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## **DISMEMBERING, FILLETING AND EVISCERATION OF HUMAN BODIES IN A BRONZE AGE SITE IN MORAVIA, CZECH REPUBLIC**

*ABSTRACT: Human remains found in the Early Bronze Age refuse pits at Cezavy Hill, South Moravia, are described. Special attention is paid to the skeletons of two individuals: numerous cutmarks demonstrate the dismembering, filleting and evisceration of the cadavers. The find is interpreted as a part of the complex ritual showing earlier (Eneolithic) roots and later (Iron Age) continuity, illustrating the social relations in the Bronze Age. This article is a reprint of a previously published article (Jelínek J., 1993: *Anthropologie (Brno)* 31, 3: 99–114).*

*KEY WORDS: Early Bronze Age – Únětice Culture – Human sacrifice – Cutmarks*

### **INTRODUCTION**

In the summer months of 1993 continued the archaeological excavations at Cezavy near Blučina (*Figure 1*), a well-known Bronze Age site on the top of the hill, where surface finds of animal bones and pottery sherds had shown the existence of a cultural layer of the Early Bronze Age destroyed by agricultural activities (*Figure 2*). The archaeological excavations headed by M.

Salaš, archaeologist at the Moravian Museum, Brno, discovered a group of five characteristic circular pits of the Únětice Culture. The present article reports on the anthropological finds discovered in some of the pits, namely: pit No. 1 (archaeological No. 40), pit No. 2 (archaeological No. 39), pit No. 3 (archaeological No. 46) and pit No. 4 (archaeological No. 45). With the exception of the pit No. 1, all of them contained some human remains.

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This article is a reprint of a previously published article "JELÍNEK J., 1993: Dismembering, filleting and evisceration of human bodies in a Bronze Age site in Moravia, Czech Republic. *Anthropologie (Brno)* 31, 3: 99–114."

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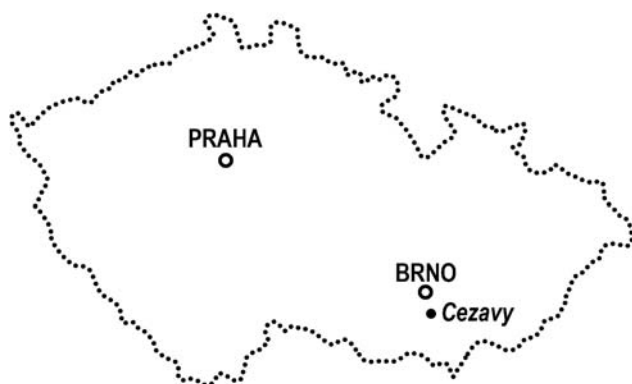


FIGURE 1. Map showing the position of the Cezavy site in south Moravia, Central Europe. This figure was in Jelinek (1993) labelled as Fig. 1.



FIGURE 2. General view of the site during the excavation. In the background the floodplain of the Svratka and Cezava Rivers is seen. This figure was in Jelinek (1993) labelled as Fig. 2.

## MATERIAL

### Refuse pit No. 1

Only animal bones have been found. Some of them have similar cutmarks as those found on human bones in the pit No 3.

The best examples are:

- 1) The right maxilla of a goat with several long (10–15 mm), fine, parallel cutmarks. Found in 50–55 cm of depth.
- 2) Four vertebrae of subadult cattle, with transversal cutmarks on the dorsal side next to the spinous process. Found in 0–50 cm of depth.
- 3) Maxillary fragment of a horse (?) with longitudinal short fine cutmarks.

Another example of human activity is a characteristic spiral splitting of a cattle humerus for marrow (compare with similar finds from pits Nos. 2, 3 and 4).

It is important to mention that in the depth of 20–30 cm a goat's metapodium was found with biting traces of a carnivore (probably dog). This means that some animal bones were part of the surface debris of the site in Bronze Age time.

### Refuse pit No. 2

Nearly in the middle of the pit and more than 100 cm deep under the surface, evidently out of reach of any agricultural activity, there were two fragments of human cranial bones, i.e. the greater part of the right parietal bone situated with its endocranial side down, and 10 cm higher in the layer a fragment of frontal bone situated with its endocranial side up. Both fragments had parts of their edges damaged (*Figure 3*). Since the bone was flaked from the endocranial side out, it is clear that this damage occurred already on the bones of the broken skull. Both bones belonged to the same subadult individual. The damage could be the result of trampling when the bones were part of the past surface layer on the site, but the question remains why human remains had been discarded without any reverence.

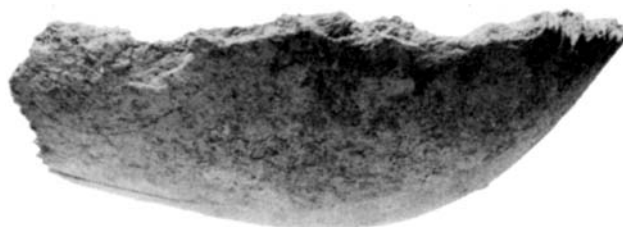


FIGURE 3. The parietal bone with damaged edges, found in the Early Bronze Age pit No. 2. This figure was in Jelinek (1993) labelled as Fig. 3.

Approximately 100 cm south from this find and somewhat deeper in the layer a human skull has been found. It was situated obliquely with its occiput up, evidently not having been deposited, but thrown there. The mandible was absent. According to the dentition it belonged to a 9-year-old individual since both second permanent incisors had nearly reached the occlusal level, but they had no traces of use. According to morphological characters the skull belonged to a girl. On both sides of the skull the zygomatic arch was missing, being broken out together with the neighbouring parts of

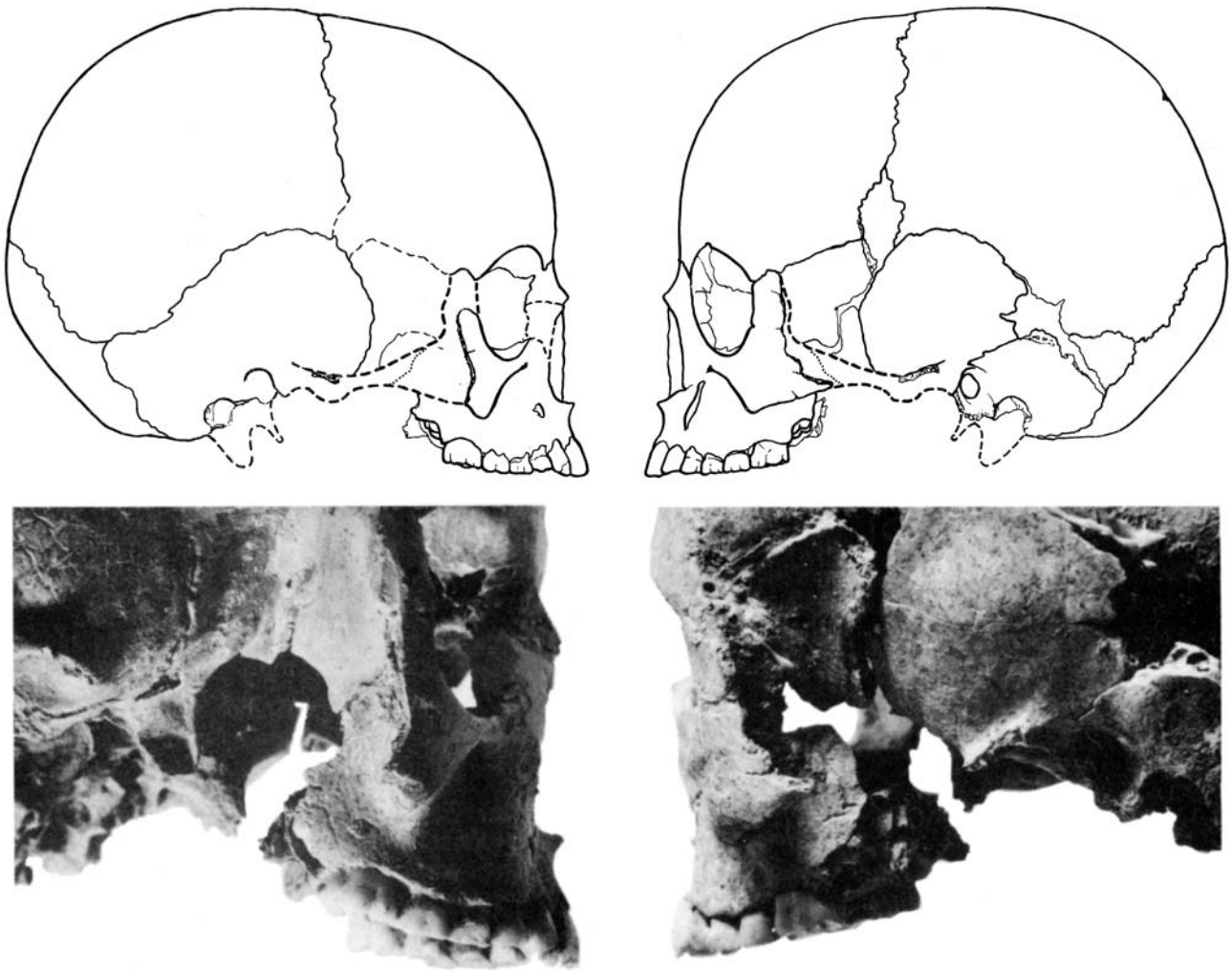


FIGURE 4. The temporal regions of the isolated skull found in the pit No. 2. Zygomatic arches on both sides of the skull are missing and I parts of malar bones are broken off. This figure was in Jelinek (1993) labelled as Fig. 4.

the malar bones (*Figure 4*). In that way the access was made to cut off the muscles and to free the lower jaw from the head. Therefore, this condition does not represent any secondary damage but intentional dissection on the head when its soft parts were still preserved.

