlu 2016 in p

**Table 1: Chronology of Beycesultan (after Dedeoğlu and Abay 2014)**

Lloyd-Mellaart Stratigraphy	New Stratigraphy	Period	Relative Chronology	Absolute Chronology
	1	Seleucid-Ottoman Principality Period	13-14. century AD	
	2a1-2			
	2b	Byzantine Period	11-12. century AD	
	3	Iron Age	9. century AD	
ia	4			
ib	5a	Late Bronze Age		Cal BC 1600 to 1500
ii	5b			Cal BC 1700 to 1595
		Middle Bronze Age		

The cemetery of the settlement was located 320m west of the site and covers a large area. It was used during the Bronze Age, Iron Age and Byzantine era (Abay and Dedeoğlu, 2009: 55).

### 3. POLITICAL BACKGROUND OF THE REGION

There is a little information about the political situation in the region during the 2nd millennium BC. There are a few written records of the Hittites and from Egypt, several rock reliefs and some hieroglyph inscriptions record a political entity known as Arzawa which formed a coalition against Hatti, based in western Anatolia throughout Hittite history (Lloyd 1956:154; Mellaart and Murray 1995: 95; Hawkins 1998; Bryce 2010:47; Mac Sweeney 2010:8) however, the locations of these vassal kingdoms of Arzawa are still under discussion (Abay and Dedeoğlu 2009: 55; Hawkins 1998:24; Bryce 2010:404).

Based on the Hittites records as well as recent archaeological and linguistic studies, Arzawa was a geographical region occupied by a heterogeneous group of people; consisting of different political, social, cultural and also linguistic groups (Mac Sweeney, 2010: 8).

Despite the common assumption of the Hittites domination in the region, recent research indicates that the Hittites might not have played a central role in the various Arzawan groups, and the people of Beycesultan were highly likely to have contact with both central Anatolia and western Anatolia throughout the Late Bronze age and were never fully integrated into Hittite political or cultural spheres (Mac Sweeney, 2010:8-9).

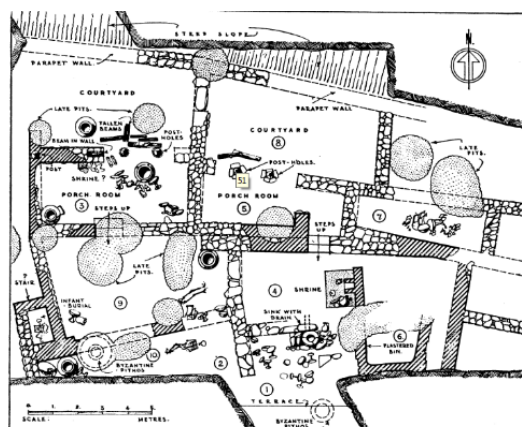
Although the political disagreements between the Hittite Empire and Arzawan's as aforementioned may have caused the site's destruction, Knapp and Manning (2016), rightly express that it would be difficult to tie a downfall to one particular reason. Natural disasters such as earthquake or climatic changes need to be taken into account and they may have triggered the situations as well as political

struggles. However, in the case of Beycesultan, during 1700- 1500 BC cal. (levels 5a and 5b), there were no recorded radical climate changes like those documented around 1200 BC (Weiss 1982) nor is there evidence of any sort of mass destruction from an earthquake (Nur and Cline 2000).

### 4. HUMAN REMAINS

Earlier work in late 1950's at Beycesultan revealed a total of 11 skeletons excavated in two areas in the Late Bronze Age layers (Lloyd and Mellaart 1955: 45; Lloyd 1972: 20). Among these only one of the individuals was intentionally buried: a juvenile interred under what was thought to be a staircase. The other 10 people were not buried, instead their skeletal remains were found on the floors of rooms.

Two of the skeletons were found in Room 2 and 9 (Trench A), where the effects of fire had been detected (Fig. 2). The excavators inferred that these people could not manage to escape from the fire and were killed where they were found (Lloyd and Mellaart 1955: 45; Lloyd 1972: 20).



