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SKELETAL "BURIALS" IN THE PITS OF KNOVÍZ SETTLEMENTS IN BOHEMIA

ABSTRACT — In the biritual Knovíz Culture in Bohemia prevail cremation burials, skeletal burials appear rarely. The third way of burial are skeletons dumped in settlement pits. The discoveries of the recent years have made it possible for the author to study 105 selected burials (see list of settlements and of other selected objects). However, anthropological documents are missing in almost half of them. Most skeletons dumped in refuse pits come from the transition from the Tumulus culture to the Knovíz horizon. This process culminates at stages K IV—V (i.e. medium stage of the Knovíz Culture) and the number of finds is then dropping at the turn of the younger Knovíz and Stítary periods. Almost one-fourth of the skeletons were found in crouched position, fewer appear lying in supine or prone position, sitting, or thrown to the pit. The number of skeletons in the pits varies between 1—6; the author distinguishes between mass burials and family burials, burials of mothers with their children and separate child burials. For comparison's sake the author presents 13 examples from Germany and Poland. The sample material is divided by the author from the viewpoint of cannibalism into 4 groups: I. Burials with grave goods, without traces of violence. II. Burials without grave goods and with no traces of violence. III. Complete or incomplete skeletons with traces of violence. IV. Skeletons with the skull missing or separated from the trunk. Groups I and II are regarded by the author as normal burials outside the burial ground, groups III and IV are connected with ritual sacrifices showing traces or anthropophagy.

KEY WORDS: Skeletal remains in pits — Knovíz culture — Bronze Age — Bohemia.

The Knovíz Culture in Bohemia developed in the Late Bronze Age under rather complex cultural and historical conditions. The basic structural component was formed by the ceramic finds of the Tumulus culture of the Middle Bronze Age, with the contribution of the Lusatian culture, and of some even older components (Hrálá 1973). The Late Bronze Age in parts of Central Europe north of the Danube is the period of culmination of the patriarchal social system, when tribal laws and the established customs were understandable to everybody (Bouzek 1985). But the very complicated burial rite of the Knovíz Culture is not in correspondence with our ideas of a simple patriarchal society, on the contrary, it bears witness of a great ideological

variety (Pleiner — Rybová 1978). The Knovíz Culture is biritual and its graves may be divided into three groups (Spurný 1950).

1. Ritual cremation graves, in which charred pieces of bones and grave goods are placed in the urn with due respect. Such graves form separate cemeteries (Slabina 1980).

2. Ritual skeletal burials in oval or rectangular pits, sometimes lined with stones and provided with grave goods. They occur sporadically on the margin of urnfield cemeteries, or separately. In the light of the recent studies their "riches" (Žatec — Macerka, Luh u Mostu, Hostomice) is quite problematic (Kytlicová 1989). Rich grave goods are more typical of cremation graves.

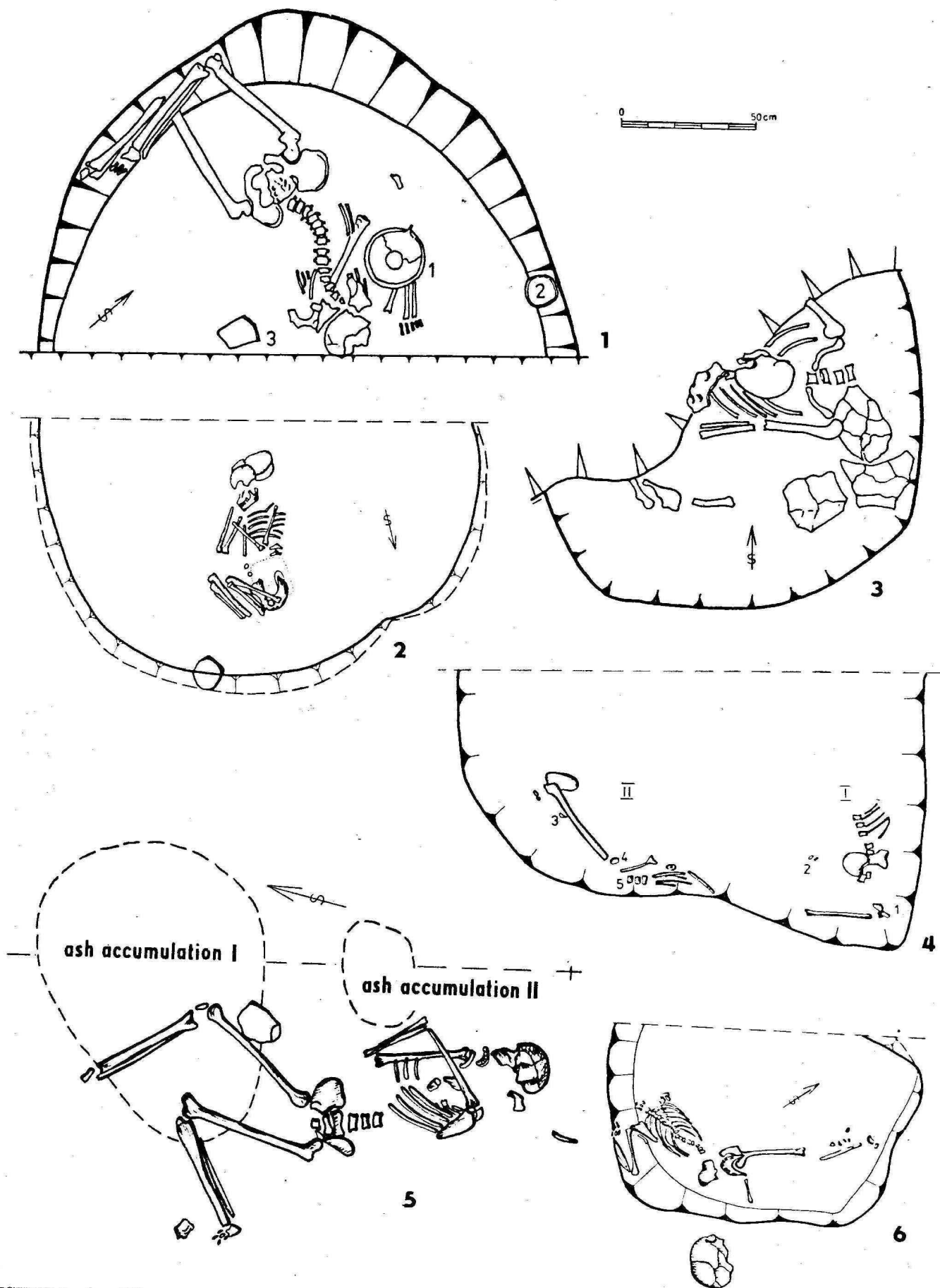


FIGURE I. 1 — Lišany, Louny District: pit 11/81, 2 — Tursko, Prague Western District: pit 2/79, 3 — Libouš, Chomutov District: pit XIV/77, 4 — Roztoky, Prague Western District: pit 749/83, 5 — Roztoky, Prague Western District: pit 371/III-82, 6 — Roztoky, Prague Western District: pit 648/82.