On the left parietal bone between the parietal boss and sagittal suture a 2 cm long injury which had not penetrated the bone could be seen (*Figures 4, 5*). The direction of the blow was oblique, as shown by one sharp and one irregular edges (*Figures 4, 5E*). This injury was covered by a slight sinter film, proving that it was of an ancient date. It cannot be presumed whether this was a lethal blow but anyhow it could have been the cause of

subdural bleeding as the cut was fairly deep. Both mastoids and occipital condyle were damaged. Since those basal parts of the skull were fairly well protected when in anatomical position and since the bone surface layer was fairly thin, no final view will be presented here. The edges of the occipital hole were not damaged.

From the neighbouring finds four vertebrae of a young cow (with unfused parts) should be mentioned, two of them being in original anatomical position, the other two slightly displaced, as well as some flakes of animal bones, a goat metapodium, numerous pottery sherds, some of them identified as sherds of large storage pots with characteristic decorative imprints made by fingers. Further there were three pebbles and some more animal



FIGURE 5. A–D, isolated skull of a young girl from the pit No. 2, note the position of the injury on the parietal bone. E, detail of the injury on the left parietal bone of the skull from the pit No. 2, originally it was covered by a thin mineral film. One side of the injury is sharp, the other is broken out. This figure was in Jelinek (1993) labelled as Fig. 5.

bones. On three of them there were spiral fractures, showing that they had been split in fresh condition. In the same level in the northern part of the pit there was the skull of a young pig, fragments of three cow ribs, three vertebrae of a goat in anatomical position, the distal part of a cow's humerus with a characteristic spiral fracture, a large flake of a cattle long bone, a sacral bone of a cow, a fragment of a cow maxilla and another fragment of a cow mandible; further two sharp-edged pieces of soft marl-stone, three limestones and two *Unio* shells.

In the bottom level, sherds of broken pottery have been found, together with two distal parts of cow humeri

with characteristic spiral fractures, an ulna bone prepared as an awl, a human navicular bone, two sharp-edged stones, the body of a cow vertebra (subadult), a cow ulna and sherds of a large storage pot (with finger decoration).

### Refuse pit No. 3

Like the preceding pits also this one had the typical shape with a narrow neck and a broad base (bottle-shaped). On the bottom there were two incomplete skeletons (*Figure 6*). The first one, belonging to a young adult man No. 17 (23–35 year-old) was in ventral position with both arms missing (including shoulderblades). Also



FIGURE 6. The disposition of finds in the pit No. 3. Note that in both skeletons whole arms with shoulderblades are missing, and in the male skeleton also the lower parts of legs. In the skeleton of the girl the legs were dismembered and the long bones are next to the spine. The feet are missing. The male skull, here missing, has been stolen during the excavations (compare with *Figure 17*). Note the dispersed stones, pottery sherds and animal bones (A), *Unio* shells (B), sherds of a ceramic strainer and a small ceramic disc (C). This figure was in Jelinek (1993) labelled as Fig. 6.

one clavicle was missing. The other one had numerous cutmarks made by a sharp tool (*Figure 10*). Similar cutmarks were on the sternal ends of the ribs on their external side, and also on the rib necks on their endothoracic side (*Figures 11, 12*). These cutmarks were often doubled. Only the first two and the last two ribs did not have any cutmarks. The sternum was severely damaged as the result of one or two heavy blows with a sharp weapon. The blows had passed through the bone and can be considered as lethal. The shape of the main damage was wedge-like with sharp edges (*Figure 13*). On the left side of the bone traces of another cut could be seen, less illustrative since partly situated in the sternum and partly in the rib cartilages. Other sharp cutmarks have been found on two lumbar vertebral bodies (*Figures 14*), on the external side of the iliac bone (*Figures 15*) and on both femora (*Figures 16*). There, they were on the distal epiphyses, on the distal and proximal parts of the femoral shaft and on the necks. Both patellae and the lower parts of both legs were missing.

Aside of this male skeleton whose skull has unfortunately been stolen during the excavations, another incomplete skeleton No. 18, that of a girl, was situated. The dentition has shown that she was aged slightly above 14 years, as her second permanent molars had just been reaching occlusal level with weak traces of use. The epiphyses of long bones were not united. This fact supports the age estimation. It should also be noted that all the long bones were very weak and gracile and the femoral heads were very small, thus corresponding to the general gracility of long bones. However, dental age is mostly considered as a better guide than skeletal age, and in this case it could be retarded for some reasons. Cranial morphology was a female one, which has also been certified by simple bronze earrings that had coloured the bone. The skull and the trunk were lying on the left side and behind the spine separated long leg bones could be seen. Both tibiae with associated fibulae were in anatomical relation. The patellae and foot bones, as well as the whole arms with shoulderblades and both clavicles,



FIGURE 7. Several layers covering the finds on the bottom of the pit No. 3. They demonstrate that the use of the pit continued for a longer period of time after the described event. This figure was in Jelínek (1993) labelled as Fig. 17.

were missing. On both femora and on both fibulae cutmarks have been found, very numerous on the femoral necks, as the result of the separation of legs (*Figure 17*). Some cutmarks have been found on the ribs but they were not so numerous as on the male skeleton. All these cutmarks were of similar character, i.e. fine, mostly short.

In the same level as the two skeletons, irregularly dispersed pottery sherds of classical Únětice type have been found, small and middle-sized stones, mostly of local origin (limestone), animal bones and some *Unio* shells (*Figure 6*). Further, there were two hoof bones, probably of a goat, and two animal phalanges lying immediately on the pelvis of the man and on the ribs of the girl. On her ribcage first upper milk incisor, not yet used, has also been found. It belonged to a small child, probably 18 month-old. Just aside of the male skull there was a spiral flake of an animal bone and a fragment of a cow rib. Certainly important was the find of a broken stone mace head made of hard polished black stone.

Besides that, there was also a small ceramic disc with a hole in the centre, sherds of a ceramic strainer and an awl made of an animal ulna. Numerous layers of different thicknesses and colours covered all these finds, evidencing that the pit had been consequently filled up during a longer period of time (*Figure 7*).

#### Refuse pit No. 4

In the neighbourhood of the pit No. 3 there was the pit No. 4, containing a complete female skeleton (*Figure 8, 9*). The individual was younger than 20 years, as the third molars were not yet cut through. The epiphyses of long bones were not completely fused. In front of the skeleton there were eight limestones and some pottery sherds. On the temporal bone there were five bronze earrings and on the little finger of the left hand there was a simple bronze ring. In front of the knee there was a distal part of a pig humerus with a characteristic spiral fracture and flint flakes (*Figure 9*). It is rather important to mention here that a flint blade has been found also in the Únětice pit with human remains, discovered in 1985 at Cezavy, lower on the slope (Jelínek 1990b, c, Salaš 1990). Around the complete female skeleton there were some *Unio* shells. Interesting was the fact that the right hand was sharply flexed, which would have been impossible if the sinews were undisturbed. Two ribs on the right side of the rib cage were united as a consequence of some injury.



FIGURE 8. The complete female skeleton No. 16 in the pit No. 4. Note also the relation to the pit No. 3, whose shape, stratigraphy and skeletal finds are well seen. This figure was in Jelínek (1993) labelled as Fig. 18.