**Figure 2: Plan of the skeletons found in Room 2 and 9 (after Lloyd and Mellaart 1955)**

The other eight skeletons were found in a room which was described as a wine shop based on the *in situ* goblets, cups, and 77 animal knuckle-bones within a pile, which were likely used in a game of chance (Lloyd 1972:12). According to the excavators, the body positions of the skeletons suggested that these people were killed elsewhere and thrown into this building (Fig. 3) (Lloyd and Mellaart 1955: 48). Although, the plan of the "wine shop" shows the location and position of the skeletons, there is no other detailed information regarding the skeletons' positions or the specific reason for suggesting that they were thrown into this building after they were killed. Minor traces of fire have been recorded in the same building; however, there is no information as to whether the skeletons were burned or not.



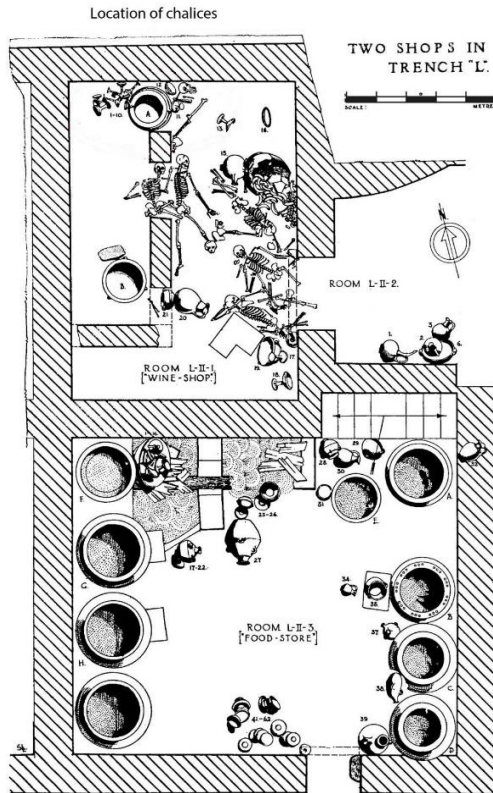


Figure 3: Skeletons found in Room L-II-1 (after Lloyd and Mellaart 1955)

Recent excavations have unearthed a minimum of 19 additional individuals from different areas in the Late Bronze Age layers. Two skeletons were found in open areas and the others were found in enclosed rooms (Abay, Dedeoğlu 2013). The location of the skeletons generally supports an already existing scenario suggesting that the individuals were hiding from something and were victims of violent attacks. For example, a male skeleton was found within a *pithoi* in an upright position, presumably because he was hiding in the room (Fig. 4).



Figure 4: A male skeleton within an upright positioned *pithoi*. N27C+A Feature 58 DHM. Space 7 (Courtesy of Beycesultan Research Project)

Additionally, a female skeleton was found in the far back of a storage room in a plaster bin (Fig. 5), and a young male was found lying on his back in an

open area, rather than being intentionally placed within a grave (Fig. 6).

All these individuals appear to have been hiding from something, and died where they hid, or they died while trying to escape.

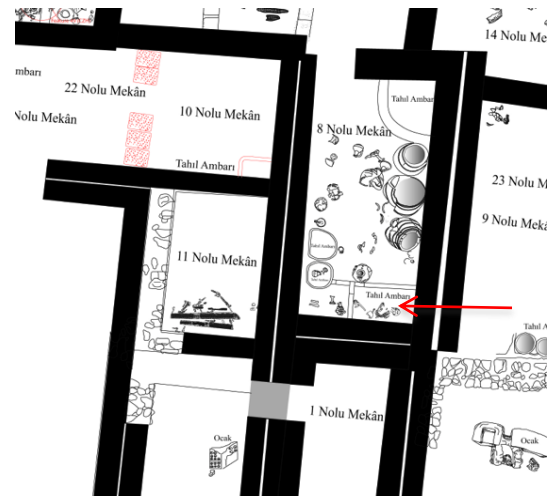


Figure 5: A female skeleton in a storage area N 27 C feature 52 DDZ in Space 8 (Courtesy of Beycesultan Research Project)



Figure 6: Heavily burned skeleton in the courtyard. N26 Feature 25 (Courtesy of Beycesultan Research Project)

Some of these skeletons within the rooms affected by fire do not have traces of burning; therefore, suggesting that they might have been killed by either soft tissue wounds or smoke inhalation from the fire. It is not possible to determine the actual cause of death in these instances, as no evidence was left on the skeletal tissue.