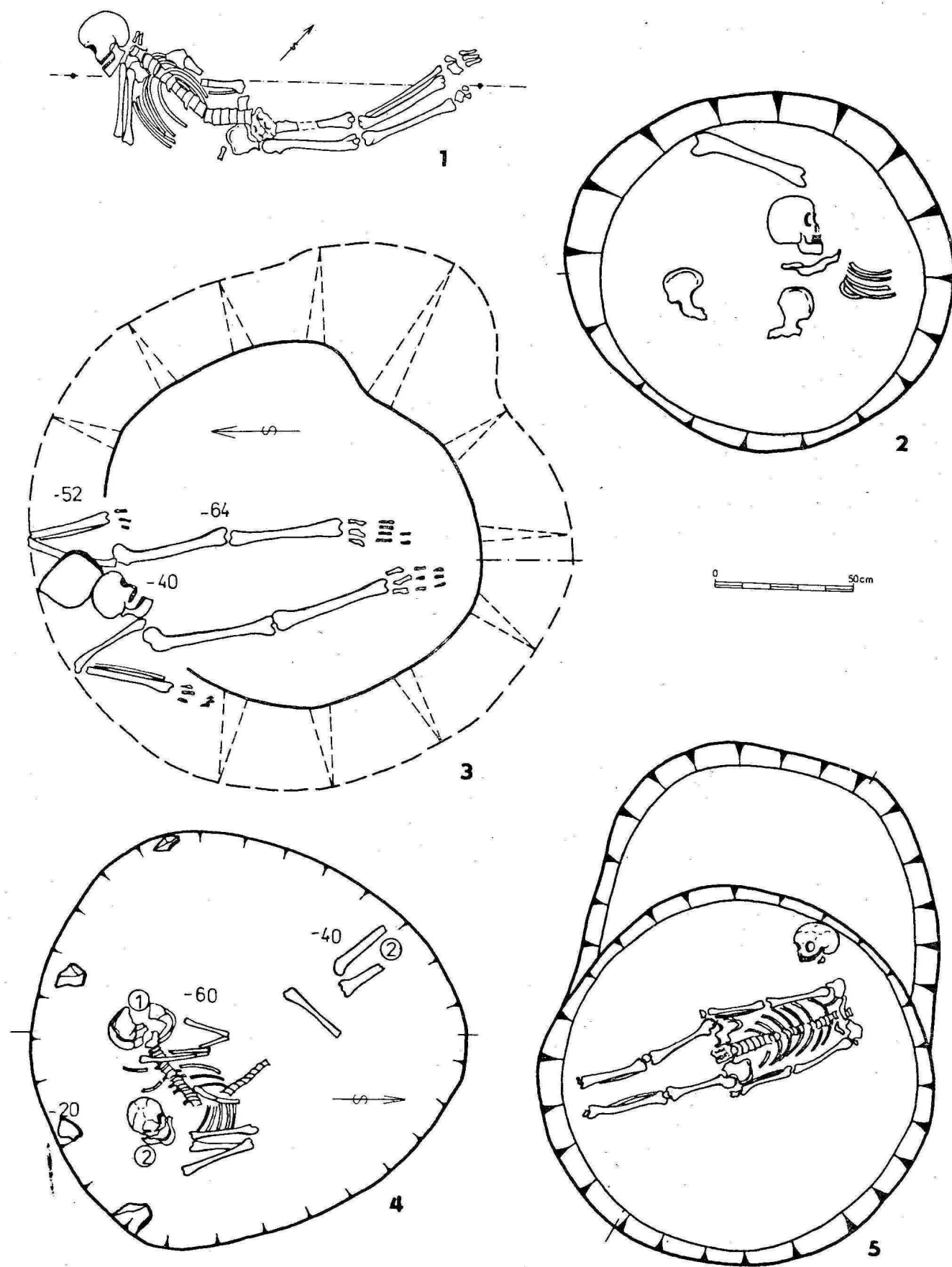


FIGURE II. 1 — Velemyšleves, Louny District: pit 6/79, 2 — Velemyšleves, Louny District: pit 142/79, 3 — Velemyšleves, Louny District: pit 43/78, 4 — Veliká Ves, Chomutov District: pit XII/82, 5 — Velemyšleves, Louny District: pit 135/81.