## STUDY OF THE CUTMARKS

### Method of examination

Before making the description of the cutmarks all the skeletal remains of the two individuals found in the pit No. 3 have been examined with a binocular lens, enlarging twice, ten times and forty times. In each bone with cutmarks, the following has been assessed:

- the number of cutmarks
- their localisation
- their length:
  - long (longer than 10 mm)
  - medium (5–10 mm)
  - short (less than 5 mm)
- their width:
  - very fine
  - fine
  - wide
- their depth:
  - superficial
  - shallow
  - deep
- their shape:
  - straight
  - slightly curved



FIGURE 9. The complete female skeleton No. 16 in the pit No. 4. Detail of the intentionally broken distal part of the animal humerus and flint flakes in front of the skeleton's knee. This figure was in Jelínek (1993) labelled as Fig. 18a.

- incision
- localisation according to muscular insertions
- relation between the cutmarks if in a group:
  - superimposed
  - parallel
  - not parallel

On the drawings the direction of the cutmarks has exactly been represented.

### Male skeleton

#### Left clavicle

Only the left clavicle (*Figure 10*) has been found. On the superior flat surface of its acromial extremity, there were two interrupted, fine, straight cutmarks, 18 mm long, and one short fine cutmark between them. In the

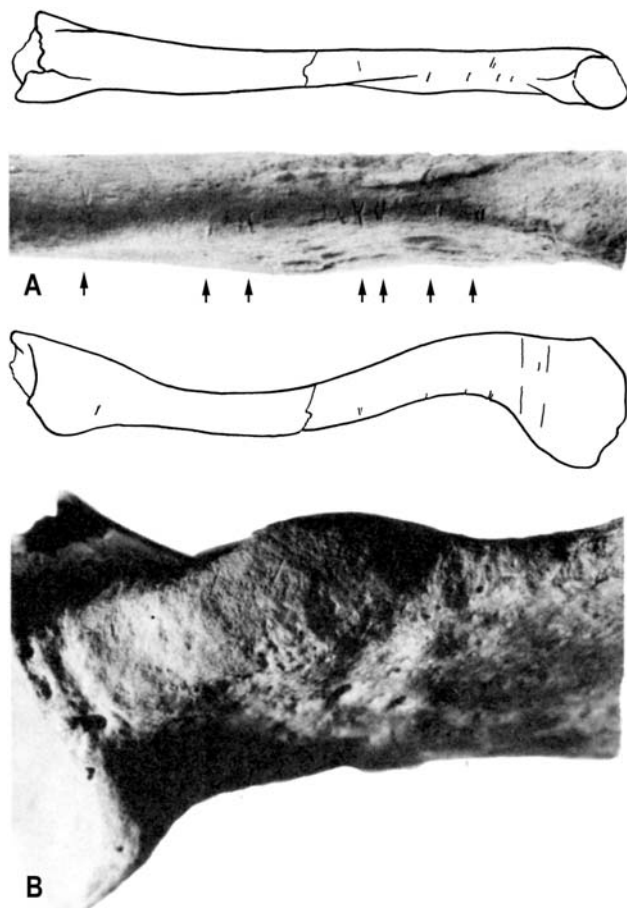


FIGURE 10. The incomplete skeleton of male No. 17 in the pit No. 3. Cutmarks on the left clavicle: A, on the anterior border; B, on the sternal extremity. This figure was in Jelínek (1993) labelled as Fig. 7.

neighbourhood of the deltoid tubercle there was a group of eight sharp, short (1–3 mm) deep cuts into the anterior concave border of the clavicle. Two other short cuts (3 mm) were on the sternal extremity of the bone.

#### Ribs and the rib-cage

The cutmarks on the external side of the ribs were found on both sides of the ribcage (see *Figure 11*). There were mostly several cutmarks in each rib, usually at a small distance (3–8 cm) from the rib end. Only the uppermost (first three) and lowermost (last two) ribs were without any cutmark. The illustrative damage of the lower border in some ribs (fourth and fifth ribs) should be noted. Also the sternal ends of most of the ribs were damaged. As for their length, the cuts were mean (5–10 mm), mostly fine, and shallow or deep. Their shape was straight.

Another set of cutmarks was found on the endothoracal side of the rib-necks, along the vertebral

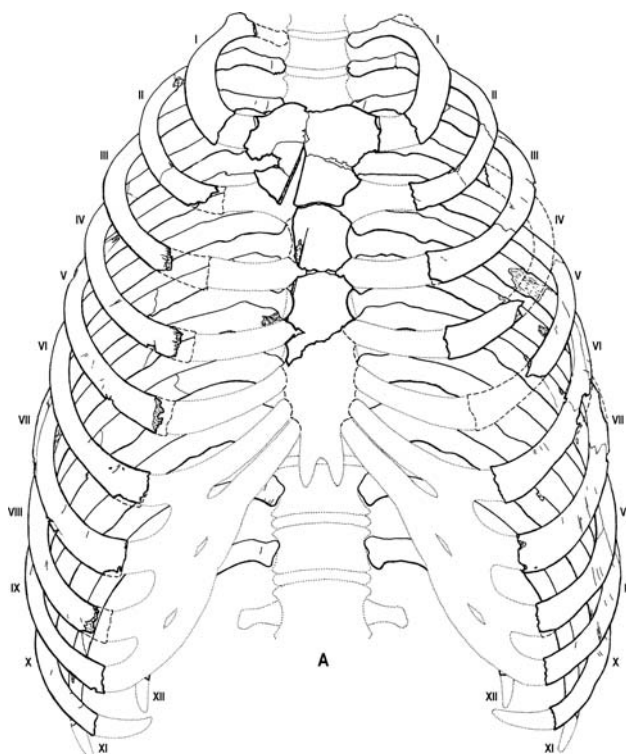


FIGURE 11. The incomplete skeleton of male No. 17 in the pit No. 3. A, Drawing of the disposition; and B–G, examples of cutmarks on the external side of the sternal ends of ribs. Note the damage or the lower edge of the fourth and fifth ribs on the right side, the damage of the ends of the ribs and the heavy damage of the sternum. This figure was in Jelínek (1993) labelled as Fig. 8.



column, mainly on the right side (*Figure 12*). They were either simple or multifold, mostly parallel. Their clearly oblique incision directed from the left to the right

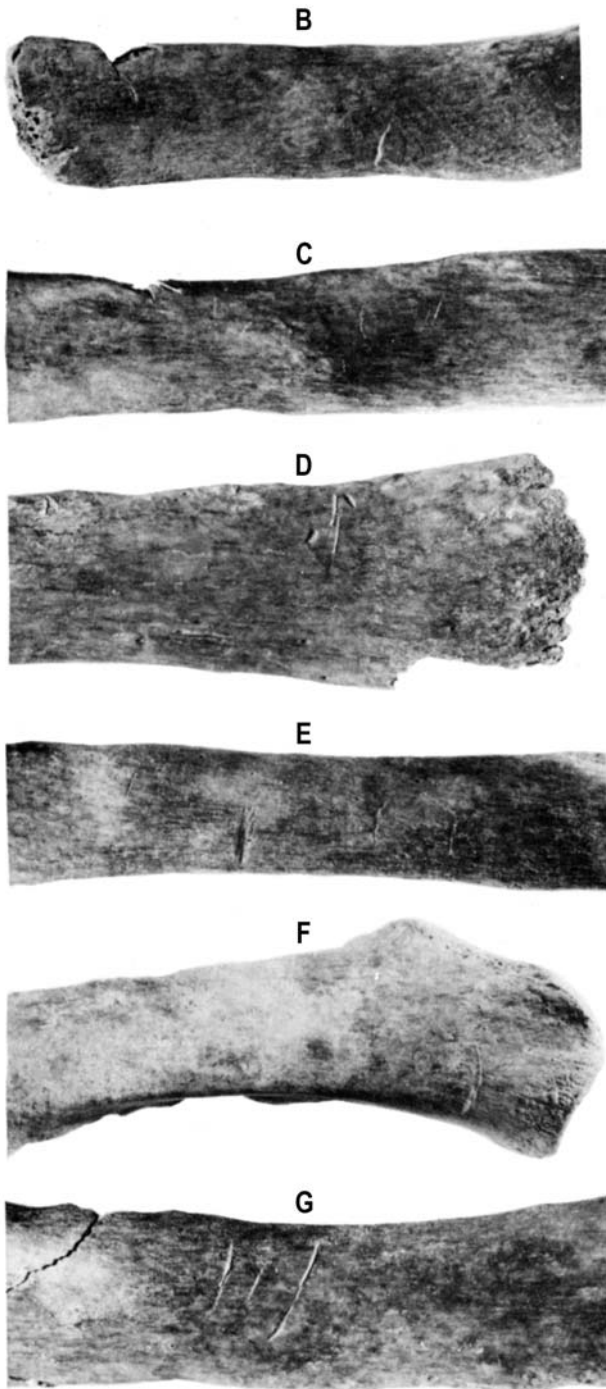


FIGURE 11. Continued.

demonstrates that they were executed by somebody using his right hand (see *Figure 12*). No cutmarks have been observed on the first and last ribs. The cuts were long (more than 10 mm), mostly fine, shallow, slightly curved, proving so the cut coming from the right side. The characteristic damage of the sternum evidently represents the lethal blow (*Figure 13*).

