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RITUAL OR ORDINARY BURIAL RITES AT THE VELIM BRONZE AGE SITE?

ABSTRACT: *Archaeological site No. 27 from the Bronze Age, dated by means of grave-mound pottery, was discovered during field work on the hilly elevation "Skalka" in Velim (Czech Republic) between 1988 and 1994.*

This site was characterised by unusual findings with regard to the human skeletons buried there; these were probably victims of ritual sacrifice, both with and without demonstrable traces of killing.

Of the 263 sites uncovered on Skalka hitherto, site 27 contained the highest concentration of human skeletons, accumulations of isolated human skulls, and isolated human and animal bones, as well as bone fragments. Stones of various size and entire ceramic vessels, as well as broken vessels, ceramic fragments and bronze objects, were deposited at the site.

By means of an osteological analysis, it was determined that 11 children, 3 women and 2 men had been buried at site 27. The skulls of nine individuals and the incomplete skeletal remains of at least 69 people and 11 species of animals were also scattered about the site. These findings may be interpreted as evidence of ritual behaviour, which shed light on differences in the types of burial that were performed at Skalka during the Bronze Age. From the taphonomic point of view, the possibility of interpreting the determined number of individuals buried as well as killed was examined with regard to questions concerning spiritual culture.

KEY WORDS: *Middle Bronze Age – Grave-mound culture – Velim – Czech Republic – Osteological identification – Human sacrifice – Burial rites*

INTRODUCTION

The "Skalka" site (210 m a.s.l.) is a slight elevation located in the eastern part of the village of Velim in Central Bohemia (Kolín district). Since 1984 a system of fortified ditches, designated by the letters A through H and dated by means of grave-mound pottery, have been successively uncovered at this archaeological site (Hrala, Sedláček, Vávra 1987, 1988, 1990, 1991, 1993, Hrala, Vávra, Sedláček 1986, 1991) (*Figure 1*). Pits of various dimensions and depths had been dug into the ditches, containing human and animal relics, including human bodily remains, isolated human and animal bones, ceramic vessels, ceramic fragments, stones, riverbed gravel, bronze objects, and bronze and gold deposits (Hrala *et al.* 2000).

Over the course of the research, 263 archaeological sites were uncovered at Skalka; the findings from sites 23 and 154 have already received an anthropological examination (Dočkalová 1996, 1998).

This study follows up on the previously obtained results, and presents new information derived from a detailed analysis of the finds and circumstances thereof at archaeological site 27, in particular, those finds related to human sacrifice at Skalka. In the case of finds of human and animal bones, isolated skulls and defined instances of human sacrifice, the circumstances of the finds were distinguished through analyses of taphonomic history.

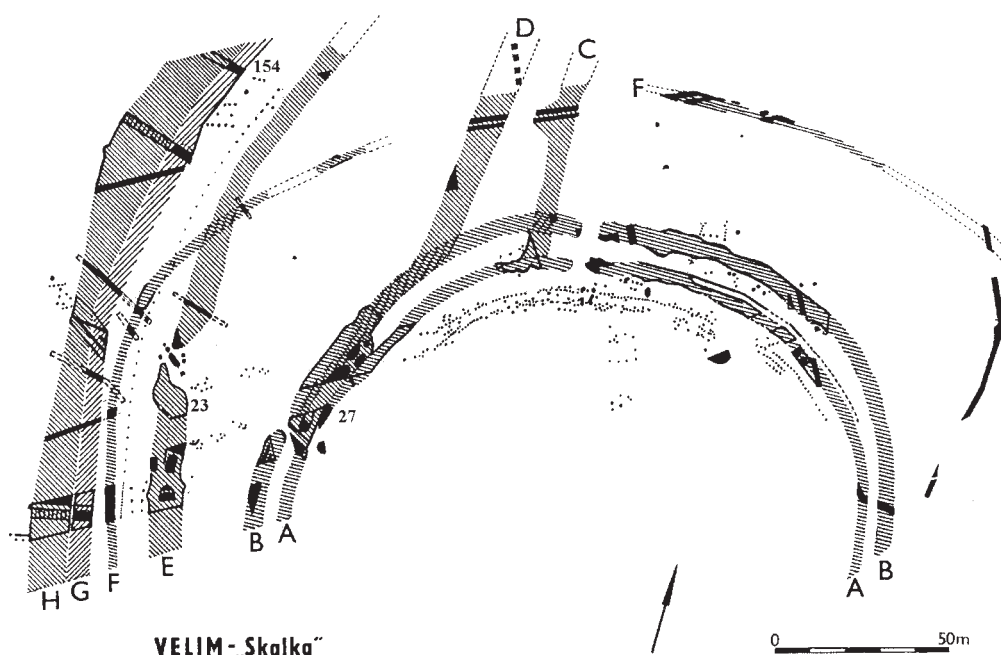


FIGURE 1. The Skalka site near Velim, researched from 1984 to 1999. The system of eight ditches and their path is indicated by the letters A – H, with sites 154, 23 and 27 highlighted. (As per J. Hrala, M. Vávra, Z. Sedláček.)

THE ARCHAEOLOGICAL SITUATION AT SITE 27

The first part of site 27 in ditch D was discovered using an archaeological test probe at the end of 1988. The partial skeleton of an adult female, K 14, together with a gold deposit, was found at a depth of 262–269 cm (12 cm above the bottom of the site). The woman's right hand was turned towards her face, with the fingers pressed against the forehead (Figure 2a). The left hand lay with its back facing upwards, and was slightly closed around 15 pieces of gold in tube and roll form (Figure 2b).



FIGURE 2a. Site 27. Part of the skeleton of an adult female, K 14, beneath whose left hand gold deposit no. VII was concealed.

Between 1989 and 1991 pit No. 1 was uncovered at site 27, containing ten skeletons and three isolated human skulls (Figure 3), as well as pit No. 3, containing the skeleton of a small child (Figures 4 a, b).

A second accumulation of human skulls, belonging to six adult individuals, was discovered on the borderline between pits Nos. 1 and 3 (Figure 19), and a group of five human skeletons (Figure 5) was uncovered in 1992 through archaeological probe No. 22D. A large number of ceramic fragments were scattered about the site, as well as larger pottery items, such as storage vessels, pots and bowls, and entire, mostly smaller vessels – amphorae, cups and small bowls. Among the ceramic fragments were also roughly hewn and polished disks purposefully made using parts of broken ceramic vessels, clay beads and fragments of a clay "colander", fragments of polished crushers and whetstones, and stone flakes from riverbed boulders with a modified work surface (Šumberová 2000).

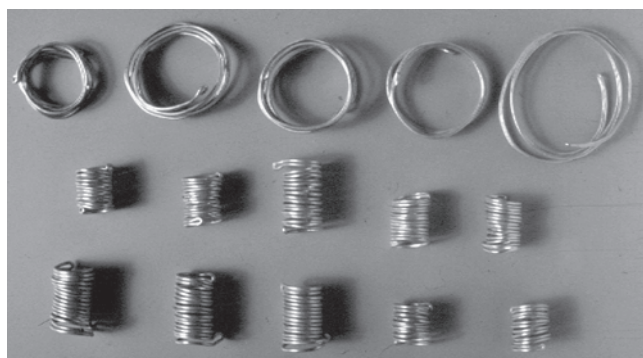


FIGURE 2b. Gold deposit No. VII, weighing 89.57 grams, contained ten tube-shaped and five roll-shaped pieces of double gold wire.

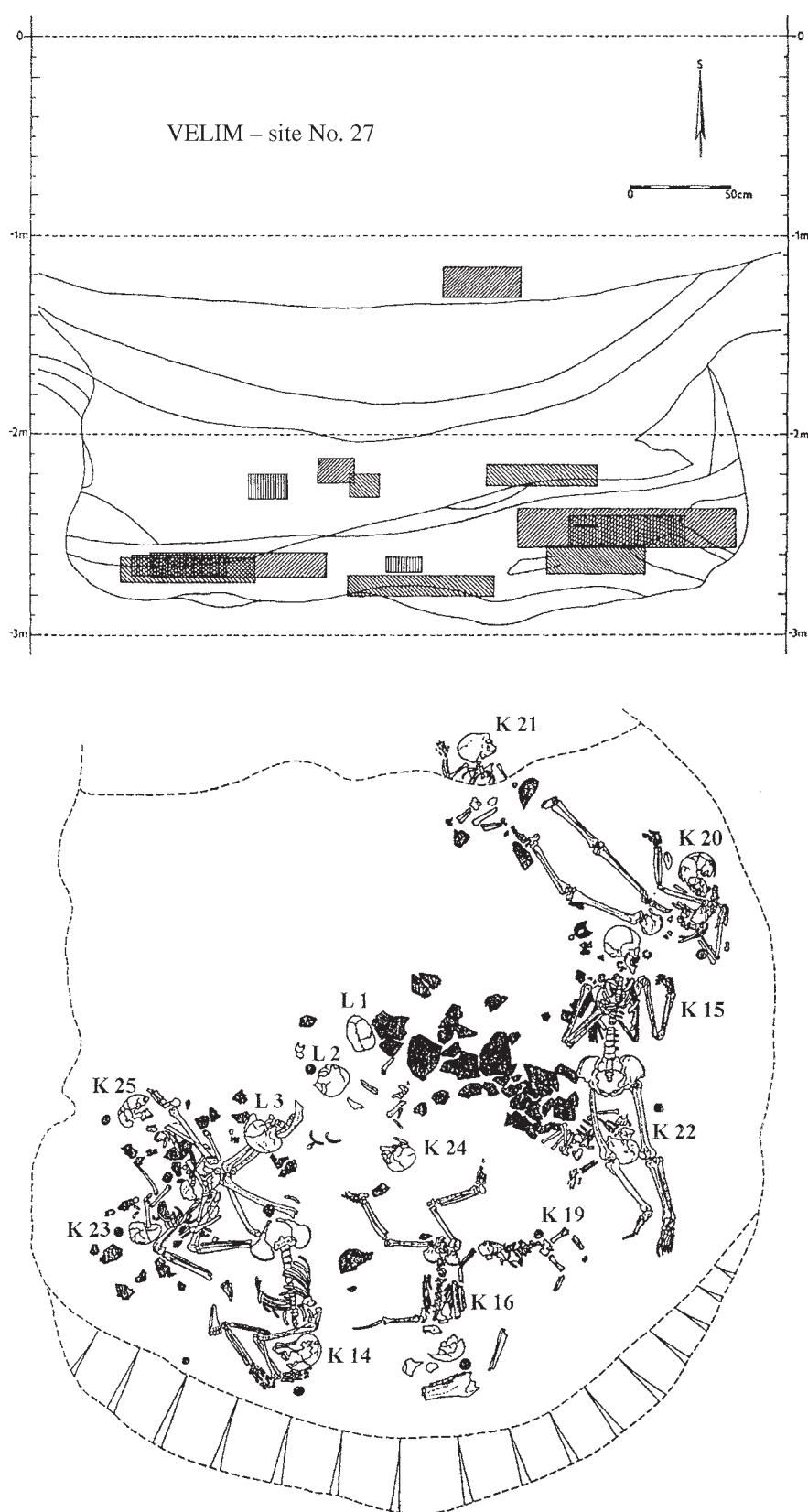


FIGURE 3. A cross-section of the find situation at site 27 illustrates the distribution and deposition of ten skeletons and three isolated skulls. In the general view, the find situation of individual skeletons has been delineated, with the broken pottery coloured black (drawing by L. Píchová).