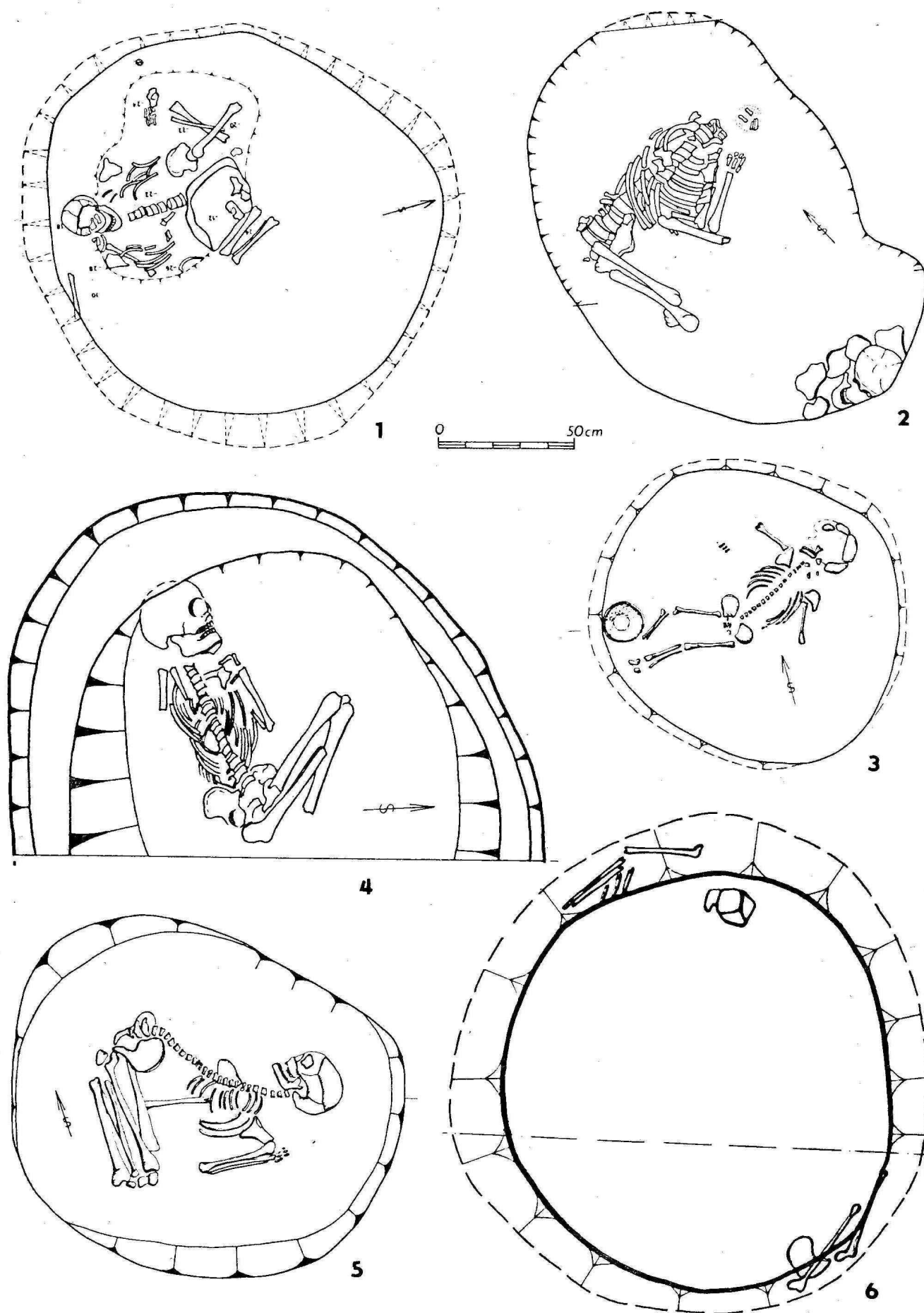


FIGURE III. 1 — Stadice, Ústí n. L. District: pit 221/88, 2 — Stadice, Ústí n. L. District: pit 199/87, 3 — Hošnice, Chomutov District: pit 24/85, 4 — Liptice, Teplice District: pit 9/82, 5 — Liptice, Teplice District: pit 8/82, 6 — Ústí-Trmice, Ústí n. L. District: pit 18/81.

3. Skeletal burials in settlement pits, sometimes with grave goods, but mostly without, and with skeletons put down with reverence. This form of burial will be the subject of our study in connection with so-called cannibalism (Beneš 1988).

The problem of anthropophagy aroused considerable attention in this country already in the late 19th century. The eponymous settlement not far from Slaný was discovered in the years 1892—3. V. Schmidt and J. Feleman studied at that time more than 52 pits, 13 of them yielding also human bones: separate skulls in two of them, isolated bones in nine of them, and in the remaining two cases (Nos. 3 and 33) human skeletons. In the backfill of the pits in general appeared sherds, animal bones, bone tools, clay weight and daub fragments. The overall picture is completed by bronze rings, pins and parts of big moulds for casting bronze products (V. Schmidt, 1893—1895). The revision of finds, unfortunately without having access to complex finds, republishing of notes on the finds and chronological classification of the pottery was done by J. Hartl (1972).

The anthropological study of the human bones was realized by J. Matiegka. He found the skeletons of two children in two pits, one of 20—24 months, the other 3—4 years old. He found traces of charring, breaking, radial splitting, cutting, crushing and also gnawing by animals on the human and animal bones, and he connected these features with cannibalism. In his view the Knovíz people “relished” not only the enemies, but also their own kinfolk. He presumed that these people ate not only the brains and marrow but also the palms and soles of their fellow creatures. Thus J. Matiegka presented proofs of the existence of anthropophagy in the Knovíz people more than 100 years ago. It is important to add that anthropophagy was not caused by shortage of food or famine, the abundance of animal bones in the pits indicates that they lived in affluence in this respect. The real cause of their anthropophagy was “fastidiousness” (Matiegka 1893—5). In connection with cannibalism we find side by side with skeletal “burials” at the Bronze Age settlements also similar “burials” in the hill settlements (Velim-Skalka), in the hillforts (Hradiško u Kroměříže) and in caves (Býčí skála), (Jelínek 1988).

Between the two World Wars many new finds of human bones, and even entire skeletons were discovered at Knovíz settlements. The latest osteological finds come namely from 10 localities from the territory of greater Prague, most of them from Prague-Bubeneč (Schránil 1928, Böhm 1941). Pits with human skeletons were discovered also in north-western Bohemia (Patokryje, Most; Preidel 1934).

In the late nineteen-thirties there were gathered sufficient finds of skeletal burials in settlements,

and thus V. Spurný was able to start with their study. The results of his study were published only when World War II was over (Spurný 1950). The base for his analysis was formed by the 150 best documented skeletal burials; 10 % of them were ritual graves from cemeteries, the rest came from pits. He concluded that most burials coming from the settlements belong to HA (Knovíz culture) and the minority to HB (Štítary culture). The great variability of the ways of laying the dead document that we have to do with disrespectful “burials” — in crouching or sitting position, in prone position on the ventral side, etc. Skeletons in irregular position, incomplete skeletons, separate skulls, burials of several individuals in a single pit, cases of quartering, splitting and breaking of skulls with dull implements are connected without doubt with anthropophagy (Spurný 1950, 15—16).

The unprecedented development of archaeological research following WW II. resulted in further finds of human bones. Namely in north-western Bohemia the rescue research operations in the open-cast coal mines resulted in the discovery of new Knovíz and Lusatian settlements.

LIST OF SELECTED SETTLEMENTS (TAB. I)

BŘEŠŤANY, Teplice District. In the M. Gorki open-cast mine part of a settlement was discovered, including 20 pits. In 12 of them human bones were found, in pit VIII appeared also the skeleton of a child (Buchvaldek — Zeman 1954, Šneidrová 1954).

BŘEZNO, Louny District. I. Pleinerová discovered in the years 1954—1977 a very densely populated Knovíz settlement; 305 objects were studied over an area of 2.5 ha. Two pits contained the skeletons of two boys (of 6 and 16 years), the head of the skeleton from pit No. 652 is missing, 10 pits contained fragments of bones and skulls (Pleinerová—Hrala 1988).

KAMENNÁ VODA, Most District. E. Neustupný excavated in the year 1965 in the local quarry part of a settlement — 88 pits. 15 of them yielded human bones and 5 complete or almost complete skeletons (pits Nos. 35, 72, 76, 84 and 88). The bones showed traces of violent interference — breaking and splitting of skulls and of mandibles (Bouzek—Koutecký 1980, not yet published in detail).

KNOVÍZ, Kladno District. See pp. 1—2.

KONOBRŽE, Most District. The author of this paper excavated in the years 1969—70 part of a settlement in the Ležáky open-cast mine. A total of 110 pits were discovered, 17 of them contained individual human bones and fragments of skulls. In 5 pits complete skeletons were found (pits Nos. 1, 6, 18E, 31 and 76), in pit 18E the skeleton of an adult female was found, with her head missing (Chochol 1979, Bouzek—Koutecký 1980).

LIBOÚŠ, Chomutov District. E. Černá and Z. Smrž rescued in the years 1973—1984 part of a Knovíz settlement in the open-cast mine Nástup.

31 pits were excavated, 18 of them contained human bones. In two pits incomplete skeletons were found; they have not yet been anthropologically studied. On the bottom of pit XIV/77 half of a skeleton was found in supine position, with part of the bones in secondary position — NZ No. 544/83 (*Fig. I: 3*). In other pit from the year 1984 a bulldozer driver found human bones and Knovíz pottery in the year 1984 and handed them over to Z. Smrž (report reference No. 348/84).

MINICE near Žatec, Louny District. On extending the runway of the local airfield N. Mašek excavated part of a Knovíz settlement — 28 pits, 4 of them containing human bones and skull fragments (Chochol 1979, Bouzek—Koutecký 1980).