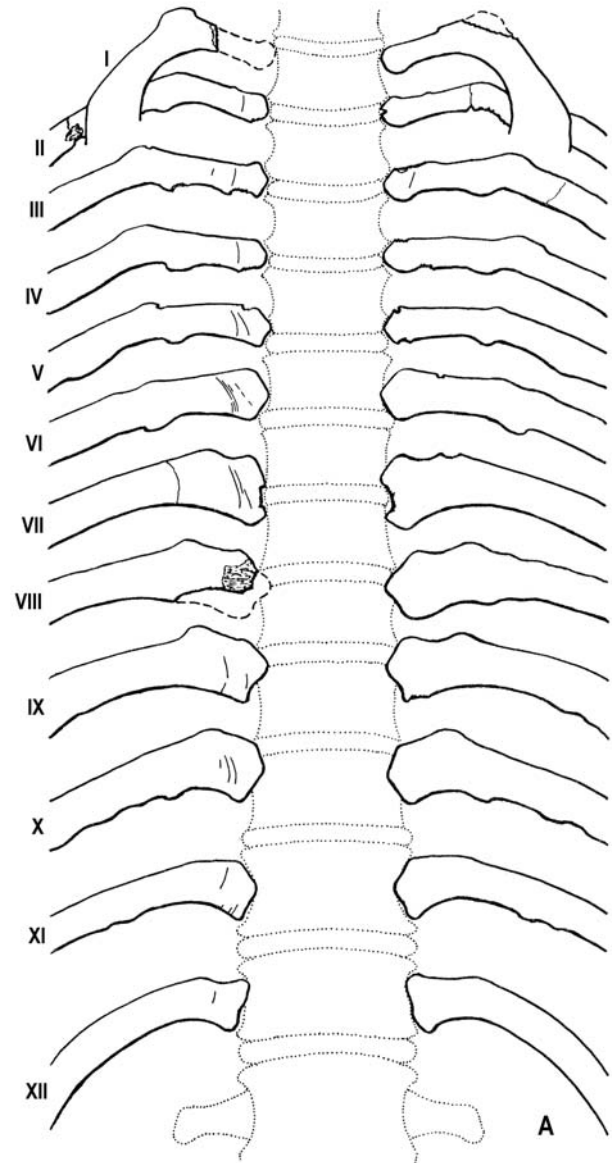


FIGURE 12. The incomplete skeleton of male No. 17 in the pit No. 3. A, drawing of the disposition; and B–D, examples of cutmarks on the endothoracic side of the rib-necks illustrating the evisceration of the ribcage. This figure was in Jelínek (1993) labelled as Fig. 9.

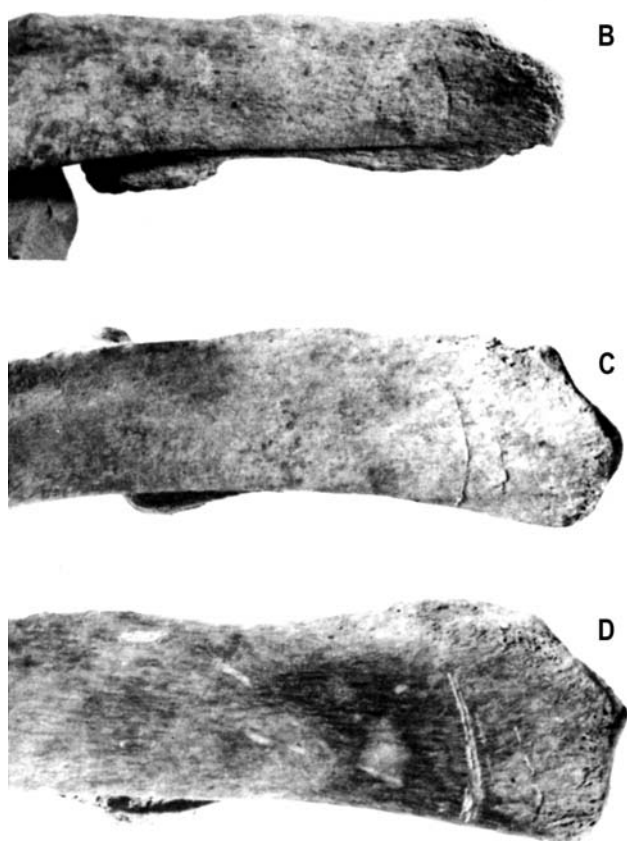


FIGURE 12. Continued.

### ***Vertebrae***

Three cutmarks have been found also on the ventral sides of the vertebral bodies of the third and fourth lumbar vertebrae (Figure 14). This could have been done only during or after the evisceration of the abdominal space. The longest cutmark was accompanied by depressed bone surface showing that this cut must have been done with some force. These cutmarks were long (more than 10 mm) or mean (5–10 mm), two fine and shallow, one deep.

### ***Iliac bones***

On both external sides of the iliac bones some cutmarks have been found (Figure 15). On the left iliac bone there were 12 cuts, two long, three mean and seven short ones. All were fine to very fine, superficial or shallow, and straight. They were in the place of *m. gluteus*. The two longest of them were parallel; three other short cuts were on the iliac crest. On the external side of the right iliac bone there was only one short (5.5 mm), fine, superficial, straight cutmark near the great ischiadic notch.

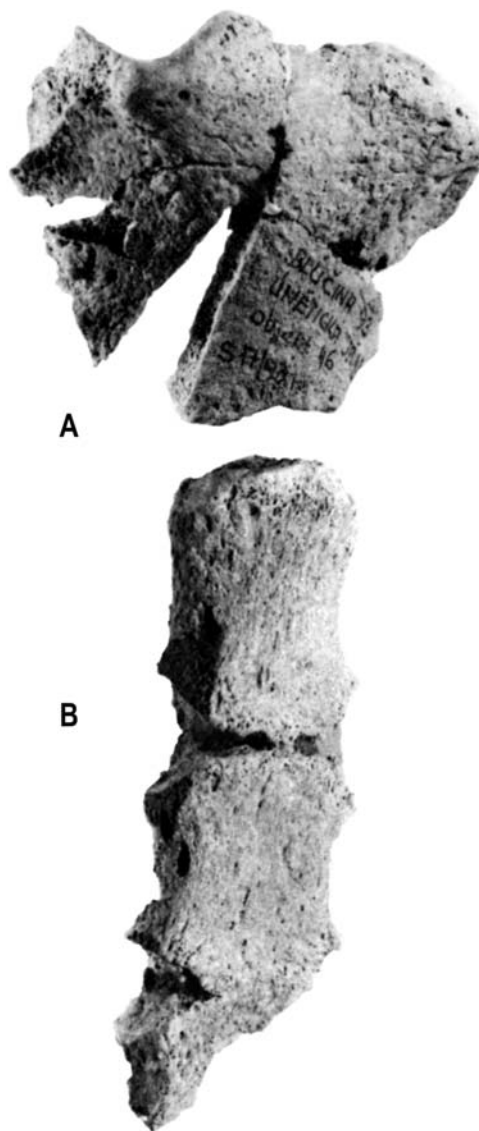


FIGURE 13. The incomplete skeleton of male No. 17 in the pit No. 3. Traces of lethal blows on the sternum (compare with Figure 8). This figure was in Jelinek (1993) labelled as Fig. 10.