FIGURE 4a. A view of the skeleton of a five-year-old child, K 40, discovered in pit 3 of site 27.

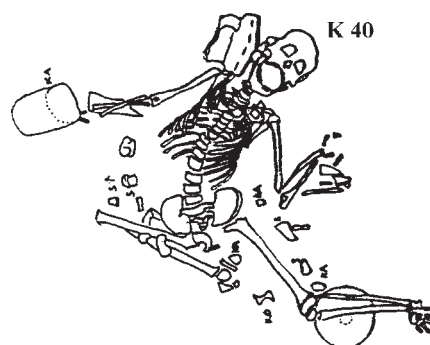


FIGURE 4b. This drawing shows the placement of the skeleton of a small child (K 40) and three ceramic vessels. (As per M.Vávra 1994.)

The site yielded a total of 4,681 human and animal bones; the osteological material was dispersed over various depths of the site, including its bottom. While various types of fractures and traces of incisions, blows and cuts were discovered on some of the human as well as animal bones, undamaged bones were also found. The human bones displaying such impacts belonged to individuals of different age and gender – men, women as well as children. The animal bones which were found together with the human ones belonged to various species of animals, mainly domestic kinds: cows, horses, pigs, dogs, sheep, goats (Roblíčková 2000). Based on the way these bones were deposited and the various impact traces found on them, they have commonly been interpreted as food remains.

This richly varied find site also included individual small bronze objects, e.g. arrowheads, awls, sticks and tubes, as well as a mass group of bronze decorations and implements in deposits Nos. V and VII. The numerous groups of human and animal bones and entire ceramic vessels or fragments were interspersed among many objects made of quarried stone, riverbed gravel and clay.

Circumstances of the finds at site 27

At a depth of 214–224 cm from the surface of site 27, higher than all the other skeletons in pit No. 1, lay skeleton **K 19**, a small, 2-month-old child (*Figures 3, 6*). The child, which was found lying on its belly, had a considerably disjunct skeleton with crossed lower limbs. Above the child's head, detached from the skeleton, lay part of its left upper limb. This detached arm had retained its anatomical order (upper arm, forearm, hand); while the child's hand pointed towards its head, the distal part of the arm lay in the opposite direction.

At a depth of 219–234 cm in pit No. 3 lay (supine) the skeleton of a child aged 5 or 6 years, **K 40**. A stone and a large amphora had been placed between its skull and right shoulder. The child's right arm was extended, with a stone lying on its forearm, while the left arm was bent at the elbow. The thigh and shin bones of the right lower limb were in parallel position, the result of an extreme bending of the knee joint. An ample mug had been placed under the extended left leg, its bottom facing upwards (*Figure 4b*).

FIGURE 5. Site 27. Taken on location, this picture shows part of the accumulation of human skeletons discovered in probe 22D.



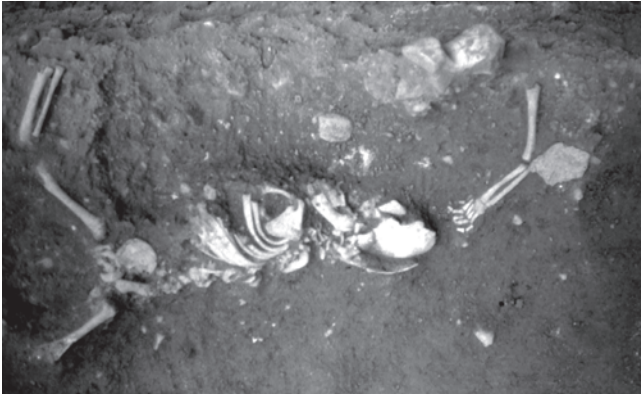


FIGURE 6. Site 27. Taken on location, this picture shows the skeleton of a two-month-old child, K 19.

In 1994 part of a skeleton was discovered at a depth of 228–239 cm from the surface of the site: the pelvis and lower limbs of a small child 1.5 years old, **K 21**. The upper part of its body had already been found in 1989. The child lay on its belly, with its head resting on its left temple and its left arm bent at the elbow, while its right hand was extended along its body (*Figure 3*).

At a depth of 226–241 cm, almost in the centre of the site, a massive stone nearly 1 m in size was found, along with some smaller stones 20–30 cm in size. Among these stones were interspersed large pieces from broken ceramic vessels (bowl-shaped) and three isolated skulls without mandibles (*Figures 3, 7*): calvarium No. **L 1** (female), skull No. **L 2** (male), skull No. **L 3** (female).



FIGURE 7. Site 27, pit 1. Three isolated skulls without mandibles, scattered among stones; the uppermost skull is that of a man (L2), below it are the skulls of two women (L1, L3).



FIGURE 8a. Site 27. This drawing shows the placement of the skeletons of a 13-year-old boy and a 45-year-old adult female, with the skull from the skeleton of a three-year-old child under the woman's knees (drawing by V. Postníková).



FIGURE 8b. Site 27. Taken on location, this picture shows the skeleton of a small child, K 22, placed under the knees of an adult female.



FIGURE 9. Site 27. A view of the skeletons found in the southern part of site 27. Upper left, the skeleton of a woman, K 16; center, the skeleton of a woman, K 14; right, the knee only from the skeleton of a child, K 25, located near the skull of the skeleton of another child, K 23. Lower left, the incomplete skeleton of a small child, K 24.

The skeleton of a 13-year-old boy, **K 20**, was discovered at a depth of 234–247 cm. The boy's skull and part of his thorax were placed to the right of his body, and the skeleton was twisted around and completely disrupted anatomically in the area of its belly. The right arm lay under the body in the area of the ribs, while the left was bent at the elbow and rested in front of the boy's face. The lower limbs were almost completely outstretched (*Figures 3, 8a*).

The skeleton of a woman aged 40 to 45, **K 15**, lay (supine) at a depth of 236–253 cm. The woman's skull was resting on its left temple, with a round stone inserted in her mouth. Both arms were bent at the elbow, with the right arm lying on the woman's chest, its hand partially closed. The left arm lay stretched alongside the body, its hand bent back towards the face. A bronze razor (lunar type with circular termination) lay at a distance of 9 cm from the back of the woman's skull. Her lower limbs were extended, with the right leg slightly turned. A small child, **K 22**, lay under the woman's knees (*Figures 3, 8a, 8b*).

A small, three-year-old child, **K 22**, lay in a crouched position (under the woman's knees) at a depth of 247–255 cm. The child's skull was damaged, and partially covered the upper part of its body (thorax), whose anatomical order was disrupted. This disintegrated skeleton was lying on its belly, with the legs in a crouched position, and the right forearm and hand facing the right side of the body (*Figure 3*).

Skeletons K 16, 14, 23 and 25 from the south part of site 27 (*Figure 9*)

At a depth of 270–276 cm from the surface of the site, i.e. 10 cm above the bottom of the pit, lay (prone) the skeleton of a child, **K 16**. The skull of this 8- or 9-year-old child

was bent back caudally. Its left arm was bent at the elbow and pressed against the body, while the right arm was outstretched horizontally. Both lower limbs were crouched at the knee, in a position that suggested starting to run or running.

The incomplete skeleton of a small child 3 or 4 years old, **K 23**, was found at a depth of 263–270 cm. The child's skull and part of its skeleton rested on their left side. The skeleton was partially disconnected, especially in the chest area, and a bronze ring was found in between its ribs.

In 1999 the other part of the skeleton of a woman 40 to 45 years old, **K 14**, was found at a depth of 262–269 cm (12 cm from the bottom of the site). The woman was lying on her back, with her right leg and foot extended, while her left leg was bent at the knee. A massive vessel lay at a distance of 20 cm from her right pelvis, beneath which skeleton **K 25** was found.

At a depth of 264–275 cm, below skeletons **K 14** and **K 23**, lay (supine) the skeleton of a nine-year-old child, **K 25**, its anatomical order undisturbed. The child's lower jawbone and part of its thorax were covered by a large flat stone and broken fragments of a ceramic vessel (amphora). Its arms were extended alongside its chest, while its legs were bent slightly at the knee.

The skeleton of a small, one-year-old child, **K 24**, was found at a depth of 262–272 cm. The child's skeleton was scattered, but in its original position it evidently lay on its left side.