A total of nine individuals were found under a collapsed ceiling in the basement of a building (Space 11). The horizontal beams of the upper stores were found directly on top of the skeletons and the skeletal remains show different degrees of burning (Fig. 7). Fragments of carbonized brain tissue were discovered within several crania (Fig. 8). Based on the articulation of the skeletons, *in situ* nature of the collapsed roof beams directly on the skeletons, and

carbonized brain tissue it appears these individuals were in the room before it was demolished.



Figure 7: Human remains in Space 11 N 27 (Courtesy of Beycesultan Research Project)



Figure 8: A fragment of a brain tissue found in Space 11 (Courtesy of Beycesultan Research Project)

The scattered nature and the locations of the bones of human remains within another room (Room 2) raised the question of whether these people were in the room when it was burned and collapsed. The remains mainly concentrated in the southern part of room, although the center and northern part of the room towards the entrance also had some skeletal elements scattered throughout the infill of the room (Fig. 9).



Figure 9: Distribution of human remains in Room 2. (Courtesy of Beycesultan Research Project)

The laboratory analysis of these bones revealed that the skeletal elements were commingled and the

estimated minimum number of individual indicates that there are remains of five individuals. However, the total number of diagnostic bones is too few for the estimated number of individuals.

## 5. MATERIAL AND METHODS

Commingled human remains of at least 5 individuals from Room 2 were analyzed for the purpose of understanding the disarticulation of the bodies and commingling. Bioarchaeological analyses of skeletal elements (age and sex estimations, minimum number of individuals, bone representation index and taphonomic modifications) from Room 2 were carried out in conjunction with the archaeological records from 2009. Archaeological documentation, including the site reports, dairies, and photos of the excavation, was used in order to obtain details of the deposit and content of the room. The locations, positions, and distribution of human remains were checked against this documentation.

As a first step, the skeletal elements from different zones in the room were analyzed separately in order to avoid further commingling. Each pile of bones was sorted according to element, side, and age. Next, all elements within each pile from different locations were compared with each other to identify possible pair matches and re-fits from the same individual. This comparison was necessary also to see the degree of commingling in the deposit. The minimum number of individuals (MNI) was defined by the most common element in the assemblage for the adults and subadults. (Bökönyi 1970; Buikstra and Ubelaker 1994). Age, sex, size, and taphonomy were taken into account for the estimation of MNI.

Bone representation index (BRI) was used to analyze all bones from the room, using the ratio between the number of observed bones and number of bones that should have been present according to the calculation of the MNI (Dodson and Wexlar 1979; Bello and Andrews 2006). The BRI allows for a calculation of the amount of missing elements (Fig. 10).

Standard osteological techniques were used for the estimation of age at death and sex (Buikstra and Ubelaker 1994). Pelvic bones were used for sex estimation where possible but the skull was also used since the assemblage was completely disarticulated and it was not possible to match the skulls and pelvic bones. Since the bones were commingled and disarticulated age categories could only be estimated as "adult" or "subadult" for most bones. For the pelvic bones, more detailed age categories could be achieved based on the pubic symphysis (Brooks and Suchey 1990).

Taphonomic modifications such as burning stages of bones by their coloration and morphological changes such as breakage and bone surface modifi-



cations were also recorded on the bones to understand differential depositional processes (Behrensmeyer 1978; Shipman et al. 1984; Krogman 1943, Thomson 2004, Thomson 2005).

## 6. RESULTS

### 6.1 Archaeological Context

Room 2 is a part of a building complex which is currently partly exposed (Fig 11). Three spaces, 2, 28, and 30 were excavated in this building. Room 28 is in the middle of Room 2 and 30 and allows access between the spaces (Abay 2014 : 179). An opening from the south wall of Room 28 leads to Room 2. The building dates back to the earlier phase of level 5 (5b) in Late Bronze Age layers (1700-1595 BC cal). All three rooms show severe burning on the construction material and appear to have been demolished after the fire.