### ***Femora***

Although both the male femora, having not been dismembered, were in anatomical position, four fine cutmarks have been found on the ventral side of the neck of the right one and four other on its dorsal side (Figure 16). Another isolated, fine, straight, narrow, superficial, interrupted cutmark, was 12.4 mm long. Near the rim of the femoral head, but on the neck, there was another very fine cutmark (of the same direction as the preceding one), 6.4 mm long. The operator probably tried to

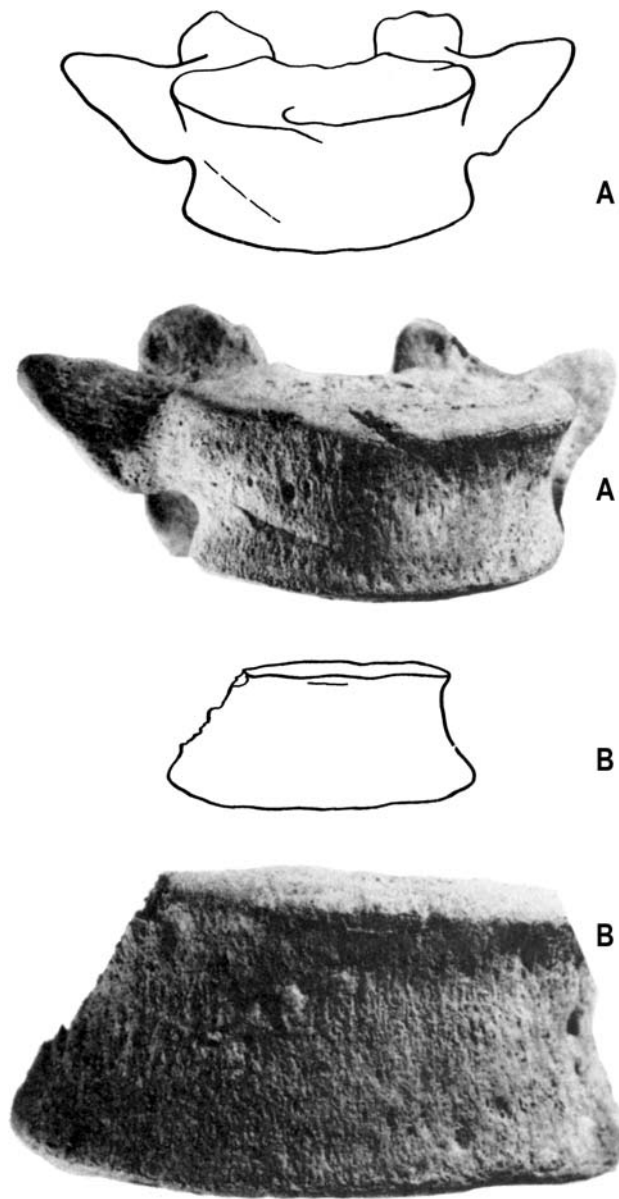


FIGURE 14. The incomplete skeleton of male No. 17 in the pit No. 3. Two examples of cutmarks on the ventral side of the lumbar vertebral bodies. This proves the evisceration of the abdominal region. This figure was in Jelínek (1993) labelled as Fig. 12.

dismember the right leg. He succeeded to cut through to the femoral neck but then he abandoned his original intention. Similarly, on the distal epiphysis of this right femur on the lateral side of the femoral condyle there were three parallel cutmarks: one, 7 mm long, the other two were shorter – 4 mm (*Figure 16*). During observation of the upper extremity of the bone in posterior view,

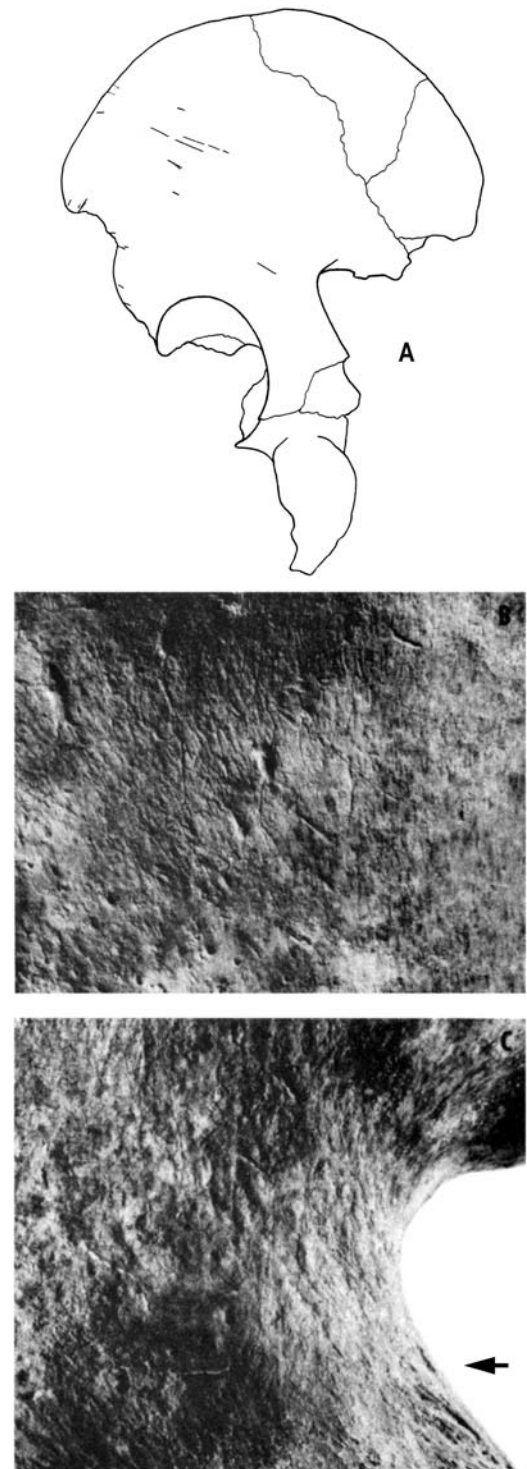


FIGURE 15. The incomplete skeleton of male No. 17 in the pit No. 3. Fine cutmarks on the external face of the iliac bone. They prove cutting of human flesh (filleting). This figure was in Jelínek (1993) labelled as Fig. 11.

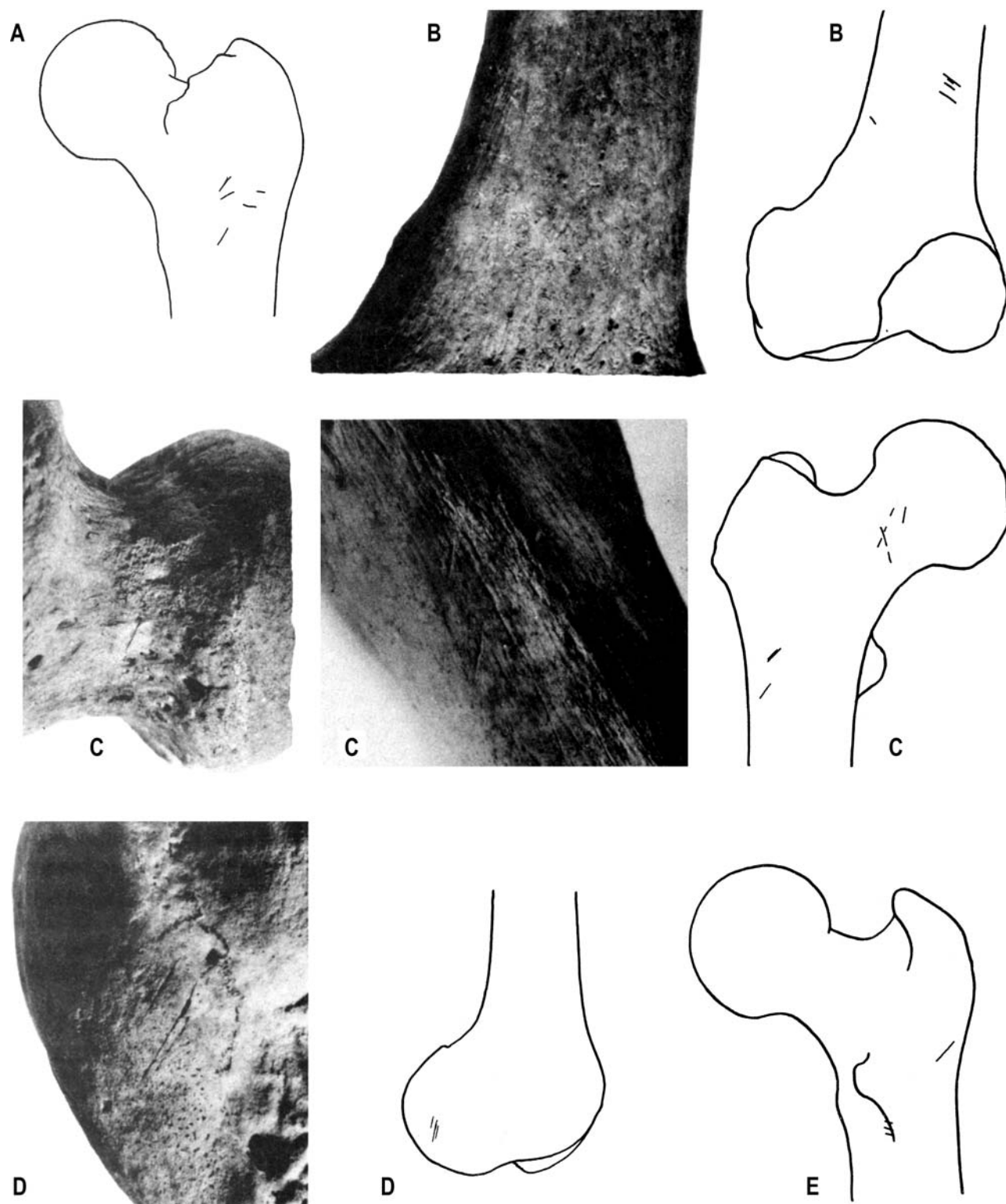


FIGURE 16. The incomplete skeleton of male No. 17 in the pit No. 3. Some examples of the cutmarks found on both the femora. This figure was in Jelinek (1993) labelled as Fig. 13.