At a depth of 234–245 cm, on the borderline between pits Nos. 1 and 3, lay part of a large (30 × 30 cm) polished stone (the fragment of a previous work surface). Parts of the cranial bones of five adult males, as well as a man's mandible and a left fibula, were scattered across the stone

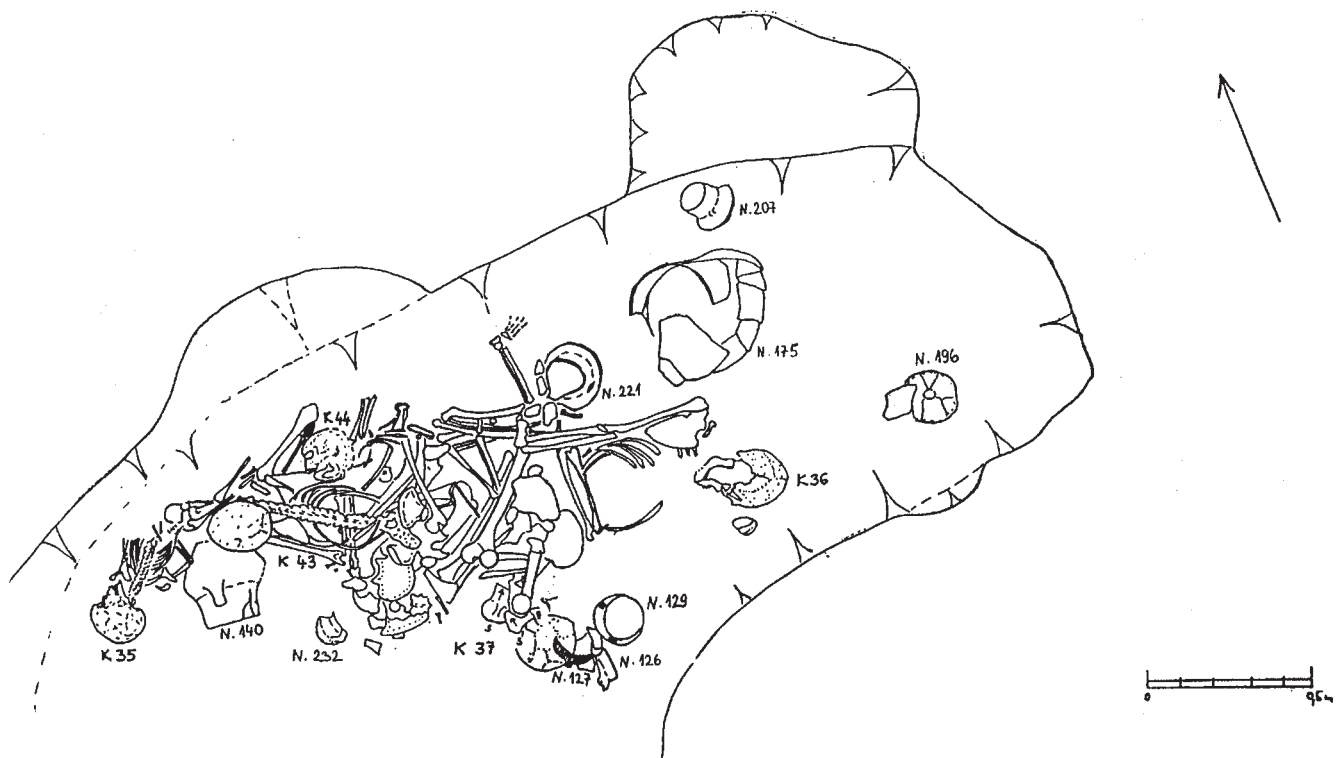


FIGURE 10. Site 27, probe 22D. A drawing of the find situation at site 27, with an accumulation of five human skeletons, K 35, K 36, K 37, K 43 and K 44 (as per M. Vávra 1994).

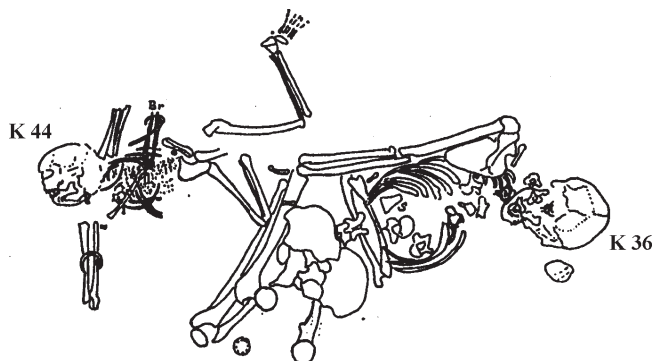


FIGURE 10a. Site 27, probe 22D. A drawing of the find situation of two skeletons, an adult male, K 36, and a small child, K 44 (as per M. Vávra 1994).

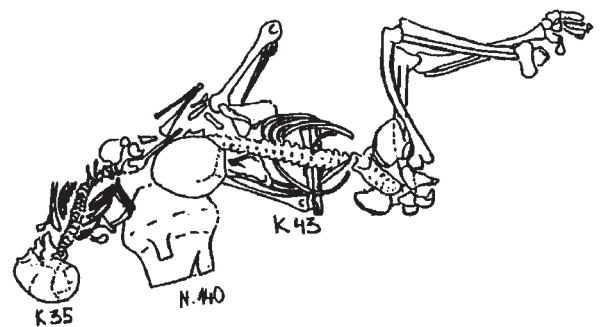


FIGURE 10b. Site 27, probe 22D. A drawing of the find situation of two skeletons, an adult female, K 43, and a small child, K 35 (as per M. Vávra 1994).

and the area surrounding it. The skull of an adult female lay near a second stone in this accumulation, with bone fragments from lower limbs and animal bones dispersed around it (Figure 15). A second adult male's mandible was found at a distance of 0.5 m from this accumulation.

Probe 22 D – group of five skeletons (Figure 10)

At a depth of 196–231 cm – the highest in this group of skeletons – lay the skeleton of a man aged 30 to 40, K 36. The man was lying on his belly, with his spine collapsed and the vertebrae scattered. His left arm was extended along his body, while part of his right arm (scapula, humerus) was not found (Figure 10a). His femori were detached from the hip joints, with the pelvis covering the loin section. An undecorated jug was found by his left hand, and a large,

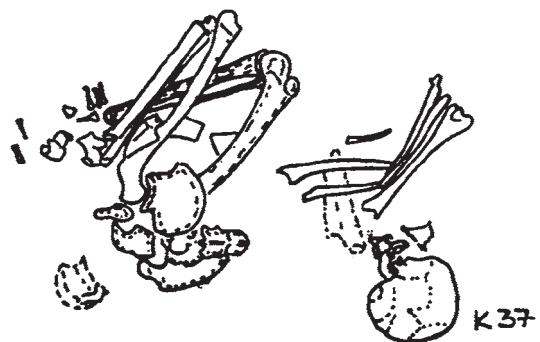


FIGURE 10c. Site 27, probe 22D. A drawing of the find situation of the skeleton of an adult male, K 37 (as per M. Vávra 1994).

broken, amphora-like vessel and a decorated jug lay near the left side of his body.

The skeleton of a young woman aged 15 to 18, **K 43**, was found at a depth of 204–231 cm. The woman lay prone on her left forearm, while her right arm was bent at the elbow, with the right hand nestled under her chest. Bronze bracelets had been placed around both her forearms. The woman's legs were bent at the knees, with the right leg crossing over the left one (*Figure 10b*).

At a depth of 214–232 cm, the skeleton of a child 5 or 6 years old, **K 44**, lay on its right side. The child's skull, part of its thorax, its pelvis and its right leg covered skeleton No. K 43. Both the child's arms were bent, with the elbows lying perpendicular to the body. A spiral bronze bracelet was found on its right forearm. The child's lower limbs were bent at the knees and crossed one over the other (*Figure 10a*).

At a depth of 217–232 cm – the lowest in the entire site, beneath skeletons K 36 and K 43 – lay the incomplete skeleton of a man 18 or 19 years old, **K 37**. This incomplete skeleton, which lay on its right side, was missing parts of its spine and thorax. The upper limbs were crossed over the chest, while the lower limbs were sharply bent at the knees. A broken mug was found inserted between the calf and thigh bones of the left leg (*Figure 10c*).

At a depth of 204–215 cm from the surface lay the skeleton of a child 5 or 6 years old, **K 35**. The child was lying on its belly, with its left elbow resting on a large amphora. Its pelvis and lower limbs were pressed against the outer wall of the pit (*Figure 10b*).

The bottom reached a depth of 309–310 cm below the surface of the site.

SUMMARY OF THE FIND SITUATION AT SITE 27

For purposes of illustration, the shape of site 27 may be described as an irregular oval 4 to 5 m wide and 3 m deep. The space of the site was archaeologically divided into several pits and probes, with more detailed scrutiny being devoted here to finds from pits 1 and 3 and probe 22 D. The different units and situations of finds from the entire site may be divided into four groups. These groups most accurately characterise the overall find situation at site 27, as well as similar find situations typical of finds from Skalka:

1. isolated human and animal bones, whole or broken (with impact and damage traces), ceramic fragments, pieces of ceramic vessels, stones of various size, gravel, bronze objects;
2. isolated human skulls without mandibles, found in different accumulations;
3. buried, scattered or partially disjointed skeletons of children and adult individuals;
4. skeletons of children and adult individuals with traces of intentional killing.

In assessing the skeletons and individual bones which were discovered, we examined the causes of the detected impacts. This evaluation was divided into three definable

areas, for which it was possible to specify evaluative criteria describing changes caused by people, animals or climate.

Regarding the evidence for human activity, demonstrable traces of impacts on human as well as animal bones which could be unequivocally attributed to human activity were examined. The causes of such impacts were evaluated as either intentional or accidental. Besides bones that had been worked (polished, drilled, incised, etc.), bones or bone fragments that originated during the process of intentionally working and manufacturing objects of use, thereby producing bone waste (fragments of horn, leftovers of raw material), were likewise evaluated. In the case of deliberate damage to bones, the original cause was examined, i.e. whether this was a case of accidental damage (primary or secondary) or purposeful damage for a premeditated use: acquiring food or an object, or a case of emotive behaviour.

The presence of animals was recorded only in unambiguous cases where animal activity was demonstrable; for instance, dog bites were found mainly on animal bones. Bites were detected on the epiphyses of limb bones and the outer parts of various bones. In the case of human bones, bites were recorded only in very small amounts, in exceptional cases only. Dog or rodent bites on human bones were found to be in close relation with the find situation, where there was easy access to scattered or exposed bones.

Climatic influences and their consequences were, in the majority of cases, very difficult to recognise. The action of climatic influences on individual bones takes place on a repetitive basis. In the case of a first primary placement, the find need not be covered immediately after its placement, but, on the contrary, may be exposed to various climatic influences. The degree of damage depends on the length of exposure, the season of the year, the influence of weather, etc. In field work, bones are uncovered secondarily, and are exposed to many influences in the find situation. The history of finds is thus treated from a taphonomic point of view, reconstructing the process of extinction, the deposit procedure, and the action of destructive influences that create a future fossil record for individual finds.

METHODOLOGICAL PROCEDURE

Isolated human and animal bones

A total of 2,750 human bones and 1,931 animal bones, whole or incomplete, were removed from site 27. 1,473 items were excluded from the group of human bones. These excluded bones were not evaluated in the isolated bones category, since, in the process of anatomical identification, the individual bones of children, women and men were reunited with sixteen individual skeletal units: K 14, K 15, K 16, K 19, K 20, K 21, K 22, K 23, K 24, K 25, K 35, K 36, K 37, K 40, K 43, K 44.

The evaluation of impacts detected on individual bones and fragments thereof was as follows:

Human bones

In order to assess the 1,277 finds, a database was established using Microsoft Access, focused on documenting, defining and evaluating the bones' state of preservation: Identification number, depth of deposit of bone. Anatomical indication (skull, thorax, spine, upper and lower limbs). Age determination. Gender determination. Type of bone. Lateral position of bone. State of preservation of the find. Damage detected.