STADICE, Ústí n. Labem District. The joint research organized by the Archaeological Institute in Most and by the District Museum realized during the earthmoving operations connected with the construction of the D 8 motorway (1987—88) discovered features belonging to the Únětice and La Tène cultures. A substantial part of a Lusatian settlement was excavated. The finds included more than 300 objects and in 2 pits human skeletons were found.

Pit 193/87: circular, broadening towards the bottom; the diameter at the bottom reaching up to 160 cm and the floor is at the depth of 160 cm. At the bottom there was lying the skeleton of an adult individual (anthropologically not yet determined) in crouched position on the left side, the position of the hands Model No. IV. The skull lined with stones was found at the southern wall, some 50 cm from the skeleton. Report, ref. No. 1045/87 (*Fig. III: 2*).

Pit 221/88: circular, with sapped walls, diameter 160—165 cm, depth 45 cm. At the depth of 18—25 cm was lying a dumped skeleton of an adult individual anthropologically not yet determined. The skeleton dumped to the pit hit a big stone and the bones got dislocated; the left arm is missing — the position of the arms is probably of Model No. II, Report ref. No. 543/88 (*Fig. III: 1*).

TRMICE, Ústí n. Labem District. During the construction of a concrete panel factory in the year 1981 M. Cvrková rescued part of a Lusatian settlement. In one of the 133 discovered pits (18/81) there were in two places remains of human skeleton. Near the head covered with a stone, there were scattered sherds of an amphora-shaped storage vessel. It means that the skeleton was not regularly buried (*Fig. III: 6*).

VELEMYŠLEVES, Louny District. A Knovíz site was discovered in the local sand-pit and it was excavated in the years 1953—1985. This is so far the most extensive Knovíz settlement discovered in Bohemia. Nine ha of area and 494 objects have been excavated (Koutecký 1986). Roughly 1/3 of the finds have not yet been processed. So far human bones were found in 3 pits, and complete skeletons appeared in 5 pits.

Pit A/53: it is a circular pit 140 cm in diameter and 55—63 cm deep. It yielded remains of a skeleton, most probably belonging to a male (adult matus, Bouzek—Koutecký 1980, 393, Chochol 1979, 23).

Pit 1/62: circular, of 118 cm diameter and 52 cm deep. At the bottom there was an incomplete skeleton of a mature male. The scattered bones show traces of violence — smashed shattered braincase, broken lower limbs (Koutecký 1970, Chochol 1974, 23).

Pit 31 (2/67): in an almost circular (174 × 182 cm), 88 cm deep storage pit in two places remains of the skeletons of two individuals were found. One belonged to an infant (inf. II), the other to a mature individual; Koutecký 1987, Chochol 1979, 23.

Pit 6/78: circular in shape, with sapped walls, 160—170 cm in diameter, depth 142. At the depth of 120 cm there was a skeleton in stretched position, on the right side, slightly arched, with the head to the west (*Fig. II: 1*). Position of the arms — No. IV (*Researches in Bohemia* 1982—3, No. 492, 192).

Pit 43/79: irregular circular shape with sapped walls, upper diameter 135, lower 200 cm, depth 85—92 cm. The skeleton was in sitting position, with its elbows leaning against the southern wall. The lower limbs extended, the position of arms — No. VII — (*Fig. I: 3*). *Researches in Bohemia* 1987—79, No. 421—145).

Pit 135/81; double pit; the smaller and deeper of them has a diameter of 135—140 cm and is 56 cm deep. There was a skeleton on the bottom in supine position, the position of arms No. II. The bones of the hands and feet are missing, the skull had been shifted aside — *Fig. II: 5* (*Researches in Bohemia* 1981—81, No. 410, 130).

Pit 142/78: a circular pit, 130—140 cm in diameter and 50 cm deep. At its bottom there were scattered human bones — *Fig. II: 2* (*Researches in Bohemia* 1978—79, 421, 145).

Skeletons from the years 1978—1981 are anthropologically not yet determined (Koutecký 1987).

We can attach to the above data also an information on earlier finds. In pit 22/54 in Mužský near Mnichovo Hradiště the skeleton of a young man was discovered (Štiková 1956). A disturbed pit in Všehřpy yielded the skeletal remains of three children (Hrál 1970) and a partially preserved skeletal burial was found in pit No. 23/55 (Solle 1980).

It is evident from synoptical table I of ten selected settlements that in some settlements human bones and burials in pits were rare (Březno 23: 1, Velemyšleves 62: 1), elsewhere they were relatively frequent (Minice 7: 1, Kamenná Voda 6: 1, Konobřez 5: 1, Knovíz 4: 1). In some settlements the proportion is 3: 1 m and in Libouš or in Břeštiny even 2: 1. But it is possible that in the latter cases the proportion has been distorted due to the loss of a number of objects (it was a rescue operation). In some settlements, e.g. in Radonice near Louny no human bones were found at all (Bouzek—Koutecký—Neustupný 1966).¹⁾

¹⁾ I feel obliged to thank all those who made for me available the information on settlement burials, namely J. Bouzek, E. Černá, M. Kuna, J. Muška, E. Neustupný, I. Rada and Z. Smrž.

TABLE 1

	Knovíz culture and Lusatian culture	Number of pits	Number of pits containing human bones	Number of pits with skeletons	No. of pits with bones	No. of pits with skulls	Proportion of all pits to the pits containing bones
1	BŘEŠTANY, Teplice District	20×	12×	1	10	1	2:1
2	BŘEZNO, Louny Distr.	305	13	2	8	3	23:1
3	KAMENNÁ VODA, Most Distr.	88	15	5	10	—	6:1
4	KNOVÍZ, Kladno Distr.	52	12	2	8	2	4:1
5	KONOBRŽE, Most Distr.	110	21	5	14	2	5:1
6	LIBOUŠ, Chomutov Distr.	31×	10	2	8	—	3:1
7	MINICE, Louny Distr.	28×	4	—	2	2	14:1
8	STADICE, Ústí n. L. Distr.	300×	2×	2	—	—	150:1
9	ÚSTÍ-TRMICE, Ústí n. L. Distr.	133	1×	1	—	—	133:1
10	VELEMYŠLEVES, Louny Distr.	494	8×	5	1×	2×	62:1
	TOTAL (× incomplete number)	1561×	76×	24	61×	12×	

FURTHER RECENT FINDS OF SKELETONS IN SETTLEMENTS IN CENTRAL AND NORTH-WESTERN BOHEMIA

HOŠNICE, Chomutov District; 1985 excavation by J. Blažek. Pit 24/85: oval in shape, half-preserved. At the bottom, at the depth of 72 cm there was a dumped skeleton in supine position with some dislocated bones. The legs were strongly crouched, the trunk turned to its left side, the skull more or less to the west, position of the arms — No. IX; the right tibia and fibula are missing. Pit 3/85 yielded human and animal bones, in pit 13/85 at the bottom near south-western wall there was a human skull — *Fig. III: 4* (*Research in Bohemia* 1984—1985, No. 134, 57).