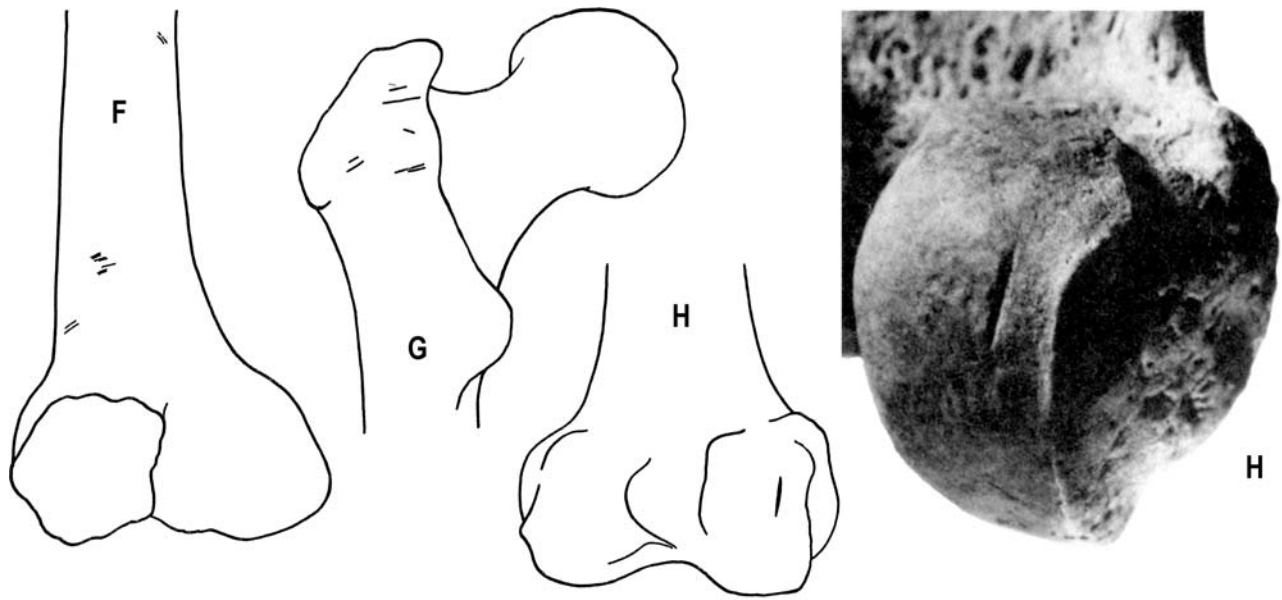


FIGURE 16. Continued.

a carved notch on the lower edge of the lesser trochanter on the pectineal line, 4 mm broad, has been discovered. On the lower part of the greater trochanter there was a fine, superficial, straight, narrow, 4.1 mm long cutmark. In anterior view four cutmarks could be seen: fine, superficial, straight. The second and fourth (immediately under the greater trochanter's edge) were doubled. The four of them were 7 mm, 3 mm, 4.5 mm and 3.2 mm long respectively.

All cutmarks situated on the femoral neck and on the distal condyles can be considered as the result of dismemberment.

On the left male femur there were no cutmarks on the neck. Seven cutmarks were found on the trochanter major. On the distal end of this bone, on the lateral side of the left condyle there were three fine, 13 mm and 7 mm long cutmarks (*Figure 16*) and on the posterior part of the smooth surface of the condyle there was one deep, 10 mm long cutmark. This condylar damage can be considered as trace of dismemberment.

Eight cutmarks illustrating the filleting were found on the distal and proximal parts of the shaft of the right femur (*Figure 16*). They were fine, sometimes doubled, 3–5 mm long, straight.

### **Female skeleton**

#### ***Femora***

When examining the skeletal remains of the young female, some cutmarks have been found on the individual

long bones of the lower extremities that laid dislocated next to the spine. After closer examination of both femora, numerous cutmarks have been found on both femoral necks, proving the dismembering of both legs (*Figure 17*). They were 5–12 mm long, fine, shallow and straight.

In posterior view, the left femur had five cutmarks on its upper extremity, situated on the femoral neck and following its circumference one after the other. They were fine, narrow, superficial, and were situated between the femoral head and the greater trochanter, reaching to the anterior side of the neck. They were 3.2 mm, 2.2 mm, 12.1 mm (interrupted), 5.1 mm and 4.5 mm long. Without any doubt, dismembering activity has been proved here. Two other cutmarks were seen in this posterior view: one on the lower margin of the femoral head – straight, medium deep, medium wide and 4 mm long. The other was halfway between trochanter tertius and the lower limit of greater trochanter (transversal position). It was 5.8 mm long, doubled, superficial, straight and fine. On the medial side of the upper third of the diaphysis there was a transversal, 4.9 mm long, simple, superficial, narrow, isolated cutmark. On the lower extremity of the shaft, on the medial edge of the popliteal plane there were two cutmarks: one doubled, 11.2 mm long, superficial and broad in its lower part, in the upper part narrow, straight. The second one was 5 mm long, medium deep, medium wide and in the same direction as the preceding one. In anterior view, a 14.0 mm long cutmark could be seen on the lower part of the shaft near its lateral side, laterally