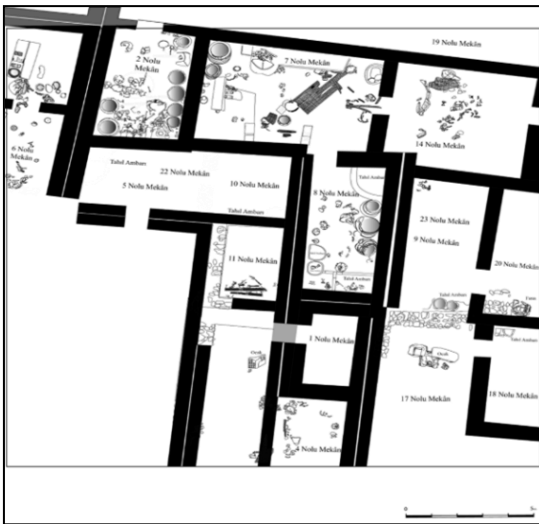


Figure 11: Plan of Room 2 within the building complex (After Abay 2014).

Room 2 is 12 m<sup>2</sup> in size with the entrance in the northern wall. Several large *pithoi* were placed along the West and East walls, some of which contained carbonized grains. In addition, many in situ scattered vessels were found at the floor level, indicating that the room was used as a storage area (Abay and Dedeoğlu 2013: 314; Dedeoğlu and Abay 2014:5).

Although on the floor of this space many artifacts were recovered, no human remains were found. The first human remains were found approximately 20 cm above the floor level in the center of the room and the northern area near the doorway (Fig. 12).

At the southern part of the room, a high number of goblets was found on the collapsed mud brick blocks on the standing clay pedestals. On top of this rubble, approximately 40 cm above the floor level, scattered human remains were found mixed with

fragmented vessels within the fill. All the human remains from this room were scattered at different levels within approximately 55 cm thick infill starting from the elevation of 837.39m, which was about 20 cm above the floor level and ends at about a level of 837.94m.

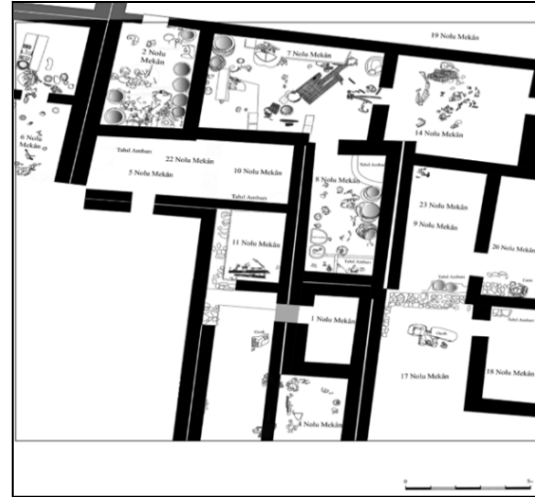


Fig 12: First human remains within Room 2.

These remains were spatially concentrated more in the southern part of the room, extending towards the center with some found in the northern part of the room as well (Fig. 13).



Figure 13: Spatial distribution of human bones in Room 2 (Courtesy of Beycesultan Research Project)

### 6.2 Anthropological Analysis

The bones that are the subject of this work were collected as arbitrary groups in the 2009 field season; therefore, it was difficult to determine how much of the commingling occurred during recovery and how much was already present in the archaeological record. Even though some elements might belong to the same individual within each group based on their size and morphology, it was not possible to determine the relationships of the bones with certainty.

Based on the field photographs, only a few elements were in articulation when recovered. For example, a heavily burned skull and mandible were in articulation on a pile of collapsed mud brick blocks and fragmented pots (Fig 14). On the other hand, a few bones of a 6-7 year old were found disarticulated on the northern side of the room. Although these bones likely belonged to the same individual, none of the bones directly articulated with each other anatomically due to missing bones in between such as the right scapula and the right radius but no humerus or ulna from the same side is present to make up the whole arm.



Figure 14: Heavily burned mandible attached to the skull in Room 2 (Courtesy of Beycesultan Research Project)

The MNI of the fragmented and disarticulated bones from Room 2 is five; one child and four adults. Of the adults, one is male, two are possible male, and one is of indeterminate sex (Table 2).