This inventory of bone finds included all information regarding individual bones or bone fragments, their anatomical indication, and an age and gender determination for each individual. The anatomical indication was divided into seven groups according to bone type, as well as a group of undetermined finds. Only very small fragments were excluded from evaluation.

Anatomical indication:

1. skull – *cranium, calvarium, calota, calva*,
2. cranial bones – *os frontale, os occipitale, os sphenoidale, os temporale, pars petrosa, os parietale, os ethmoidale, maxilla, os palatinum, os zygomaticus, mandibula os hyoideum*,
3. teeth – *dentes permanent, dentes decidui*,
4. thorax – *sternum, costae verae, costae spuriae, costae fluitantes*,
5. spine – *vertebrae cervicales, vertebrae thoracicae, vertebrae lumbales, vertebrae sacrales, vertebrae coccygeae*,

6. upper limb, arm (hand) – *clavicula, scapula – humerus, radius, ulna – carpus, metacarpus, phalanges*,
7. lower limb, leg (foot) – *os coxae, os illium, os ischii, os pubis, femur, patella, tibia, fibula, tarsus, metatarsus, phalanges*,
8. undetermined bones and fragments.

In the case of isolated bones, the lateral position, i.e. dex. or sin., was the chief criterion for determining the number of individuals found at site 27. For purposes of statistical evaluation, bones which gave evidence of the unequivocal existence of a definite, non-interchangeable individual were selected. The state of preservation of individual bones was highly varied according to age and gender. For instance, the largest number of finds among children aged 5 to 9 was *maxilla dex.*, while for adult females it was the left temporal bone (*os temporale sin.*), and the *frontal* or *occipital* bones for adult men. The number of preserved, non-interchangeable bones yielded the (probable) number of children and adult individuals found at site 27 as a whole.

Results – number of individuals

Among the total number of 1,272 bone finds (Table 1), a high number of children was determined. The finding of two limb bones (*ulna dex.*, *ulna sin.*) from newborn children aged 3 and 5 months was a surprise. In the age category Infans I we ascertained 99 bone finds in the 1 to 4 age

TABLE 1. Number of individuals identified at site 27, by gender and age.

	Infans I	Infans II	Juvenis	Adultus	Maturus	Total	%
male			24	188	60	272	21.4
female			25	86	4	115	9.0
undetermined	239	105	79	453	9	885	69.6
total	239	105	128	727	73	1272	100.0
%	18.8	8.3	10.1	57.2	5.7	100.0	

FIGURE 11. Proportional representation of children, women and men, adolescents and undetermined individuals.

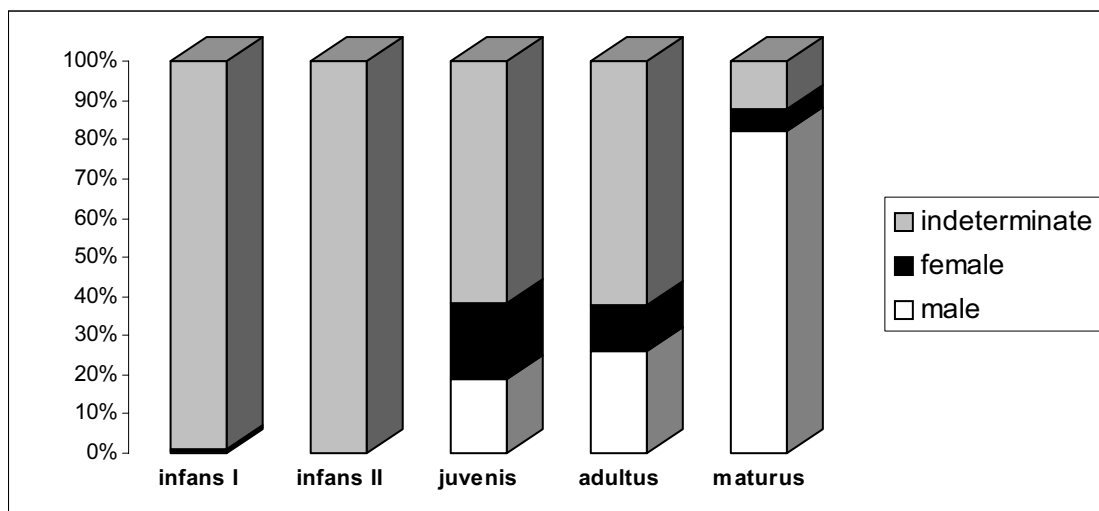


TABLE 2. Impacts on individual bones, by type of bone and manner of impact.

	a	b	c	d	e	Total	%
cranium	268	7	16	14	69	374	29.4
spine, thorax	287	19	0	1	7	314	24.7
upper limbs	258	8	0	15	3	284	22.3
lower limbs	242	9	0	43	6	300	23.6
total	1055	43	16	73	85	1272	100.0
%	82.9	3.4	1.3	5.7	6.7	100.0	

group, with at least 10 children identified. The 138 bone finds corresponding to children aged between 5 and 9 demonstrated the presence of 12 individuals.

The age category Infans II was not so well-represented, with 105 bones indicating the presence of five children aged 10 to 14.

In the case of adolescent individuals, no gender was determined for 79 of the 128 bones discovered, while the proportion of men and women was nearly 50%, with a ratio of 24:25 items. From this total, six adolescent individuals aged 15 to 19 were identified.

Adult individuals: the category from 20 to 25 years included 241 finds, with 11 individuals identified. The category from 25 to 30 years included 236 finds, with 12 individuals identified. The category from 30 to 40 years included 139 finds, with 21 individuals identified. The category of adults of undetermined age included 111 finds, with 3 individuals identified. The category of adults aged 20 to 40 shows a predominance of male remains (188 items) versus female remains (86 items), while for 453 bones no gender was determined.

The higher age category (Maturus, 30 to 40 years) included 39 finds, with 5 individuals identified. The category from 40 to 50 years included 25 finds, with 4 individuals identified. The category from 50 to 60 years included 9 finds, with 1 individual identified. No finds were classified in the category from 60 to 70 years. The Senilis category comprised 10 individuals.

The skeletal remains of a total of 69 individuals were identified. A certain imbalance between the number of lower and upper cranial bone finds is evident from the statistical results. The minimum number of individuals determined may, by means of an informed estimate, be used to define a maximum number, corresponding to the remains of over 100 individuals.

It follows from the anatomical identification of individuals that men are numerically predominant, with a proportional representation of 21.4%, whereas women represent only 9.0% (Figure 11). The category of undetermined individuals, i.e. 69.6%, includes all children, who represent a total of 27.1%, as well as adolescents, representing 10.1%. From this perspective, children represent the largest number, although the remaining 32.4% of individuals in the undetermined category is rather a high

percentage for drawing unequivocal conclusions regarding the number of women and men.

Impacts on human bones

The existence or absence of impacts on individual bones or bone fragments was evaluated according to the same criteria used in examining the finds from site 23 (Dočkalová 1998), so that the results of partial examinations from individual sites would be statistically comparable:

- a) absence of impacts
- b) illnesses – anatomical anomalies, pathology, healed or fatal injuries
- c) impacts on teeth – splitting, cutting, mutilation
- d) fractures – smooth, irregular, stepwise, spiral, complicated (bilateral)
- e) breakages – cranial and limb bones, slight or deep cuts, chiselling. Blows – superficial and deep. Trepanation, drilling, polishing, smoothing. Evidence of fire – burning and annealing.

a) Absence of impacts

In the case of 1,055 finds of whole or partial cranial bones and post-cranial skeletal bones, no impact was detected, with a high proportional representation of over 82.9%. Finds in this group are very difficult to interpret unambiguously, as these bones, while showing no impacts, have a numerical significance which cannot be overlooked. Of the 268 cranial bones found, adult individuals may be identified from the isolated skull finds (left temporal bone

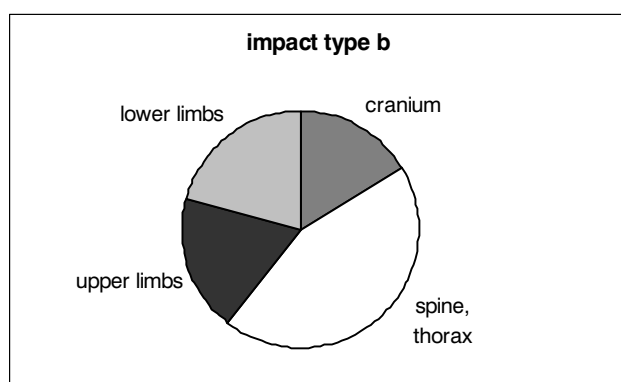


FIGURE 12. Graphic illustration of illnesses and injuries detected.



FIGURE 13a. Traces of violent impact on dental crowns P 1, P 2 and M 1.

and others). In these cases, it is not important to unify the finds exactly from an anatomical point of view, as cranial bones mostly fall apart by themselves due to the disintegration of skull sutures. Following the loosening of ligament or muscle connections, limb bones may easily become dislocated. All of these finds must be evaluated from the point of view of the overall find situation, according to the place where human bones were found together with animal bones, pottery and other objects. In this regard, we have evaluated animal bones as food waste, while in the case of human bones we sought a more complex explanation.

b) Anatomical anomalies, bone diseases, pathology

The illness category was examined in terms of state of health, and has a merely informative character. Pathological instances were detected in the case of 43 finds, representing 3.4% of the total finds. The greatest number of cases of illness were found for the spine and thorax.

The following were identified in individual cases: tooth decay, the presence of *cribra orbitalia*, arthritic bone ends and growths on vertebral units, concrescence of vertebrae to the spinal column, and others. There was one interesting case of congenital concrescence of the pelvic blade to the sacrum.

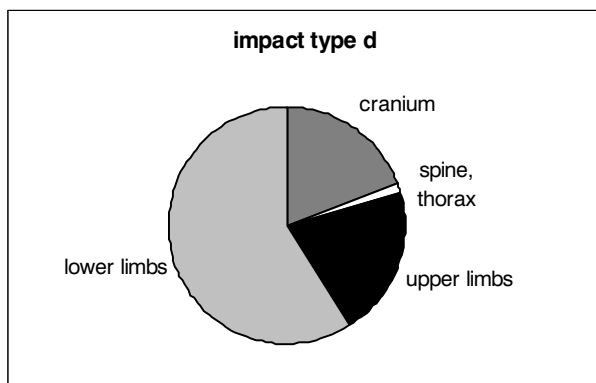


FIGURE 14. Graphic illustration of fractures detected, with those on the lower limbs showing the highest rate of occurrence.