LIPTICE, Teplice District; 1982 excavation by J. Muška. During rescue research realized by the Teplice Regional Museum in the M. Gorki open-cast coal mine besides other objects appeared also 2 pits with skeletons of immature individuals. Their preliminary determination was realized by M. Stloukal.

Pit 8/82: oval in shape 150 × 122 cm, the preserved depth is of 32 cm. At the bottom there was the skeleton of an adolescent (of 13—14 years) lying on its right side with strongly crouched lower limbs. The arms in position No. IV, the head oriented to the east (*Fig. III: 5*).

Pit 9/82: circular in shape, 112—120 cm in diameter, depth only 30 cm. The skeleton of a child (inf. II, 4 years) was dumped to the pit, fell on its back, the legs are slightly crouched at the knees, the arms are stretched to the sides — position No. 11. The head of the skeleton was oriented to E; Research

Report ref. No. 359—60/82 (*Fig. III: 3*). Near the right foot was found the neck of a Štitary type vessel.

LIŠANY, Louny District; 1981 research by P. Holodňák. It was a rescue excavation organized by the Žatec Museum following the reclamation of soil. Besides many other finds there appeared also a skeletal burial in a pit. The trench digger destroyed the facial part of the skull. The skeleton was in prone neutral position some 10 cm above the bottom. The legs were crouched, forming right angle at the knee, so that the body may get into the pit; the arms in position No. IV. Besides sherds in the back-fill the pit contained also grave goods — a cup (No. 1), a dish (No. 2), both with their bottoms up, and a large sherd of a storage vessel (No. 3). Research report of the Žatec Museum No. 11/(18); *Fig. I: 1*.

ROZTOKY, Prague-West District; 1982—83 excavation by M. Kuna. Excavations of a polycultural site on the left bank of the Vltava River, organized by the Archaeological Institute.

Pit 371/III-82: circular, half preserved, at the bottom at the depth of 135 cm ashes and mud plaster were found. The skeleton lay on its right side, with the legs crouched, it was partly situated over the ashes, some 20—40 cm above the bottom, with the head to the south — position of the arms No. VI. The skeleton belonged to a young man (adults I, of about 25 years). *Researches in Bohemia* 1982—1983, No. 393, 159—160 (*Fig. I: 5*).

Pit 648/82: oval in shape, half destroyed. At the depth of 200 cm there was a skeleton of a child in irregular position (inf. III, of 8—10 years). Only the chest remained in its original position, the skull had been shifted some 50 cm outside the pit; orientation of the skeleton E—W (*Fig. I: 6*).

Pit 749/82: oval in shape, only half preserved. It contained two incomplete skeletons in irregular position. Skeleton I belongs to an older child (inf. III, 8–10 years), skeleton II belonged to a younger adult female (adultus I).

The finds from Roztoky and Tursko have not been published. M. Kuna was so kind as to provide the information.

VELIKÁ VES, Chomutov District; 1982 excavation by I. Rada. He excavated in the local sand pit, besides the usual pits also a circular cauldron-like pit feature 12/82) of 160 cm in diameter and 100 to 110 cm deep. The pit contained 2 incomplete skeletons. Skeleton I — the lower — discovered at the depth of 60 cm was lying in supine position, with the legs crouched; the head was oriented towards SW. The upper skeleton (II) was at the depth of 40 cm and in two places: the skull, and the maxilla and mandible at the pelvis of skeleton I, and the long bones of the lower limbs at the NW wall — Fig. II: 4 (Researches in Bohemia 1982–1983, No. 494 d, 194).

It follows from the above surveys that many of the new skeleton finds lack anthropological determination. Having no clear idea concerning the individual human bones mixed with animal bones, it is archaeologically logical that my analysis will be limited to complete or almost complete skeletons. From the hitherto better documented finds we have separated a sample comprising 105 "burials" found in pits and settlements of central and north-western Bohemia; the finds from southern, western and north-eastern Bohemia have been left aside.²⁾

When ten years ago we were gathering materials related to burial rites in the settlements of the Middle and Late Bronze Age, part of them had already been anthropologically determined (Chochol 1971, 1974, 1979). For this reason it was possible to divide the skeletal "burials" with the help of archaeological and anthropological documents into 8 characteristic groups (Bouzek—Koutecký 1980). The first four groups were determined on the basis of complete or almost complete skeletons, the rest were classed on the basis of parts of skeletons, individual bones, separate skulls or of their fragments. I would like to emphasize that for the last four groups we lack in the latest finds any anthropological determination, therefore we shall deal with the first four groups only.

DATING OF SKELETAL BURIALS IN PITS

Skeleton finds are very rare in Eneolithic settlements. They appear in larger numbers in the Early Bronze Age in the Únětice Culture (Blšany, Březno near Louny, Tursko near Prague, etc.) The number of burials inside the settlements is markedly growing in the Middle Bronze Age in the Tumulus culture

(Čížkovice, Kamenná Voda, Konobříž, etc.). The first peak in this development appears in the Tumulus-Knovíz transition period. The second peak — the highest as regards the number of skeletons and separate human bones in the pits — belongs to the middle period (K IV–V). In the Late Knovíz period (K VI) and in the Štítary culture the number of finds is dropping to the level of the transition period. Only occasionally appear entire skeletons in the Hallstatt and La Tène periods, but frequent are the skulls, fragments of skulls and separate human bones. In connection with the dating we have to add that more than half of the cases in our sample were determined as examples of the Knovíz culture (See Table II).

THE POSITION OF THE SKELETONS IN THE PITS

The position of the skeletons in the pits is much more varied than the position of ritual burials in normal cemeteries. Some skeletons found in the pits were — for practical reasons, to get them into the pit — bent in the pelvic area or at the knees (Vešmýšev 6/78, Lišany).

1. The most frequent way of putting the skeletons in the pits is crouching position — in our material there were 37 such cases (24 %). 16 skeletons were discovered lying on the right side (10.6 %), 9 (6.1 %) on the left side, and in crouched position in general 12 (7.8 %). There were several variants of the position of crouched legs: slightly crouched, strongly crouched position, the legs pulled to the hip bones, buried with arms, and legs tightly bound. From the position of the skeleton we can judge whether he was put there with due respect, sometimes even with grave goods. The position of the arms will be discussed below.

2. The second most frequent way of putting the dead in the pit was on the back (25 cases), with the lower limbs either stretched — 15 = 9.8 %, or slightly crouched — 10 = 6.6 %. Both these ways of putting the dead in the pits are regarded as respectful, no matter whether they are connected with grave goods or not. With two exceptions on the bones of individual buried in this way there are no traces of violent interference.

3. The remaining ways may be regarded as extraordinary or exceptional. Burial in sitting position occurred 7 times — 4.6 %, e.g. in pit 35 from Kamenná Voda the skeleton of a female leaned with its back against the wall of the pit. The burial in pit 73/78 in Vešmýšev also contained a skeleton placed in sitting position with the back leaning against the wall of the pit, with legs and arms thrown apart. There was a special case in Žižice in the Kladno District, where allegedly a skeleton was found seated on a row of vessels (Böhm 1937). Burial in ventral position occurred in our analysis 7 times — 4.6 %. In pit 72/65 in Kamenná Voda the skeleton of a woman was situated with one leg crouched, and both hands touching shoulders. The skeleton from Lišany buried with pottery grave goods had its back-

bone bent in an unnatural way. The dumped skeleton found in Lomazice was situated in prone position (Neustupný NZ ref. No. 1437/73). The incomplete skeleton lacking the head in Březno (pit 652) was also in prone position (Pleinerová—Hrál 1988).