Table 2: Age and sex distribution of bones

ID no	Age	Sex
1- F48 CZI	6-7 yrs	N/A
2-F49 CZH	2 Adult	1 male, 1 indeterminate (commingled)
3- F51 CZJ	2 Adult	2 possible males (commingled)
Total	MNI=5	3 possible males; 1 indeterminate

The BRI showed that small elements such as those of the hands and feet, ribs, and vertebrae were represented in very low percentages in the assemblage whereas bigger bones such as arm and leg bones show the highest percentages (Fig. 10). Even though the crania are well represented, facial parts make up a small portion of the cranial collection. Maxillae and mandibles are represented in higher number compared to the other body parts even though they are fragmented. Skeletal parts such as manual and pedal phalanges and ribs are represented in very low percentages, whereas sternums do not exist in the col-

lection. In terms of vertebrae, cervical and lumbar vertebrae are presented in higher frequencies than those thoracic vertebrae.

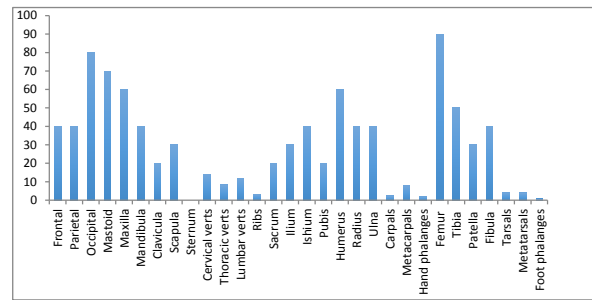


Figure 10: BRI index for bone elements in the assemblage

### 6.3 Taphonomy

Taphonomic alterations of the bones were investigated in order to identify any potential differences in the depositional conditions of the bone assemblage. The time of deposition in terms of immediate burial versus delayed burial could play a role in the taphonomic changes of the remains. Also, different local conditions within the space might cause different alteration of bones.

Research demonstrates that there is a correlation between discoloration and dimensional change and that of burning temperature (Baby 1954; Binford 1963; Shipman et al., 1984; Munro et al., 2007) and that of bone surface color can be an indicator of taphonomic processes to which bone has been exposed (Devlin and Herrmann 2008:110). However, bone modifications depend greatly on different factors including, proximity of subject to fire or heat, the degree of heat, duration to exposure, robustness of bones and the amount of flesh that covers the bone itself (Baby 1954; Wells 1960; Binford 1963; Shipman et al., 1984; Krogman 1943; Thomson 2004; Thomson 2005).

In the case of Room 2, the entire room was affected by a severe fire indicated by the heat alterations on the walls, floor, and contents of the room, including grains stored within pots. The human bones found in this space were also burned to differing degrees and have great variation in discoloration, even between the bones in close proximity. The coloration of the bones ranged from no alteration to brown, to black (charred), to blue-white (calcined). The bones at the southern part of the room, over the collapsed debris of shelves and goblets, show blue-white color indicating intense burning. Another group of bones towards the southeast of the room at a higher elevation shows more variety of burning indicated by different coloration from brown to black as well as some bones with no alterations (Fig 15). Conversely, at the other side of the room on the northwest, a small group of sub-adult bones (6yrs

old) show no indication of fire or heat despite the fact that this part of the room was also affected by the fire.



Figure 15: Different coloration of bones at the southern part of the space (Courtesy of Beycesultan Research Project)

Differential taphonomic changes of bones are recorded according to Behrensmeyer (1978) (Fig. 16a). Clear differences are found between the bones collected from southern and northern parts of the room (Fig. 16b).

The bones that were scattered mainly in the southern part of the room show no weathering at all. However, in the northern part of the room 80% of the assemblage shows no modification, 12.8% exhibits fine longitudinal cracking, which corresponds to Stage 1, and 4.3% of bones exhibit marked cracking with angular edges on the surface and exfoliation. The remaining 2.9% of the assemblage surfaces have more severe modification, rough surfaces along with flaking and splintering of bone where damage penetrates the inner cavity of bone that is described in Stage 4 (Fig 16a and 16b).

Stages	Description
0	No cracking or flaking
1	Cracking parallel to fibre structure (longitudinal), articular surfaces perhaps with mosaic cracking of covering tissue and bone
2	Flaking of outer surface (exfoliation), cracks are present, crack edge is angular
3	Rough, homogeneously altered compact bone resulting in fibrous texture. Weathering penetrates 1-1.5 mm maximum.
4	Coursely fibrous and rough surface; splinters of bone loose of surface, with weathering penetrating inner cavities; open cracks
5	Bone falling apart <i>in situ</i> , large splinters present, bone material very fragile.