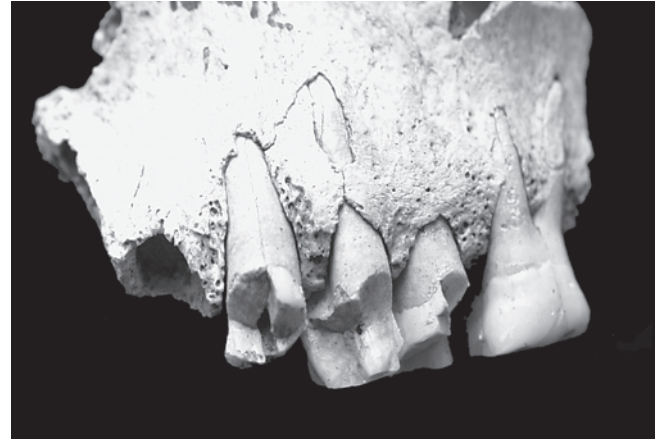


FIGURE 13b. Traces of violent impact on dental crowns C, P 1, P 2.

Among healed injuries, the most common were healed fractures of the cranial bones, ribs and forearm bones. Fatal injuries were evaluated separately, in the whole skeleton category. The final results may be evaluated as common instances which occur when investigating the state of health.

c) Dentes

This group is composed of an interesting set of findings, even though it is not very highly represented numerically, with 16 finds, or just 1.3% of the total. In the case of maxillas and mandibles, or fragments thereof, as well as isolated teeth, the manner of impact, or rather the technique by which damage was inflicted to the teeth, was evaluated (Figures 13a, b). During the examination, types of impacts on the teeth of children and adult individuals, repeatedly occurring and resembling those in other find situations at "Skalka", were recorded. The question remains as to whether these cases of impact were accidental or intentional, and this can only be answered once the skeletal findings at this location are examined and assessed.

d) Fractures

The category of fractures includes all types as per Marshall (1989): Transverse light fractures – these have a straight,

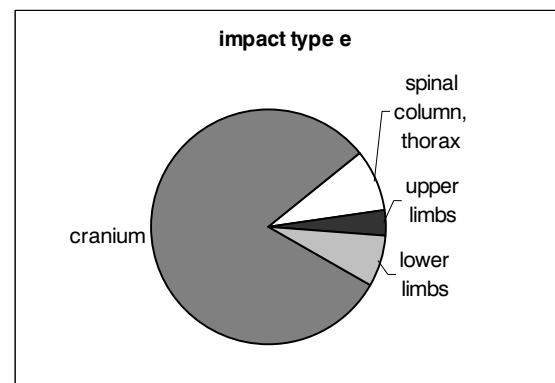


FIGURE 15. Graphic illustration of the damage detected, showing the considerable predominance of skull impacts.

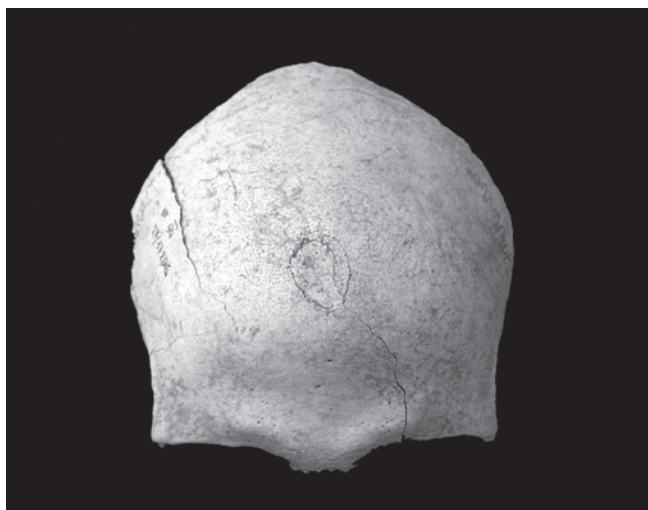


FIGURE 16a. Circular depression on the surface of a frontal bone.

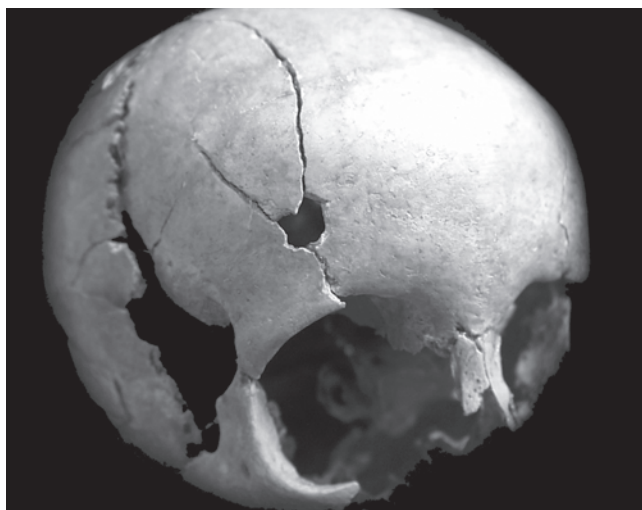


FIGURE 16b. The skull of an adolescent individual, with a broken frontal bone.

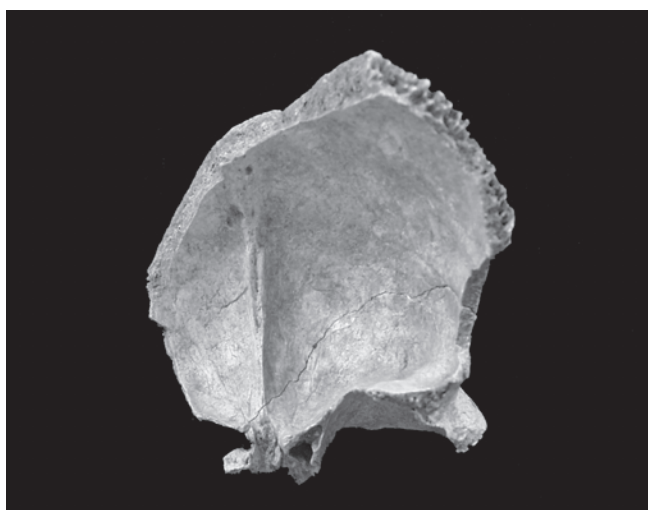


FIGURE 17a. A view of the inner surface of a frontal bone, part of which has been cut off.



FIGURE 17b. A view of a longitudinally halved occipital bone.



FIGURE 18a. Deep incision marks on the joint surface of the scapula.

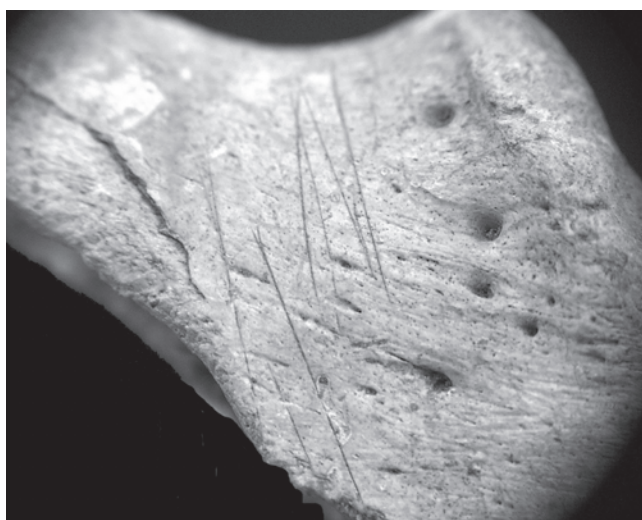


FIGURE 18b. Small, fine incisions on a fragment of the os pubis.

smooth surface of bone breakage. Spiral fractures – fractures coiling lengthwise. Transverse irregular fractures – the surface of the break is not level, it has an irregular surface, sometimes splintering. Stepwise fractures – bone breakage with a step-like pattern. The classification into individual basic groups according to the various types of fractures was modified in order to allow assessment of the osteological findings. In the case of cranial bones, circular impressions and fractures remain on bone surfaces following a blow, and spiral fractures on mandibles had already been detected at site 23 (Dočkalová 1998).

Fractures of limb bones are more complicated, and in the case of certain finds (*humerus, femur*) a combination of several types of fractures was recorded. Evaluation of the fractures determined and their classification according to the given categories was often difficult, approximate, or a compromise. Of the total of 73 finds, the greatest number of fractures were detected on the lower limbs. The number of fractures to the skull and the upper limbs showed the same proportion, while in the case of the spinal column the amount was insignificant.

e) Breakage, incisions, blows, drilling, cuts, chiselling, trepanation and puncturing of bones

These types of impact and damage have been gathered into a single group for evaluation. The majority of all types of impact were concentrated mainly on the cranial bones (Figure 15). The bones exhibited traces of various breakages, cuts, blows, and incisions.

At the point of impact, the surface of the bone was often broken through or punctured inside the bone (Figures 13a, b). We found the same place and manner of inflicting damage on individual bones in the case of all types of

cranial bones. In the case of limb bones, the impacts were concentrated in proximity to the joint epiphyses; the points where limb bones were struck often lay near the joints. Cuts and deep cracks were found near the surfaces of the joints, while incisions were found near their connections (Dočkalová 1990).

Of the total number of 85 impacts, 69 occurred to the cranial bones. All types of impacts were found on the skulls of children of various ages, adolescent individuals and adult men and women as well. Two cases of trepanation in the area of the parietal bones were also recorded, one adolescent and one adult (Dočkalová 1996, Figure 9). Traces of blows were mostly concentrated on the frontal bones (Figure 13a), while cut-marks were found not only on the frontal bones but even more frequently on the occipital bones (Figures 17a, b), where they were often combined with other impacts (blows). Fatal instances of bone breakage were determined for individual skeletal finds, as well as in the case of isolated skulls, where the impacts may be regarded as brutal, and associated with emotive behaviour. In the case of the isolated bones, smaller-scale breakages of the cranial bones were identified (Figure 16b). Incision marks were found more often on limb bones, their intensity varying according to the type of bone (Figures 18a, b).

Animal bones

A detailed analysis of the 1,931 animal bone finds taken from site 27 has been published (Roblíčková 2000). In classifying these bones, the author indicated the amounts of bones representing six species of domestic animals and five species of wild (undomesticated) animals (Table 3).

TABLE 3. Amounts of individual animal forms and species, given in real numbers and in percentages (as per Roblíčková 2000).