4. Another large group is formed by burials in which the skeletons are put in the pit non-anatomically (24–16.2 %), a phenomenon evidently connected with anthropophagy. Human bones are situated as a rule at the bottom, on a heap (Blažim, Louny District) pit 3/68; (Koutecký 1973). The scattered bones of a male and of a female from pit 84/65 in Kamenná Voda formed a continuous layer on the bottom (Neustupný NZ ref. No. 397/67). The same applies to pit 31/70 from Konobříž (Bouzek—Koutecký 1980). In other cases the bones are situated in two heaps (Trmice pit 18/81), or are scattered over the bottom of the pit (Vešmýšev pit 1/62, 142/78 — Koutecký 1970). In 10 "burials" we met with violent interference — splitting and cutting of long bones, smashing of skulls with dull implements.

5. The last group is formed by skeletons lacking heads or with skulls separated from the trunk. The skeleton of a female from pit 18E in Konobříž was situated in crouched position on the left side, the skull was replaced by a flat stone (Bouzek—Koutecký 1980). In pit 88/65 in Kamenná Voda besides the head the right hand is also missing, and the skeleton is also situated on the left side (NZ ref. No. 397/67). From the same locality, from pit 76/65 comes also the skeleton of a juvenile male in supine position. Here to, the head and the left foot were missing. In other burials the skulls had been shifted aside: Vešmýšev pit 135/81, Březno pit 652, Stadice pit 199/87 and Roztoky pit 648/82. The skull of the skeleton found in supine position in pit VIII in Břešany was separated and after some time returned to the trunk (Buchvaldek—Zeman 1954).

THE ORIENTATION OF SKELETONS IN PITS AND THE POSITION OF HANDS (TAB. II)

In more than 100 burials found in settlement-pits only in 39 cases have been determined the cardinal points. In the orientation of skeletons there is considerable variability, greater than in normal graves in cemeteries. The position of the skeleton is determined according to the direction of the head. Most frequent was the orientation N–S: 12 times = 1/3, E–W: 11 times = 1/4, S–N: 6 times; for the rest see the attached table. There is considerable versatility also in the situation of hands. Their position has been determined in 32 skeletons, we have determined 10 various modes (see explanations attached to Table II). Most frequent is mode IV — the right arm is stretched along the trunk, the left is bent upwards, with the hand at the shoulder. Mode IIa has been represented 5 times, Modes VI and VIII 4 times, Mode VII 3 times, for the rest see the table.

THE NUMBER OF SKELETONS IN "BURIALS" FOUND IN SETTLEMENT PITS (TAB. II).

Before we start the consideration of skeletal finds in pits in the neighbouring countries we have to make a brief statistical evaluation of the number of burials in the individual pits. From the synoptical table follows that 65 pits (62 %) contained by one skeleton, two skeletons were found in 22 pits (19.4 %), three in 8 pits (7.5 %). In two cases four skeletons were found in a single pit and in two pits there were found 5 skeletons in each. Only in a single case were there the skeletons of six individuals in a single pit. From the viewpoint of the number of burials and eventual family ties we can distinguish 4 groups: mass burials, family burials, burial of mother with her child and separate burials of children.

1. Mass burials

Burials containing the skeletons of 4–6, eventually more individuals are very rare, and they remind to a certain degree of skeletons dumped in the ditches of the Bronze Age hillforts (Cézavy near Blučina, Velim-Skalka). The only mass burial in our sample was found in Konobříž. In storage pit No. 1 there were found the skeletons of 6 individuals — of 3 males, 1 child, and of 2 adults of indeterminable sex. Pit 18E in the same locality yielded the bones of 5 individuals — of 2 males, of 1 child, of an adult of indefinable sex and of a female with her head cut off. By four skeletons were found in the pits in Břevany and in Chouč. They were skeletal remains of 2 males, of a female and of a child (Hanáková—Stloukal—Muška 1977, Laube 1932). Mass burials inside settlements are rare also outside Bohemia. We could mention here a Bronze Age pit from the Bavarian locality Essenbach containing at least 5 skeletons (see below). Mass burials are explained in most cases as a result of epidemics or wars (Podborský 1988).

2. Family burials

They are quite frequent also among settlement burials. To this type belong pits containing skeletons of a man, of a woman and of one or more children. Most frequent are pits with three skeletons (Mutějovice, Radim — Kamenná Voda). It is possible to mention also some earlier finds with two-to-three skeletons — such as Ohrada near Kolín, Prague-Bubeneč, Rybnany, Vykáň and Zápy (Böhm 1941, Šchránil 1928). The most plausible explanation is that they all died in consequence of an epidemic, less plausible is the conjecture that burials of this type represent human sacrifices.

²⁾ I did not evaluate the finds from Moravia, Slovakia, Austria and northern Yugoslavia, perhaps I shall return to the topic later.

TABLE 2

I	Skeletal burials at living sites determining their cultural identity	Únětice culture	Tumulus culture	Lusatian culture	Knovíz culture	K II/III	K III/IV	K IV/V	K V/VI	K VI/ST I	K ST I/II	Total
	Number of graves	1	6	6	61	4	4	9	4	3	7	105
II	Position of the skeleton in the grave	Supine position, stretched legs	Supine position, crouched	Crouched position	Crouched position right s.	Crouched position left s.	Prone position	Sitting position	Non-anatomical	Not-determined		Total
	Number of burials	15	10	12	16	9	7	7	24	50		150
III	Orientation of the skeleton — head to feet	S—N	N—W	SE—NW	SW—NE	SZ—SE	E—W	W—E	non determined			Total
	Number	6	12	3	1	1	11	5	64			105
IV	Number of skeletons in the grave	1	2	3	4	5	6		—	—	—	Total
		65	22	8	2	2	1	5				105
	Position of the hands	I	II	III	IV	V	VI	VII	VIII	IX	X	
	Number	2	5	2	7	2	4	3	4	2	1	32

3. Burials of mothers with children

Burials of a mother with 1–2 children are quite frequent in the Knovíz settlements. A pit in Velké Přílepy contained the skeleton of a female with two children. Skeletons of mothers with children were found also in pits in Březno, Kamenná Voda, Libočany and Roztoky near Prague. In earlier finds we often come across the definition "woman with child", in most cases without anthropological determination (Bylany, Chouč, Prague-Hloubětín). In case of the definition "adult and child" it cannot be ruled out that the adult is a male. Anthropologically accurately defined skeleton of a male (father?) with a bigger child is quite rare (Konobříže pit 6/70).