Fig 16a: Bone weathering stages (modified from Behrensmeyer 1978)

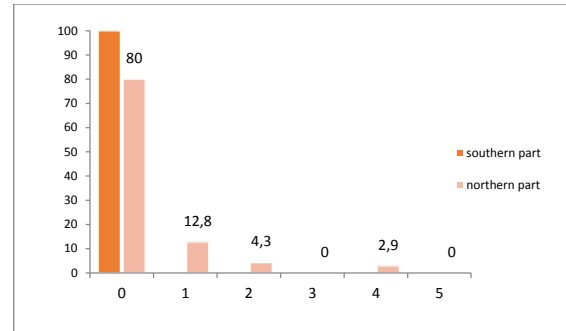


Fig 16b: Percentages of weathering stages on the bones from the northern part and southern part of Room 2.

The bones of a 6-year old from the northern area, which were unaltered by heat, show some perforations as a result of surface flaking and crumbling (Fig. 17a and b).

The bones in the southern area, despite the high degree of fragmentation, are durable and the fractures are mostly clear transverse breaks. The edges of the breaks of the same bone parts are sharp, clear breaks with no abrasions and fit well with conjoining parts, as opposed to the bones of the 6 year old where surface flaking and crumbling is suggestive of the bones being moved around previously.



Figure 17a: Surface flaking and penetration on the bones from the northern part of the space.



Figure 17b: Surface flaking and penetration on the bones from the northern part of the space.



Studies of burned bone fractures suggest that various fractures (longitudinal, step, transverse, curved transverse) as well as patina, and evidence of splintering and delamination can be seen on the bones depending on the location, progression of fire or heat, temperature, duration, and the amount of flesh that covers the bone (Baby 1954; Binford 1963; Symes et al., 2008).

However, the aim here is not to explore to degree of the temperature that affected the bones nor whether they burned fleshed, which will be a subject of another paper, the differences in preservation of bones suggest either different local conditions (i.e. a hard object such as a rock pressing on bones), or a different origin before they were deposited here, or different time as in later additions to the space.

## 7. DISCUSSION

### 7.1 Absence of Skeletal Elements and Disarticulation

There are several possible explanations for the differential preservation of remains at Beycesultan.

**a-Differential preservation according to structural properties of bone:** It is important to make a distinction between the loss of bones due to burial customs and different structural properties of the skeletal elements. In some cases, the absence of certain elements can be attributed to burial rituals i.e., removing heads or other body parts (Boz and Hager 2013; Sofaer 2006; Croucher 2010). In other cases, structural reasons such as high trabecular bone and less bone density can cause poorer states of preservation and those bones might not be discovered (Willey et al. 1997; Lambert et al. 1985; Bello and Andrews 2009). Bello & Andrews (2009) state that spongy bones do not preserve as well as less spongy bones in the same depositional conditions.

Small bones, such as elements of the hands and feet or vertebrae with high trabecular bone were represented in less frequency in the collection (see Fig. 10). However, the preservation of these small bones are very good when they are present and the fracture type in these small bones are similar to that of larger bones. It is therefore unlikely that poorer preservation is the reason for their absence.

**b-Animal disturbance:** Small mammals such as rodents in particular often transport small and medium-sized bones when burrowing through archaeological sites. For the most part, the animal burrows can be distinguished in the deposits. In this instance, there is no record of animal disturbances in the deposits.

**c-Possibility of missing small bones during excavation:** Small bones of the hands and feet are always a challenge to recover for untrained eyes. Even

though, some bones might be missing due to excavation, the recovery of carbonized grains is an indicator of detailed excavation. Therefore, missing the bones during excavation is unlikely in Room 2.

**d-Post-depositional disturbance:** Archaeological documentation shows that a Byzantine rubbish pit destroyed a large area from the west wall towards the center and to the southern part where the bones were concentrated (Fig. 17). It is highly possible that some bones were removed during this rubbish pit construction. However, the chances of disturbance should have been the same for all other parts of the bodies and the underrepresentation would have been random, which is not the case in Room 2 (Fig 10).

If these 5 people were in Room 2 when the room was burned and collapsed, the remains should have been found in anatomical articulation at least in the part of the room that the later pit did not disturb. In addition, only low percentages of the long bones are missing (Fig.10) compared to the hand and feet bones. If the bones were removed by the later pit, one should expect to see higher percentage of long bone loss along with the articulated hand and feet bones. Therefore, there must be alternative reasons to explain the lack of bone.