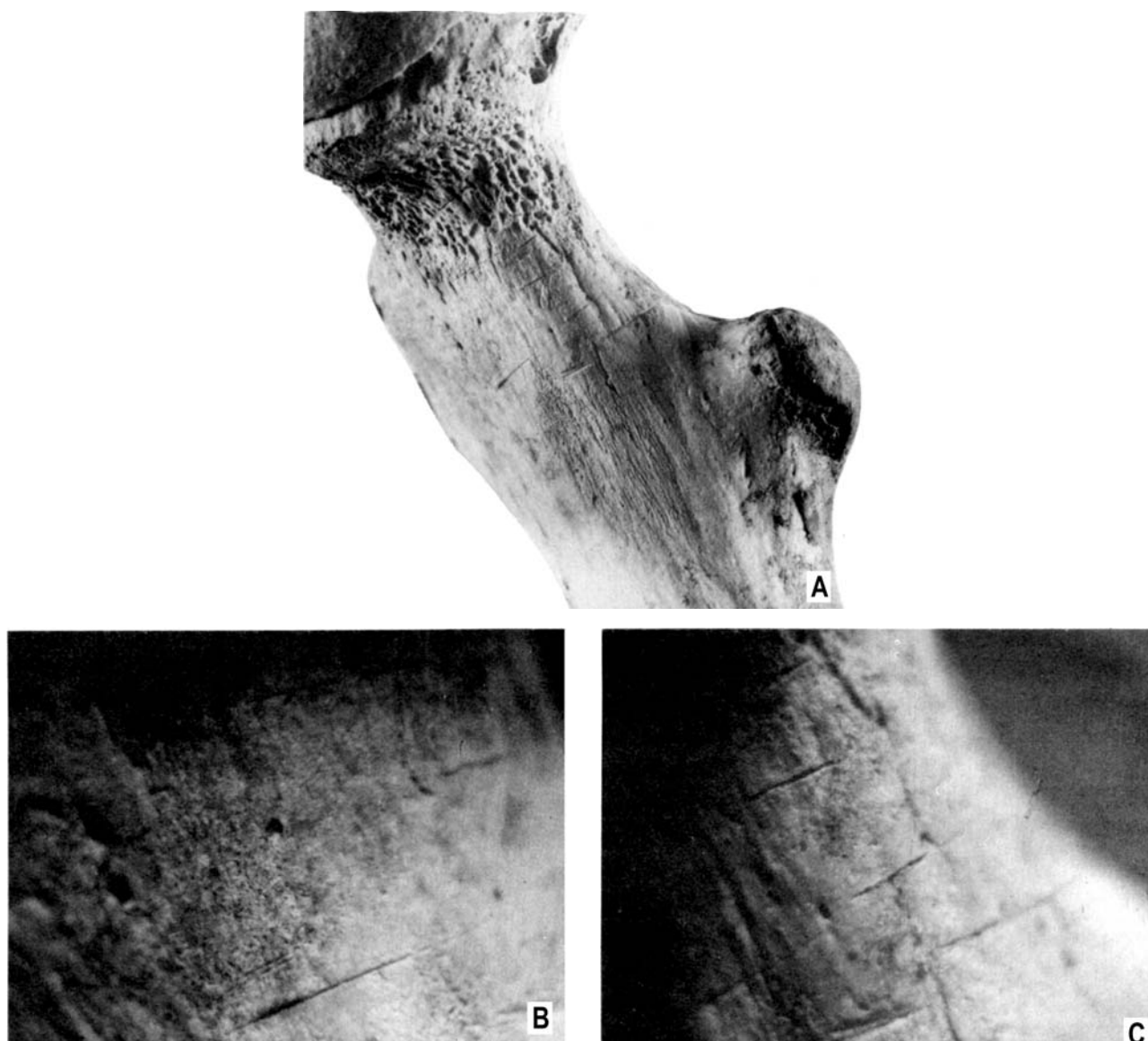


FIGURE 17. The incomplete skeleton of female No. 18 in the pit No. 3. Cutmarks on femoral neck. They prove the dismembering of the leg. Note the enlarged details in views B, C. This figure was in Jelinek (1993) labelled as Fig. 15.

broad and deeper but finer and superficial in its higher part, as the cutting tool had probably slipped out.

The right femur had one cutmark on the distal part of the shaft and another one, short and wide, was superior to the lesser trochanter (*Figure 17*).

### ***Tibiae***

When the left tibia was inspected in anterior view, three short, wide superficial cutmarks have been found on the lateral edge of the lower end of the shaft. It seems

that they had been made by a rather blunt tool. They were 4.8 mm, 3.0 mm and 4.8 mm long.

In posterior view, a transversal, simple, medium deep, curved isolated incision could be seen on the upper part of the shaft near the medial edge – it was directed upwards and 3.8 mm long. Another cutmark was near the middle of the shaft at its medial border. It was broad, medium deep and 3.5 mm long.

The cutmarks on the proximal and distal parts of the bone should be considered as traces of dismembering activities.

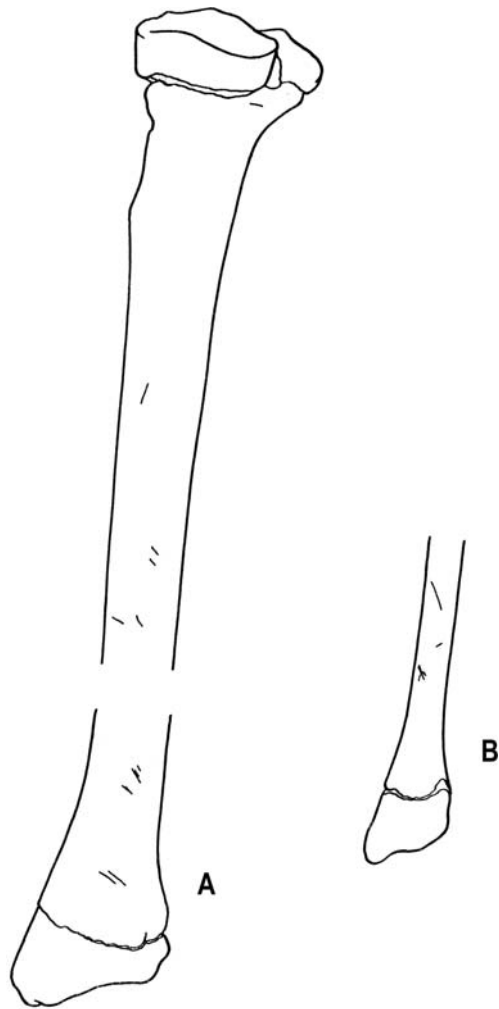


FIGURE 18. The incomplete skeleton of female No. 18 in the pit No. 3. Some examples of the cutmarks found on the tibia and fibula. This figure was in Jelínek (1993) labelled as Fig. 14.

On the right tibia two cutmarks were obvious in posterior view, on the lower extremity of the shaft near its medial edge: one was 4 cm above the epiphyseal line and was 2.5 mm long, wide and medium deep. The other was only 2 cm above the epiphyseal line and was doubled, 3.5 mm long, medium deep and narrow. On the uppermost end of the diaphysis near the epiphyseal line there was one isolated, transversal, superficial, fine, straight and 5.0 mm long cutmark.

In anterior view, two short cutmarks could be seen on the medial side of the shaft, approximately in the middle of its length, each 3.0 mm long. The first was narrow, the second one was broader.

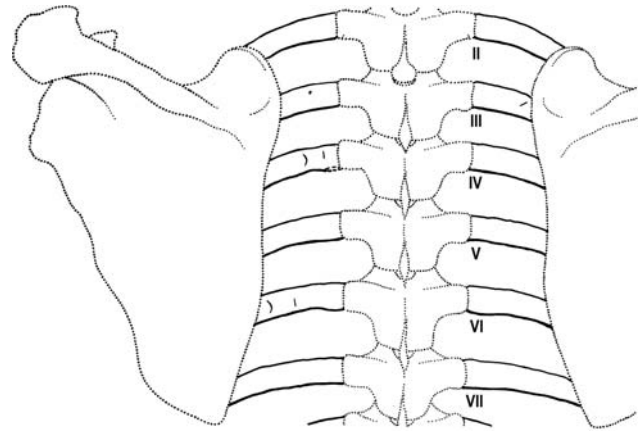


FIGURE 19. The incomplete skeleton of female No. 18 in the pit No. 3. Dorsal view on the disposition of three ribs with cutmarks situated between the backbone and both shoulderblades. This figure was in Jelínek (1993) labelled as Fig. 16.

### ***Fibulae***

On the right fibula six cutmarks or traces of damage were apparent in anterior view. Starting from the lateral maleolus, a 3 mm long fine cutmark appears first, 3.5 cm above the epiphyseal line on the fibular shaft, followed 2 cm higher up by a clear, 10 mm long, oblique, narrow, medium deep cutmark (*Figure 18*). Approximately in the middle of the diaphyseal length there were two short transversal cutmarks, each 3 mm long, and on the upper half of the shaft one other short cutmark and one impression, small damage. All these marks were on the anterior crest. Two short, fine, straight cutmarks could be seen in anterior view on the distal end of the left fibular diaphysis.

All these long bones of a subadult female were found behind the spine of the same individual in irregular position, evidently thrown there. The thigh bones were isolated but both tibiae and fibulae were together in anatomical position, demonstrating that they still have had some ligaments and tendons or muscular remains when thrown there.

### ***Ribs***

During careful study of the ribcage some cutmarks have been found on three of the ribs – on their external (dorsal) side of the spine, that is between the rib-head and the rib-tubercle (*Figure 19*). They were on the third rib of the right side and the fourth and sixth ribs of the left side of the ribcage. According to the anatomical position of those ribs which all are situated at the level of the vertebral crest of the shoulderblades, it is clear that this costal damage was the consequence of the

dismembering of the arms with shoulderblades when cutting through dorsal musculature. On the third right rib there was one short (2 mm) simple cutmark on its tubercle, on the external side of the fourth left rib, in the neighbourhood of the tubercle, there were two short (3 mm) but clear and deep cutmarks, and on the sixth rib of the same left side there was one short similar cutmark on the costal angle. All these cutmarks were of similar character and position.

### Characteristics of the cutmarks

The section of the cutmarks was mostly V-shaped. They had been made by a stone or metal tool. There were no traces of rodent gnawing, carnivore biting, neither of erosion of the bone surface caused by plant roots, or human or animal trampling. The originality of the cutmarks is proved by a slight lime film coating covering them in some cases. When the bone was secondarily broken (post mortem), the damaged traces of cutmarks on both fractured parts document that the cutmarks were earlier than the post-mortal fracture.

Some cutmarks are particularly characteristic: long, slightly curved and often doubled – these are the endothoracal cutmarks on the costal necks of the male ribcage.