4. Burials of children

Separate burials of children are quite frequent in the settlements. Separate child burials amount to 14.2 % — i.e. to 15 cases of the total number; in combination with adults there have been 46 such cases. Most pits contained a single skeleton, in pit 33 in Knovíz 3 skeletons were found, pit 31/70 in Konobříže and a pit in Všechny contained by two skeletons each. Our ensemble comprises children of all age groups: infants — infants I (0–3 years) — 4 times; children belonging to the infants II group (3–7 years) — 5 times; children — infants III (8–10 years) — 5 times. Three cases have remained not defined.

Burials of a mother and a child are explained in various ways; the most frequent explanation is that they are ritually "impure" or otherwise inferior persons, denied the privilege of being buried on the

sacred hill. To the periods in which women in various cultures were considered impure belonged e.g. the childbed. That's why they appear buried with new-born babies.

Separate burials of children may be connected with the fact that they died prior to reaching maturity (i.e. before undergoing the initiation ceremony and were not considered of full of rights). In some cases there is no doubt that they served as sacrifices to the gods of fertility and harvest (Bouzek—Koutecký 1980).

SKELETAL BURIALS AT BRONZE AGE SETTLEMENTS IN THE NEIGHBOURING COUNTRIES

Cases of skeletal burials at settlements are known from the territories of the Federal Republic of Germany (Bavaria, Baden-Württemberg), Poland (Silesia, Little Poland, Great Poland), the German Democratic Republic (Thuringia, Upper Saxony, Lusatia). The phenomenon occurs also in Moravia, Slovakia, Austria and northern Yugoslavia (Jelínek 1988). Among the earliest reports on the phenomenon belongs the article by E. Lehmann on a Knovíz settlement in Gera-Niederung near Erfurt. In the local gravel pit several pits containing Knovíz-like pottery sherds were found. They appeared alongside with human bones showing traces of violent interference prior to killing (Lehmann 1928, 1929).

Thanks to a dissertation by A. Wisniewski we have a survey of finds of human bones found at settlements in the territory of the Federal Republic of Germany. The survey contains detailed informa-

tion on the situation in Bavaria and in Baden-Württemberg. R. Ganslmeier (1988) deals also with similar problems in connection with the publication of a skeletal burial discovered in a pit in Altdorf. In order to draw comparisons with Bohemian finds I have chosen similar examples from Germany and Poland.

ALTDORF, Ldkr. Landshut. Three pits of the Final Bronze Age settlement yielded human skeletons — Pit No. 14 contained the skeleton of a child (infans II, 6 years) placed in crouching position on the right side, at the southern wall of the pit. The skull lay on the right temporal bone and was oriented to the east. In pit No. 48 there were found remains of a child skeleton — parts of the trunk, pelvis and arms. Pit No. 355 contained the skeleton of an old man (maturus), with the right femur missing. The burial was fitted with grave goods — with a bronze bracelet and the neck of a vessel. In two further pits (Nos. 71 and 361) there were found individual bones (Ganslmeier 1988, Fig. 2, Wisniewski, inventory).

BOLZHAUSEN, Ldkr. Würzburg. In one of the pits in the settlement of the Final Bronze Age (HB3) the skeleton of an adult was found in prone position and with stones placed on it. As grave good a dragon-fly-shaped pin was added (Wilbertz 1982, Wisniewski, inventory).

BURKHEIM am Kaiserstuhl. In a hill settlement from the period of the Urnfield culture the skeleton of a child was found in a pit (Gutman 1929 to 32, Wisniewski, inventory).

ESSENBACH, Ldkr. Landshut. In one Bronze Age pit the remains of at least five human skeletons were found. The finds come from a simultaneous settlement (Wisniewski, inventory).

ESCHBACH, Ldkr. Breisgau-Hochschwarzwald. A settlement-pit from the period of the Urnfield culture yielded the skeleton of a child (Werth, 1983, 180; Wisniewski, inventory).

WALLERFING, Ldkr. Rothal-Inn. In an Early Bronze Age settlement human bones were found in two pits. Pit No. 25 contained a double burial — the skeleton of an adult male (adultus), and that of an adult female (adultus I). Pit No. 30 contained the bones of an older adult-to-old man (adultus II-maturus); (Siegroth 1972, Wisniewski, inventory).

Pits in other localities in the Federal Republic of Germany yielded individual bones: in Göggingen — fragments of a skull, Unterechlingen — a femur — Weingenheim — in 3 pits right arms of females, Wittlingen — a human skull cap animal bones and pottery.

Localities in the GDR

ALTENBERG, Kr. Nebra. At a Final Bronze Age Settlement (HB) human skeletons were found in two pits. In pit No. 2 there was a child skeleton in prone position. The bones showed traces of charring, the limbs were in turned out position. In pit No. 1 there was an incomplete skeleton of an adult, lying on a layer of stones. The skull and lower limbs had been separated by force, the bones showed traces of chopping and burning. In pit No. 3 the fragment of a child skull was found (Mania 1971, Ganslmeier 1988, Abb. 15: B).

GROSS—GODDULA, Kr. Merseburg. In a 140 cm deep refuse pit from the Final Bronze Age at the depth of 100 cm there was a crouched skeleton of an adult. The skeleton was lying on the right side, the legs were crouched with the knees at the very chest. The arms at the elbows were bent so that the hands were at the shoulders (Ganslmeier 1988, Abb. 14: 4).

RUMSTEDT, Kr. Helmstedt. In two Knovíz culture pits with broken animal bones, waste and debris and sherds appeared also the skeletons of a man and of two children (Wisniewski, inventory).

SEEBURG, Kr. Halle. In a Final Bronze Age settlement a pit with a fireplace contained the skeleton of a female, some bones appeared in the ashes. The legs of the skeleton were bent at the knees and the feet were missing, the arms were stretched, and the hands were clasped on the lap (Agde 1934, Ganslmeier 1988, Abb. 14: 5). Finds in Poland

The finds of human skeletons and bones, similarly as in Bohemia are very frequent in the fortified settlements of the Bronze Age and of the Hallstatt period. They appear in moats, and cultural layers (Biskupin, Smuszewo, Sobirjuchy, etc.). In contrast to Bohemia they are less frequent in open settlements of the Bronze Age or of the Hallstatt and a Tène periods (Gedl 1966).

SLUPA, pow. Słupca. In this lowland settlement of the Late Hallstatt period (HD) human skeletons were found in two pits. One pit contained the incomplete skeleton of an adult woman (Adultus I, 30 years), with smashed skull, separated mandible and a rib fragment. The other pit yielded the fragment of a skull (Malinowski 1966, 1969).

SZYSZYŃ, pow. Konin. In the open settlement from the Fourth Bronze Age (D) human skulls were found in two pits (Gedl 1966, No. 106, 35; Malinowski 1966).

WITÓW, pow. Kazimierz. One of the pits of the Early Lusatian settlement situated on the high terrace of the Vistula River contained a complete skeleton. The deceased was put on the right side in crouched position and received the usual grave goods (a vessel, flint to produce sparks; Gedl 1966, No. 122, 39–40).