Species, form	No. of finds	No. of finds in %
<i>Bos primigenius f. taurus</i>	950	49.2
<i>Sus scrofa f. domestica</i>	362	18.4
<i>Ovis ammon f. aries</i>	116	6.0
<i>Capra aegagrus f. hircus</i>	10	0.5
<i>Ovis/Carpa</i>	219	11.4
<i>Equus caballus</i>	166	8.6
<i>Canis lupus f. familiaris</i>	71	3.7
Domestic animals	1,894	98.1
<i>Sus scrofa</i>	7	0.4
<i>Cervus elaphus</i>	4	0.2
<i>Capreolus capreolus</i>	2	0.1
<i>Lupus europaeus</i>	17	0.9
<i>Castor fiber</i>	1	0.0
<i>Rodentia</i>	4	0.2
Wild (undomesticated) animals	35	1.8
<i>Aves</i>	2	0.1
Total classified	1,931	100

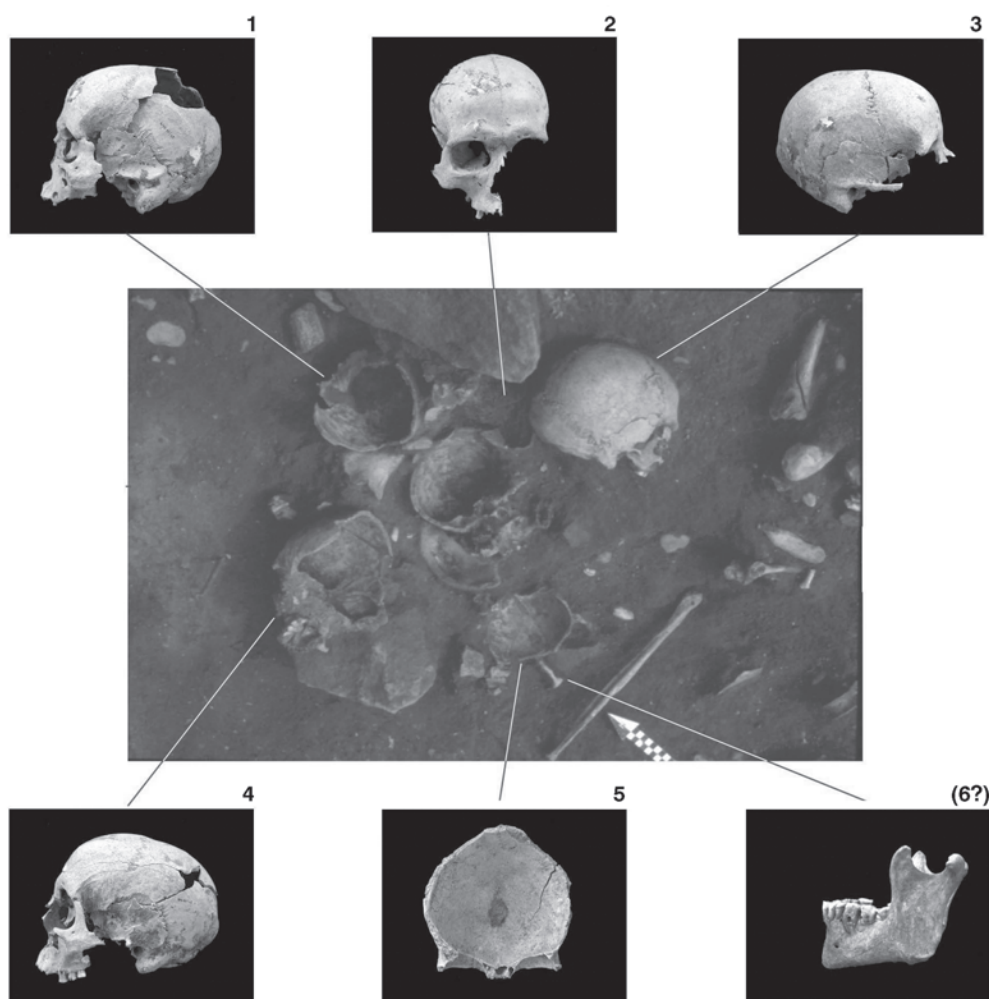


FIGURE 19. An accumulation of human skulls from site 27, discovered in between pits 3 and 1. Reconstruction of the find situation led to identification of the skulls of five adult individuals. Skull number 1, an adult male 30 to 40 years old. Skull number 2, the damaged facial part of a man aged 40 to 50. Skull number 3, an adult female 30 to 40 years old. Skull number 4, an adult male aged 40 to 50. The frontal bone of individual number 5, an adult male 30 to 40 years old. The mandible (number 6?) of a robust adult male.

Nearly one half of the skeletal finds (49.2%) represented the remains of the domestic ox (*Bos primigenius f. taurus*); remains of the domestic pig (*Sus scrofa f. domestica*), represented more than 18%; remains of small ruminant animals, domestic sheep (*Ovis ammon f. aries*) – 6%; the domestic horse (*Equus caballus*) more than 8%; the domestic dog (*Canis lupus f. familiaris*) – 3.5%. Wild animals were represented more sporadically, and made up not quite two percent of the total number of finds. The animal bone materials from site 27 were highly fragmentary, and whole bones were preserved only rarely. A detailed study of the impacts and damage detected on the bones will be published at a later date.

Isolated skulls

The first group of three isolated skulls, together with broken pottery, bone fragments and animal mandibles, were found near a massive stone nearly 1 meter in size, which had been dropped into the middle of the pit at a depth of 2.5 m below the surface of the site. Other stones of up to

30 cm in size had been scattered nearby it, as well as a large amount of broken pottery. Along with the stones and pottery, three isolated skulls without mandibles had been thrown into the pit: the cranial calvarium of an adolescent female, **L 1**; skull **L 2**, belonging to an adult male aged 40 to 50; and the skull of a 20-year-old woman, **L 3** (Figure 7). Large pieces of bowl-shaped ceramic vessels lay among the stones, having broken against the large stone when they were thrown into the pit. Half of the jawbone of a cow (*Bos primigenius*) had been thrown in between skulls Nos. 2 and 3, and broke into two parts. The left half of the animal's lower jawbone (*corpus mandibulae sin.*) partially covered the skull of the young woman, No. 3. The second part of the animal's jawbone, the joint end (*ramus mandibulae dex.*) and fragments thereof, were scattered near where the largest item of broken pottery lay. Isolated animal bones were dispersed around this accumulation, and the finds also included part of a battered human shinbone (*tibia*) and fragments of human ribs.

The second accumulation, consisting of one complete skull and five broken skulls, was scattered across the borderline between pits 1 and 3, at a depth of 2.80 m. At the edge of the find area lay a polished stone 30 × 20 cm in size, with a large amount of cranial bone parts, as well as a human mandible, a human calf bone (*fibula*) and bone fragments of human lower limbs (*femori, tibiae*), scattered in between it and another large stone. All the skulls had been violently broken, and only one skull, found at the edge of the accumulation, was intact.

A reconstruction of the finds in this situation was undertaken, and the parts of the broken skulls were rejoined. Through this process of reconstruction, remains of five adult individuals were identified (*Figure 19*). Skull No. 1 was that of an adult male 30 to 40 years old; No. 2 was the facial portion (missing parts of the left orbital cavity and the maxilla) of the skull of a man aged 40 to 50; skull No. 3 was that of an adult female 30 to 40 years of age. Skull No. 4, belonging to an adult male 40 to 50 years old, lay on another stone. Next to this stone was the frontal bone of individual No. 5, an adult male aged 30 to 40. The mandible of a robust male lay underneath this frontal bone, and a second robust mandible was found 0.5 m away, in the northern part of the pit. Both mandibles apparently belonged to individuals from this group, but they could not be unequivocally assigned to the skulls found there. Except for the intact skull No. 3 (female), extremely violent, even brutal breakage was detected on all the skulls. In particular, the skull of adult male No. 1 had its vertex completely caved in. Skull No. 2 had been struck on the right side of the frontal bone, near the coronal suture. The surface of the bone showed the lengthwise fissures caused when it was struck. In the middle of frontal bone No. 5 there was a small circular hole on the inner side of the skull, while the outer side showed a circular depression 2 cm in diameter (*Figure 16a*). The blow to the skull must have been powerful, since it caused the *lamina interna* to break and fall off. Skull No. 4 was punctured on the left half of its vertex. The most completely damaged was skull No. 1, which has been reconstructed from many cranial bone fragments, but which still lacks part of its vertex. Individual limb bones were scattered around the find area; these were, however, exclusively from the lower limbs.

TAPHONOMIC ASPECTS

In 1940 the Russian palaeontologist I. A. Efremov described and defined "taphonomy" as a new science dealing with the deposit or burial of fossils, and concerned with research on the transition of organic materials from the biosphere to the lithosphere. Since that time, archaeologists have used taphonomy mainly to identify processes that modify the character of bone finds, in order to be able to reconstruct the original arrangement. Taphonomy focuses on the study of processes which influence bones from the moment of death through burial to fossilization.

Taphonomic processes distinguish between deposited, removed and preserved objects. They define deposit sites in terms of moved and unmoved objects, as well as various modifications that combine both processes of spatial deposition. Taphonomic effects may be divided into four categories: disarticulation, scattering, fossilization, and mechanical changes. In accordance with the nature of these processes, the process of taphonomy may begin only after the death of a living organism. The order and process of the disarticulation of joints in a skeleton is evidently linked to the function of the joint structure and its connecting soft tissues. If the soft tissues are removed, the skeleton gradually loses its anatomical integrity, i.e. the bones "disarticulate" and, finally, become spatially detached. There are also many ways in which the "fossilization" of dead bodies occurs, and, as part thereof, the soft tissues are usually devoured by various microscopic and macroscopic organisms. From a taphonomic point of view, we may identify joint connections in a skeleton as strong when the insertion ligaments succumb to dissolution only after a number of years. In the case of weak joint connections, these ligaments are weaker, and disconnection of the joints may already occur shortly after death. The dividing line between strong and weak joint connections is by no means clearly defined, and depends on the possibilities for firm joint connections (Binford 1981). In general, it is assumed that joints which are more heavily burdened are surrounded by stronger joint casings, and should stay connected for a longer time. Less strong joints with a minimal physiological burden should loosen in a shorter period of time (Larsen 1999).

The degree of scattering of the elements of individual skeletons depends on many factors, such as the dispersal or transport of bones, which affect individual parts of the skeleton. Among these processes and factors are carrion animals, carnivores, human beings, fluvial events, gravity and soil pressure.