Some others are short, semicircular, oblique incisions in the bone: e.g. some of the cutmarks on the external side of the male ribcage.

The majority of the cutmarks are short (the long cutmarks are exceptional, e.g. on the humeral end of the male clavicle or on the dorsal side of the male ilium) and fine.

### Final observation on the cutmarks

The systematic analysis of the cutmarks has proved three kinds of manipulation:

1. The dismemberment of the lower extremities which has been evidenced on the femoral necks of the female individual and on the proximal and distal epiphyses of the conserved long bones of the lower extremities in both individuals.
2. The filleting, represented by cutmarks on the external sides of the sternal extremities of the ribs, on the diaphyses of the long bones of the lower extremities of both individuals, on the male iliac bones and on the male clavicle.
3. Thoracic and abdominal evisceration, proved by cutmarks on the endothoracal side of the rib-necks and on the lumbar vertebral bodies of the male skeleton.

## MISSING PARTS OF THE SKELETONS

In the male skeleton, as well as in the female one, both arms including both scapulae were missing. Since this has been the case in both skeletons, it must have been intentional. Corresponding bones have not been found and they (or their remains) should most probably be in some other place of the top of the hill. The cutmarks on the dorsal side of the female ribs demonstrate the dismembering procedure. Similarly, parts of the lower extremities were missing. In both, upper and lower extremities there is rich musculature with important pieces of flesh and it is highly probable that this was the reason for their dismemberment. This is finally proved in the cases when long bones of the lower extremities have been found, with cutmarks resulting from the filleting activities. Filleting the dorsal musculature was the first step towards loosening the upper extremity with its shoulderblade (see the cutmarks on the dorsal side of the female ribcage).

## CHEMICAL ANALYSIS (by J. Jambor)

Strontium (Sr) and zincum (Zn) analyses have been realised for three skeletons: the incomplete ones, No. 17 (young man) and No. 18 (girl) discovered in the Únětice culture pit No. 3, and the complete skeleton No. 16 (young woman) from the Únětice culture pit No. 4. Five samples were taken from all the three individuals – of the ribs, vertebrae and skull. Although some specialists have recently considered the possibility of contaminating influence of soil content of strontium on bone samples, the reached results are presented here as a contribution to contemporary knowledge (*Table 1*). The collagen analyses will be published later.

The strontium evaluation has shown an unusually high content of this element in all the three individuals, as compared with other prehistoric populations (e.g. German, Roman, or Celtic; see Smrčka *et al.* 1988) in central Europe. The values for the samples of the female No. 16 are significantly lower than those of the girl (No. 18) and the man (No. 17), both in the general average (476.6 for the No. 16 woman, 858.4 and 759.2 for Nos. 17 and 18 respectively), and in individual samples: any single one of the five samples from the No. 16 woman does not reach the minimum values of the altogether ten samples from the girl and the man (Nos. 17 and 18). In future study, it may be interesting to follow the age of the finds, comparing the corresponding way of treating corn – i.e. whether the high content of strontium is not related to rougher grinding of grain.



Generally speaking, despite the evident difference between the two incomplete skeletons (Nos. 17 and 18) on the one hand and the complete one (No. 16) on the other, it may be assessed that vegetal food of all the three studied individuals was very good.

When considering the zincum (Zn) content, it may be assessed that it is either equal or higher than in comparable prehistoric populations (Smrčka *et al.* 1988 – the Celts, personal communication). This shows that no one of the three individuals suffered from important lack of meat in their diet. Mutual comparison of the results obtained in the three individuals indicates, however, considerably higher values, and consequently also higher consumption of meat, in the No. 16 woman than in the other two individuals Nos. 17 and 18. Considering that the average value in the No. 18 girl (128.8) has been strongly influenced by the maximum value of the fifth sample in this individual (235), significantly higher than the values obtained from the remaining four samples, it cannot be excluded that the average value of the No. 18 girl (128.8) would not be very different from the average calculated for the No. 17

man, as the calculated data show. On the contrary, the difference between these and the average value in the No. 16 woman is significant.

If the discovered differences are confirmed by the comparison of analyses of other finds of complete and incomplete skeletons from the same site, it may be indicative of social hierarchy, reflected in differentiated food, mainly in the consumption of meat.

## DISCUSSION

Similarly to the Late Bronze Age Velatice culture finds discovered on the Cezavy hill earlier (Jelínek 1957, 1990a), also in these finds of the Early Bronze Age (Únětice Culture) there were human remains accompanied with stones, pottery sherds and animal bones. The similarity of both situations is striking, especially in cases when human remains have been found in pits. The stones were usually pieces of local limestone, but sometimes there occurred also river pebbles coming from the Svratka river or Cezava creek, flowing through the floodplain below the Cezavy hill some 1000 metres far from the site. The pebbles were manuports, they had no traces of use. The Únětice find circumstances excavated in 1993 were analogous to the circumstances discovered earlier in the Late Bronze Velatice cultural layer. They demonstrate analogical ritual habits. Like in the Late Bronze finds at Cezavy or at Velim in Bohemia (Dočkalová 1990, Hrala *et al.* 1992), also here in the Early Bronze Age at Cezavy an isolated human skull, isolated human bones, dismembered skeletons and a complete skeleton in flexed position, have been found.

The isolated skull does not demonstrate any traces of cannibalism. Its brain had not been used and it had not been situated on a pole as a trophy. Its great occipital opening was not damaged. It is impossible to assess why the mandible had been intentionally separated. According to the injury found on the skull vault and according to the find circumstances it is possible that this individual did not die in a normal way but was killed.

Isolated human bones have been found in the pit No. 2. Given the fact that no other human remains have been found with them and considering their damage, they may be considered as refuse thrown into the pit. It is the same with the isolated deciduous incisor found in the pit No. 3.

The two incomplete skeletons had been dissected with a sharp tool, considering the character of the cutmarks (see *Figures 10–19*). The damage on the sternal bone of the male skeleton was a lethal blow, made by a heavier weapon. This was the single use of such a tool,

TABLE 1. The trace element analysis (strontium, zincum). Samples from three individuals are represented.

	Sr		Zn	
	Raw	%	Raw	%
Complete female 16				
Vertebra	415	1.60	113	1.43
Vertebra	372	0.42	134	1.80
Rib	526	1.27	236	1.14
Vertebra	626	0.41	174	0.24
Rib	444	0.56	114	0.58
Incomplete male 17				
Vertebra	833	2.05	108	0.84
Vertebra	978	0.79	119	0.88
Rib	810	0.88	96.2	0.92
Rib	910	1.00	103	1.07
Vertebra	761	1.53	117	0.23
Incomplete female 18				
Vertebra	754	3.40	235	0.46
Vertebra	793	1.39	86.9	0.94
Skull	646	0.75	73.2	0.21
Vertebra	918	1.89	102	0.73
Skull	650	0.58	149	0.77

which means that such a tool or weapon had not been further used in the dissection of the cadaver.

The cutmarks on the external sternal side of the ribs were evidently traces of cutting off the large pectoral muscles. The cutmarks on the male iliac bone and on both male femoral shafts are of similar origin (cutting off the muscles). The cutmarks on the endo-thoracal sides of the costal necks were the result of cutting out the content of the endothoracal space. Therefore three activities should be considered here: 1) dismembering, 2) cutting the human flesh (filleting) and 3) cutting out human intestines (evisceration).

The destructive approach, illustrated by deliberate throwing of stones on human remains, by breaking and throwing down pottery sherds, and by breaking or otherwise destroying other valuable objects (e.g. polished black stone mace-head in the pit No. 3), signals an elaborate ritual. The same destructive approach (the destruction of property in some kind of ritual) can be also observed in the killing of humans.

The complete skeleton of a young female (*Figure 8, 9*), found in a flexed position in the pit No. 4, lacks usual funeral goods and it is therefore difficult to decide whether it was a funeral of a deceased person or a sacrifice. The accompanying material (stones, pottery sherds, animal bones, etc.) support the latter possibility. In this context, also the flint flakes found in front of the knee of the skeleton can be important, reminding of another similar find discovered in 1985 (Jelínek 1990b, c, Salaš 1990).

## CONCLUSION

If the observed facts are summarised and compared with other observations published earlier, this important find of 1993 supports the theory that all these numerous finds represent a complex ritual with earlier roots and later continuity (Jelínek 1957). The continuity of this ritual on the sacral hill from the Early Bronze Age to the Late Bronze Age (and probably also from the Neolithic period) is highly interesting and will be the subject of further study. Cezavy near Blučina in south Moravia is a key site illustrating the ritual life and social relations in the Bronze Age period.

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