In Poland, in settlements belonging to the Lusatian Culture appear mostly deficient skeletons and individual human bones (Malinowski 1961). Complete skeletons are real exceptions (see Witów). Comparable conditions can be seen also in the Lusatian settlements in Bohemia, and conditions are similar also in the adjoining territories of Germany. The largest number of skeletons dumped in pits, and the large number of isolated bones is probably connected with cannibalism. It seems that the centre of these customs was in Bohemia. The gruesome ritual executions are connected with changes in ideology, regarded as direct result of the development of the production of bronze and iron (Jelínek 1988). We, on the other hand, hold that the Bronze Age, with the culminating patriarchal system, was well established, this period was characterized by firm and stable social order. A break occurred later, at

he time of the extension of the use of iron in the Hallstatt Period, with the first signs of the decay of the clan institutions, when the importance of the individual, or the leader, and of the institution of the body of armed retainers was increasing (Bouzek 1985, Koutecký 1968).

COMPREHENSIVE EVALUATION OF SKELETAL BURIALS DIVIDED INTO GROUPS (TAB. III)

I. Burials with grave goods, without traces of violent interference

In settlements they appear in relatively small quantity, our sample comprised 12 graves (6.8 %). As a rule they are fitted with ceramic grave goods (1–3 vessels), the finds included also a bronze pin, a stone ball and a moon symbol. The proportion of sexes, and of adults and children is even, half of the skeletons have not been anthropologically determined. Prevails the situation of the skeleton in crouched position on the right side (5 cases). Two skeletons were found on the left side, and other two in the sitting position. In one case the skeleton was lying in prostrate position. The orientation of three burials has been determined — twice N–S, once SW–NE. The position of arms was determined in three cases — Type VIII once, Type II twice. The burials with grave goods had been put into the earth with due respect, there are no traces of non-anatomical position or violent interference. These occurred only on the skeleton of a female from Lipenec, where J. Chochol stated the smashing of mandible, and in skeleton from pit 3 in Knovíz, with crushed skull. It is not quite clear whether we have not to do with secondary damage. It is a group of normal burials of adults and of children buried in settlements, because for some reason they were denied a place in the normal burial ground. They may have been children not yet initiated, sick or people otherwise differing from the mass. They may have been people breaking a law (taboo). By being buried in the settlement according to the ideas of the period they had been denied afterlife (Podborský 1988).

II. Burials without grave goods and without traces of violent interference

These burials represent more than half of our sample — 120 cases (62.2 %). The burials from this group can also be regarded in most cases as normal — but with no grave goods. Almost half of the finds have not been determined anthropologically. From the viewpoint of age and sex children prevail — 31 finds (50 % of the determined finds), 1/4 are adult females, the rest are males or adults without determined sex. 11 skeletons were lying in crouched position (without closer definition) ten skeletons lay on the right side in crouched position and five in crouching position on the left side. Twelve skeletons were in supine position with stretched legs and six in supine position with their legs crouched. Appeared also burials in sitting and in prostrate position (6 cases).

Cases of non-anatomic position (possible secondary burial) occurred 21 times, 42 cases have remained non-determined. As far as the position of arms is concerned, type IV prevails — the right hand is stretched, the left is bent at the elbow to the shoulder (4 cases) and type VI — the right arm is stretched and the left bent at the elbow and touching the chest (3 cases). For the rest see the table. The orientation of the head — N–S (9 cases), E–W (5 cases), S–N (4 cases), the rest is in the table.

In this group too we may have to do with children not yet initiated, or with possible sacrifices to gods, perhaps stifled. Some of the males and females buried in this way can be regarded from the viewpoint of morality of the period as immoral or unchaste, eventually sick (women in childbed, people expelled from the society, delinquents, etc.). There may be also sacrificed people in this group, but there is no proof of anthropophagy, there are no traces of violent interference in these skeletons (Bouzek—Koutecký 1980).

III. Complete or almost complete skeletons with traces of violent interference

This group is represented by 35 skeletons only (19 %). We would expect more; following a detailed anthropological evaluation perhaps we shall be able to add to this group some of the skeletons from group II. Prevail males (10) and children in the age of 12–14 years, evidently boys. Among sexually non-determined adults probably prevail males. Very conspicuous is the small number of females (3 cases). 20 skeletons were found in pits, otherwise the non-anatomical position prevails — the bones of the deceased have been scattered on the bottom, heaped up, or mixed with the backfill (9 cases). In this group we can find also seemingly normal, but later disturbed burials, twice crouching on the left side. The position of arms has been determined in two cases (type VIII and IX, orientation 1× E–W).

On the skulls and on the long bones there are frequent traces of violence prior to putting these individuals to death, the skull broken with a blunt object, broken mandible, bones split longitudinally and removed marrow. Frequent are also the transversal cuts and traces of charring. Probably we have to do with killed individuals, in some cases with ritual human sacrifices made during intercourse with gods at feasts held in honour of the latter. Namely the incomplete skeletons may be related with such practices. The breaking of skulls is often explained as a measure to prevent the dead from causing harm to the living. Adult males and boys may have been sacrificed at ritual feasts, while females were taken by the conquerors to their new homes as workforce and secondary wives (Bouzek—Koutecký 1980).

IV. Skeletons without skulls or with skulls separated from the trunk

This group of special burials is the smallest, it includes 9 skeletons, i.e. 5 % of the total sample.

TABLE 3

Group	Skeletal burials in settlements	Males	Females	Adults	Adolescents	Children	Not-determined	Total	%	Notes
I	Burials with grave goods and with no traces of violent interference	2	2			2	6	12	6.8	More than half in crouched position. Grave gifts: cup (3 pcs), whet-stone (2 pcs), (3 pcs), amphora, dish, bronze pin, stone balls, part of a moon-idol
II	Burials without grave goods and with no traces of interference	11	15	4	2	31	57	120	69.2	Prevail crouched burials, in supine position, then follow non-anatomic position, and prone position
III	Skeletons with traces of disturbance	11	3	7		10	4	35	19.0	Prevailing in non-anatomic position (dumped into the pit), sometimes it may be a secondary burial. The skeletons are often covered with clay.
IV	Skeletons without heads, or the head is dislocated and separated and situated at some distance from the trunk	1	3			3	2	9	5.0	Skeletons in crouched position, in supine position, the missing head replaced by a stone, the skull lined with stones
	Total number of burials	21	21	11	2	46	75	176	100	Number of graves 105 Number of burials 176

The skeletons of three females and of a single man were found without skulls. The skeletons of children have their skulls, but separated from the trunk, and buried alongside with the body or outside the pit. In two cases adult individuals had their skulls situated 50 cm from the trunks. In three cases the skeleton was on the left side and the legs crouched, three times in supine position with crouched legs, one skeleton was in prostrate position, and once non-anatomical position was found. Traces of violent interference were found in three skeletons (Kamenná Voda, pit 76/65, Most-Zahraňany pit 1/67 and Břešťany pit VIII). The skeleton in pit 18E in Konobříž had — according to J. Chochol — the skull severed with a single oblique cut (with a sword?) across the second cervical vertebra; it is a clear case of decapitation. In the place where one would expect the head, there was a big stone lying. The skeletons of females without head are considered as related with persons having supernatural force (black and white magic). Sorcerers were sometimes severely punished if the prophecy misfired — by hanging, decapitation, etc. (Glob 1965).

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