Soil pressure is a consequence of the horizontal and vertical scattering of bones, their scratches and breaks. When bones lie in the surface layers of the soil, they may be damaged by roots and plants. Bones may be also destroyed by the effect of other mechanisms, such as fungi, bacteria, rodents and insects, so that skeletal tissue is gradually consumed.

In interpreting changes in bones, it is essential to distinguish between the different types of fractures, and whether they were sustained before death, at the time of death or after death. Some fractures show traces of violence (skull fractures), in which case it may be assumed that the damage to the bones occurred at the time of death. The majority of fractures are caused by the impact of a blow to the bone (Anvil abrasion). In the case of limb bones, various types of fractures are observed; spiral fractures, which result from a mechanical impact on the bones of a still-living person, are quite typical. Johnson (1985) states that tensile spiral fractures on "fresh" limb bones may be caused by static or dynamic strain; however, the spiral character itself does not indicate the cause of the fracture. Fractures

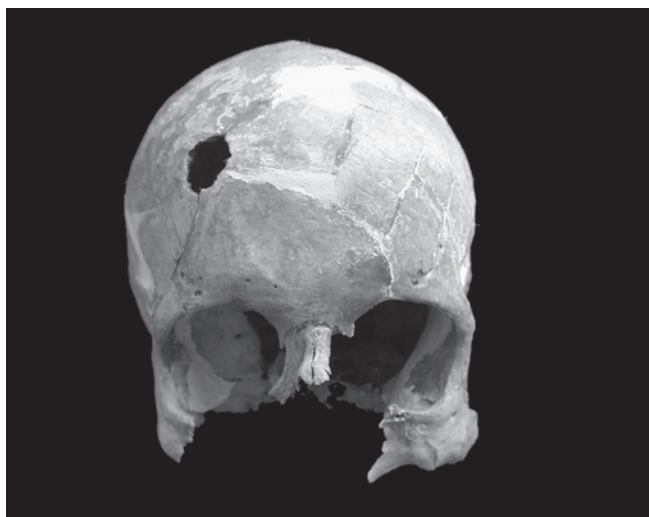


FIGURE 20a. Frontal view of the skull of an adult female aged 40 to 45 (K 15), with a broken frontal bone.

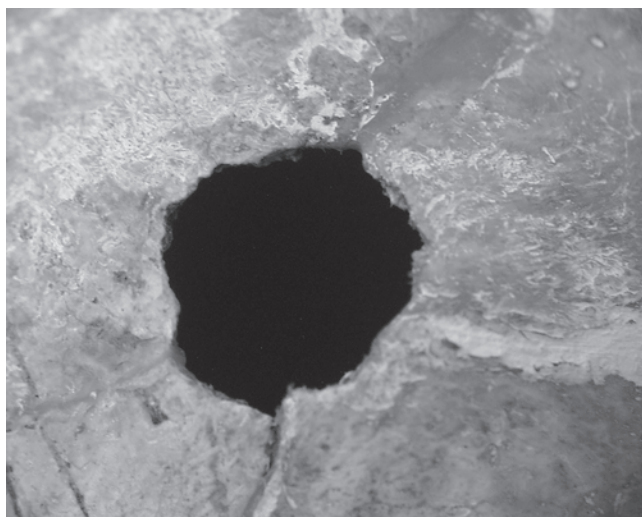


FIGURE 20b. A detailed view of the hole, 3 cm in size, in the skull of the adult female K 15.

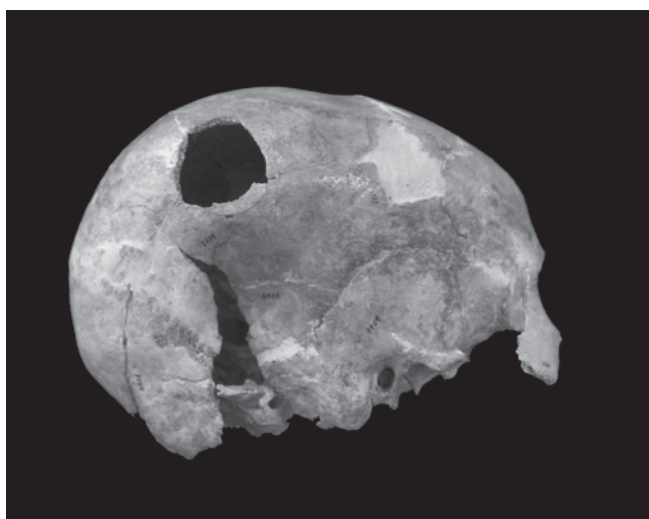


FIGURE 21a. Lateral view of the skull of a 13-year-old boy (K 20), with a broken right parietal bone.

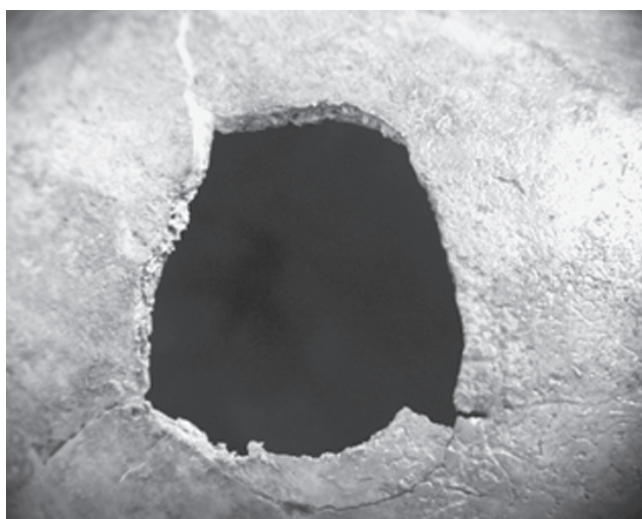


FIGURE 21b. Detailed view of the hole, 5 cm in diameter, on the fatally-broken skull of K 20.



FIGURE 22a. A broken animal scapula (*Cervus elaphus dex.*) with the same type of circular hole as that found on the human skulls.

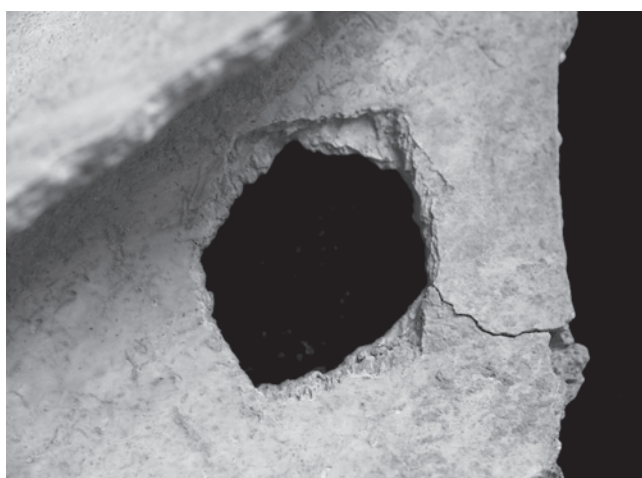


FIGURE 22b. Detailed view of the hole in animal scapula (*Cervus elaphus dex.*).

resulting from percussive force show traces of abrasion or cutting on the surface of the bone, and the shape of the bone is altered as a result of its being crushed. Fatal fractures to the skull result in extensive breakage, as well as the beveling and breaking off of the inner surface of the skull and matching coloration on the surface of the breaks, which confirms that the fracture occurred at the time of death (Ubelaker 1974). Linear breaks or stepwise fractures, which produce uneven, rough edges, are common in the case of post-mortem fractures. Dynamic strain on dry bones causes fractures along split-line features, which are often the result of a transverse fracture perpendicular to the bone surface (Johnson 1985). Post-mortem fractures which result from the downward pressure of sediment are characterized by incomplete fractures and the mutual proximity of individual fragments of a particular bone. Fractures which occur during excavation show a different coloration (clear) at the surface of the break, which contrasts with the surface of the fossilized bone and its traces of taphonomic history such as dark coloration, discolored patches, and bone breakages covered by sinter.

Spiral fractures and notches may also be caused by animals, but such cases are easily distinguished. Animals split bones using static pressure between their upper and lower jaws, just like the pressurized splitting of stone implements. Human beings exercise a dynamic pressure on bones similar to the hammering technique of producing tools, with a characteristic blunt angle; the notches are wider and shallower than those left by teeth whose action was perpendicular to the surface of the bone (Capaldo, Blumenshine 1994).

Cuts result from the contact of tools with the bone surface, where they produce various marks according to the type of tool being used. It is important to distinguish between different marks of a similar kind, and to differentiate them from cuts and evidence of human activity. The concentration and direction of cuts, and their repetition at apparently selected places on individual bones prove that these are truly cuts, and not just the appearance thereof (Lyman 1987). Disemboweling, removal of limbs, defleshing and other forms of treating dead bodies are reflected in the differing character of incisions, cuts, blows and fractures. Cuts which result from the removal of limbs or parts thereof are concentrated on the surface of the joint areas, while randomly distributed cuts or extensively abraded areas bear witness to defleshing (Jelínek 1993).

TYPES OF BURIAL AND BURIAL-RELATED MANIPULATION

Andrews (1992) has discussed the main geological processes and effects of burial, stating that taphonomic problems in this area may be divided into two groups: "according to the type of physical environment or sediment in which the remains were found, and according to the nature of the fossil accumulation itself". Burial as a

taphonomic process is a very complicated area, more intuited than methodically treated, together with the effects acting on bone remains. It is quite interesting that while the remains of fauna are very often preserved through their form of burial, the situation is entirely opposite in the case of skeletal remains.

When studying burial rites we distinguish between two basic kinds of burial, primary and secondary. Primary burial is understood as burial which takes place within a relatively short time span, when most of the destructive and disarticulating processes already occur at the definitive, that is, primary, deposit site. Secondary burial, as its name implies, refers to cases in which the bone remains have been relocated from their original place of burial. The number of buried individuals may be distinguished as single-frequency primary and secondary or multiple-frequency. With regard to placement, individual skeletons may be deposited on their right (*dex.*) or left (*sin.*) sides in various positions – lateral, dorsal, ventral – if they were buried in the ideal conditions of prehistoric burial sites.

The skeletons of individuals buried in a primary deposit are mostly found in natural anatomical conditions, and these individuals are accompanied by artifacts deliberately placed within the tomb. The position and deposition of the skeleton corresponds to certain biomechanical laws of the human body's motor apparatus. The given position of the human skeleton must be distinguished from all sorts of taphonomic deviations, which are directly related to the type of burial rites and the environment in which they are found.