The human remains were disarticulated, spread spatially and vertically within approximately 55cm infill of the room. The first appearance of the bones was approximately 20 cm above the floor level. The bones that were collected together in the field were checked against the field photographs and confirmed that disarticulation and commingling occurred *in situ*.



Figure 17: Byzantine rubbish pit disturbance in Room 2

These individuals perhaps died either in the attack to the site and/or by the fire that occurred thereafter. If they were within Room 2, body parts would have maintained their integrity and would all show evidence of burning since the room has extensive burning evidence in all its *in situ* contents.

However, evidence presented above indicates that these people were not in the room when it was burned and the bones were deposited here in later stages through human intervention. The differences in

taphonomic modifications and differential burning stages, small number of anatomical connections in bone piles, low representation of the same type of small size bones for all individuals, make the possibility stronger that these remains were collected from another space and randomly thrown here. On the other hand, the human remains in Space 11, despite the fact that they were commingled during excavation, were clearly intact when they were deposited and were found in articulation. Presence of brain tissue in some individuals also proves that they were burned *in situ*.

Reuse of some buildings in the later phase 5a after the big fire event in phase 5b has been documented in the Late Bronze Age layers (Dedeoğlu and Abay 2014:4). Rooms such as 2 and 11 were not used after the fire (Fig. 11). The excavators reported that rather than cleaning out the rubble in these rooms, these areas were flattened out in order to make new surfaces. On the other hand, within the border of the excavated area, rooms 22 and 23 had been cleaned out, repaired, and reused in the later phase (5a) (Fig. 11). In terms of location, Room 22 is adjacent to the southern wall of Room 2, and it is highly possible that the bones found in Room 2 might have been deposited here while cleaning the rubble within Room 22. It is equally possible that the bones might have had been in the rubble coming from another location.

Although, Lloyd (1972) mentioned some efforts to level the settlement after the destruction in layer IVb and before reuse in IVa, (Level 7 with the new phasing) a more extensive and organized reconstruction was not made before level III. Lloyd claimed a change in cultural identity of the new settlers based on the change in small objects and pottery. He also designated this period as the beginning of the Late Bronze Age era (Lloyd 1972:4). The cultural changes in Level III (Dedeoğlu, Abay 2014) become more pronounced in small finds and settlement plan in level II (now level 5). According to Lloyd, these layers were also ended with fire and settled partially afterwards, but the culture had continued with little change (Lloyd 1972:4).

## 8. CONCLUSION

Burned layers of the Late Bronze Age Beycesultan settlement have revealed skeletons within several enclosed rooms and open areas. Taking the political

situation into consideration at the time of the occupation of these layers, the available written sources mention attacks from the powerful state of the Hittites.

The immediate assumption was that these human remains were the people who were either killed during these attacks and/or during the events of the fire.

In this brief research, human remains from one of the spaces were analyzed. Both depositional evidence and taphonomic processes indicated that the human remains found in Room 2 were a secondary deposition. They were not the victims of attacks or fire within this room. They died elsewhere and were later deposited here.

The striking point here is that this action was not done with consciousness, it was done rather contingently. People, who cleaned out the rooms at a later stage for re-usage, treated the dead bodies as part of the rubble and did not make an exception for them. This treatment of the remains raises further questions:

Who were these deceased individuals, did they not have living relatives? Why were they not treated in a respectful way and buried according to burial customs?

These findings can lead to a broader understanding of the reuse of the settlement and the identity of the people who lived there. Ancient DNA and strontium isotope analyses are crucial towards identifying cultural change and should be evaluated along with archaeological and environmental data. However, both the burned nature and commingling of human remains prevent these analyses at the time of this research. Unearthing more area on site along with excavation of the cemetery may allow these analyses to be incorporated in future work.

The Beycesultan research project has illustrated the importance of detailed documentation. Using excavation diaries, site reports, and photographs it was possible to reconstruct the chronology of deposition, and the relationship between the room and the human remains. This work also highlights the importance of conjoining archaeological contextual information with various types of bone analysis to understand disarticulated, fragmented, and commingled assemblages.

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