Secondary burials often show the deliberate removal of limbs or parts thereof, as well as traces of defleshing, which could potentially suggest marks of cannibalism. In the case of such burials, individuals could be temporarily buried or put aside before being deposited for final burial. Secondary burials are found in a number of contexts: mass graves, ossuaries, individual tombs, urns and other containers. Historical records from North America describe the nature of secondary burials, for instance, during the Huron funeral celebrations called the "Feast of the Dead", in which the remains of individuals who had died since the time of the past celebration were exhumed and buried together in a large ossuary (Ubelaker 1974).

Secondary burial is characterized by partial or complete removal of the limbs or parts thereof, either by means of deliberate activity or due to decomposition. The secondary burial of human skeletal remains is known from the finds at the oppidum in Manching (Lange 1983). The skeletal remains discovered were designated as evidence of the military defeat of the oppidum's Celtic population by the Romans, or as remains of anthropophagic rituals, or as secondary burials in pits belonging to the settlement.

Human skeletal remains from the Bronze Age occur abundantly in such pits, and have generally been regarded as evidence of anthropophagic practices or rituals. Unfortunately, the interpretations given to human skeletal remains and finds in settlement pits from the Bronze Age and in cave locations are doubtful. Finds of human sacrifice

or ritually-motivated cannibalism, based on the context of the finds and fragmentary evidence, have not yet been unequivocally and convincingly evaluated. The interpretation of the finds at Kyffhäuser near Bad Frankenhausen, as published by Behm-Blank (1958), are regarded as problematic.

Evidence of anthropophagy at the prehistoric settlement in Knovíz, as published by Matiegka (1896), and the interpretation of prehistoric cannibalism in Thuringia (Lehmann 1929) are burdened by contemporary tendencies and the authors' efforts to put forward an original interpretation of the existence of cannibalism. Unfortunately, it is no longer possible today to reconstruct the circumstances of the finds in the settlement pits, or to review the "evidence" of anthropophagy on human bones during the time of the Knovíz culture. Interesting finds from the Bronze Age were discovered in the 1950s on Cézavy Hill near Blučina in Moravia (Czech Republic). Dr. K. Tihelka (1950, 1951, 1952a) discovered a large number of animal and human bones at this location (Velatice and Věteřov cultures). The human remains were scattered throughout the settlement in garbage pits, and entire skeletons were found in various ditches, along with parts of skeletons and individual bones, above all skulls; there was a total of around 200 skeletons from individuals of different age and gender. An anthropological examination and evaluation of the skeletal remains was published by Jelínek (1957), who already at that time designated the finds from research carried out during the 1950s as evidence of anthropophagy. In his study, the author created a proposal for reconstruction of the evolution of anthropophagy in the "Velatice group" in Moravia, as compared to finds from the later Bronze Age and the beginning of the Hallstatt Period from Knovíz in Bohemia and Thuringia. He pointed out the fact that anthropophagy was practised to a fairly large extent during the Bronze Age and Hallstatt period, when burial rites were often accompanied by anthropophagy and human sacrifice, as proved above all by the finds from Cézavy in Blučina (Jelínek 1957). This study did not provide, and indeed could not have provided, clear evidence of the existence of anthropophagy supported by an anthropological analysis in the spirit of modern "taphonomy". Yet the opinion presented there cannot be simply designated as erroneous (Peter-Röcher 1994). It is merely a question for the near future, when an evaluation of the osteological finds from Cézavy will be carried out. During the Bronze Age, the Blučina site served as an important center of sacral activity, including human sacrifice and the bloody rituals of that period.

From the point of view of many archaeologists, the most convincing evidence of cannibalism comes from the Neolithic cave site of Fontbrégou in France (Villa *et al.* 1986 b). Cuts from defleshing, the removal of limbs, and breakage on limb bones were detected for individual bone finds. The piles of animal bones also included human bones, which showed the same frequency of bone cuts and breaks as were observed on the animal material (Villa *et al.* 1986

a). Besides this, bones showing such impact marks were deposited together with food waste at the site, which supports the interpretation that cannibalism had occurred. Villa *et al.* (1988) state the following: "To argue that the bodies were stripped of their meat but not eaten is tantamount to believing that people from Fontbrégou cooked animals but did not eat their meat, and secondarily buried boars, sheep and the animals they hunted. Cannibalism clearly represents the only satisfactory explanation for the finds at Fontbrégou". M. P. Pickering and P. Bahn (1990) cast doubt on these quite convincing claims, stating that this was not a case of evidence of cannibalism, but rather of finds from secondary burials.

Differences in the manner of burial of children and adult individuals – interpretation of the finds circumstances

The skeleton of a very small child (K 19), buried at the age of 2 months, was not covered with a layer of earth at the moment of its burial or death. The skeleton's anatomical order had been preserved, however, the entire skeleton was disjointed, with its left arm relocated. No traces of violence were found on the child's skeleton. The left arm must have been placed above the child's head at a time when the ligament and muscle connections were still intact.

The skeleton of a child aged 5 or 6 (K 40) was buried in a separate part of the site, in pit No. 3. It was given an almost separate place outside the accumulation of other skeletons. The child's skeleton lay in an extreme position, together with stones, a ceramic amphora and a decorated mug.

The skeleton of a small 3-year-old child (K 22) was placed under the knees of an adult woman, whose weight evidently led to the deformation of the child's skull, causing it to be pressed tightly to its thorax.

The skeleton of a woman aged 40 to 45 (K 15) showed a fatal injury to the skull (*Figures 20a, b*). There was a stone in her mouth, a bronze razor and the skeleton of a 13-year-old boy above her head, and the skeleton of a three-year-old child under her knees (*Figures 8 a*).

The skeleton (K 20) of a 13-year-old boy lay in a crouched and turned position. The skull showed a fatal injury, with its right parietal bone punctured (*Figures 21a, b*).

The skeleton of a child aged 8 or 9 (K 16) had its skull bent backwards and nearly displaced; its right arm was extended horizontally, its left arm bent. Its lower limbs were in running position.

The skeleton of a woman aged 20 to 30 (K 14) was found together with a gold deposit. Her arms were held upward as if to defend her head, presuming her attacker did not know what was in her left hand. Her right leg was extended, while the left was bent, covering her right knee.

The skeleton of a 9-year-old child (K 25) was found anatomically intact, with a stone on its thorax. The skeleton of a one-year-old child (K 24) lay above its right knee.

Each skeleton in this accumulation of five skeletons lay on its belly, with the exception of skeleton No. 44 (small

child), on whose skull a fatal injury was detected. The skeleton of a child 5 or 6 years old (K 35) was pressed up against the wall of the site. A large amphora (N 140) had been placed in the pit earlier than the skeleton of a child (K 35) and the skeleton of a young woman (K 43). The amphora was lying below the head of the young woman (K 43), just beside the left elbow of the child (K 35). The woman's face lay next to the leg of the small child, and there were two bronze bracelets on her forearms. The skeleton of another child (K 44) had been placed between the right forearm and thorax of this woman (K 43), partially covering her skeleton with its thorax, pelvis and right leg. The skeleton of this child (K 44) lay on its back, and showed a fatal injury to its head (*Figures 4a, b*). Both of the child's arms lay with the elbows pointing outward from its body, its legs were crossed, and it wore a bronze bracelet on its right forearm. The question remains as to whether the child was killed at the site, or was killed first and then tossed into it.

The incomplete skeleton of a man aged 18 or 19 (K 37) was found lying prone at the lowest position in the find site. His legs and arms were bent, and a mug lay near his left leg. The skeleton of an older man, aged 30 to 40, lay prone above that of the young man (K 37), and was missing part of its arm.

Burial rites – ordinary or ritual

When looking not only at the Neolithic period, but also the Iron Age and even beyond it, it is necessary to realize that there were a great many diverse burial customs and methods at play, besides those which are considered ordinary today (archaeological burial sites). Ethnographic evidence also shows that most ethnic groups practise several forms of burial all over the world (e.g. Australia, New Guinea, America). The archaeological material in particular gives no grounds for thinking that prehistoric Europe was any exception in this regard. The interpretation hitherto advanced for finds of entire human skeletons and fragmentary bone remains from the settlement context, namely, as ritual- or cult-motivated practices of an anthropophagic character, has not been accepted. The basic criteria for determining cannibalism are so extremely strict (Gibbons 1997) that it is evidently impossible to prove certain cases of prehistoric European cannibalism. The unpleasant existence of cannibalism is replaced by the more acceptable phenomenon of partial or secondary burial. With regard to reservations as to the existence of cannibalism in the Neolithic period in southern France, based on the finds at Fontbrégou, Villa (1992) stresses the fact that: "In the European prehistoric era, the theory of secondary burial is not one bit more probable than the theory of cannibalism."

SUMMARY

The abundant find situation at Velim site 27 included a group accumulation of isolated human and animal bones.

The human bones showed the same deliberate fragmentation and marks of breakage, fractures and cuts as the animal bones. The question is still open as to how to interpret the way in which the human remains (i.e. the isolated bones) of the 69 individuals identified were handled. It will be possible to make a statement regarding this issue only after completion of the study of osteological material taken from all the archaeological finds at Skalka near Velim. In any case, even the other form of burial, i.e. the deliberate destruction or scattering of human skulls, cannot be designated as an ordinary, albeit only secondary, form of manipulation of human remains.

At this time, no clear criteria have been set for defining the difference between a "settlement grave" and a "settlement burial". A settlement grave may be defined as an ordinary manner of burial that maintains anatomical order and includes gift offerings, as is familiar to us from various archaeological burial sites (burial places). A settlement burial or burials may vary in character according to the reasons behind the burial rites, e.g. "religious", "cult", "sacrifice" and others. Classifying or designating a manner of burial in terms of specific categories is a highly subjective way of seeking a solution, based on one's conception of spirituality. With regard to the manner in which the dead were handled, in other words, the individual find situations at site 27, we may point unequivocally to individuals who were deliberately killed. Children of various ages, adolescents and adult women and men were scattered or buried at various depths throughout the entire site. This burial ritual was not a one-time event, rather it recurred at various periods in time. We know that some individuals were deliberately killed – as a sacrifice, apparently performed in a ritual manner, even though their deaths may have been motivated by other reasons as well. Based on the assumption that the individual skeletons at site 27 are in a state of primary burial, the circumstances of the individual skeletal finds may not be said to demonstrate an ordinary manner of burial. The same traces of injury and killing are also found on the animal bones; one example is the similar method of killing animals by breaking their scapulae (*Figures 22a, b*). Each deviation from the given ritual could have had several causes, which differed at each time and each place, and which we may no longer distinguish.

Based on the examination of the individual archaeological sites hitherto, the finds from site 27 may be designated as clear evidence of ritual behaviour connected with human sacrifice.

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