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„Social structure of the early Bronze Age population
Gemeinlebens F reconsidered:
pathological and degenerative conditions“

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1. Introduction

Up until the 1980s, local anthropologists were mainly focusing on morphometric analysis, and most contemporary findings such as the approximately 3,000 excavated prehistoric graves from the Lower Austrian Traisen-Valley region stored in the National History Museum of Vienna had not yet been systematically investigated in terms of palaeopathologies.

In addition to archaeology and demographics, paleopathology makes a great contribution to the reconstruction of the quality of life and health in our prehistoric past. Several authors have emphasized the importance of palaeopathology and stated that pathological changes on human skeletons not only provide information on the individual's fate, but also allow conclusions on the living and social conditions of ancient populations (e.g. NEMESKERI and HARSANYI, 1959; GOLDSTEIN, 1963; BROTHWELL, 1981; GRUPE et al., 2005).

Oral health depends on the individual's diet and is assessed by examining dental abscesses, carious lesions, periodontal disease and ante mortem tooth loss.

Thanks to unspecific stress markers such as cribra orbitalia, enamel hypoplasia or periosteal reactions, the deficiency symptoms and eating habits of ancient populations can be characterized more specifically. Investigating degenerative joint conditions (osteoarthrosis and osteoarthritis) can provide important insights into activity and workload.

This thesis focuses on the type and frequency of pathological and degenerative modifications within the Early Bronze Age population of Gemeinlebarn F in Lower Austria (Figure 1) and brings them into a social context.



Figure 1: map extract of Lower Austria showing the early Bronze Age burial site Gemeinlebarn F

1.1 Early Bronze Age in Lower Austria state of the art

Since the beginning of the 1980s, the *Federal Office of Historic Monuments (Abteilung für Bodendenkmale des Bundesdenkmalamtes)* has discovered about 100 new archaeological sites with more than 3,000 graves in the Lower Traisen-Valley (Lower Austria) dated between the Middle Neolithic and Early Latène (NEUGEBAUER, 1991 and 1994). The carefully excavated and precisely documented findings of these sites prove that aspects such as climate, geology and economics must have been constantly beneficial for several thousands of years within this region.

The majority of burials – more than 2,500 – belong to the major cemeteries Franzhausen I, Franzhausen II, Pottenbrunn-Ratzersdorf and Gemeinlebarn F and are of early Bronze Age (2,300/2,200 – 1,600 B.C.) origin. During this time period the Lower Austrian Danube area comprised three major cultural groups: north of the Danube the *Aunjetitz* culture (*Únětice* culture), and south of the Danube the *Wieselburg* culture to the east of the Wienerwald and the *Unterwölbling* culture west of the Wienerwald (Figure 2).

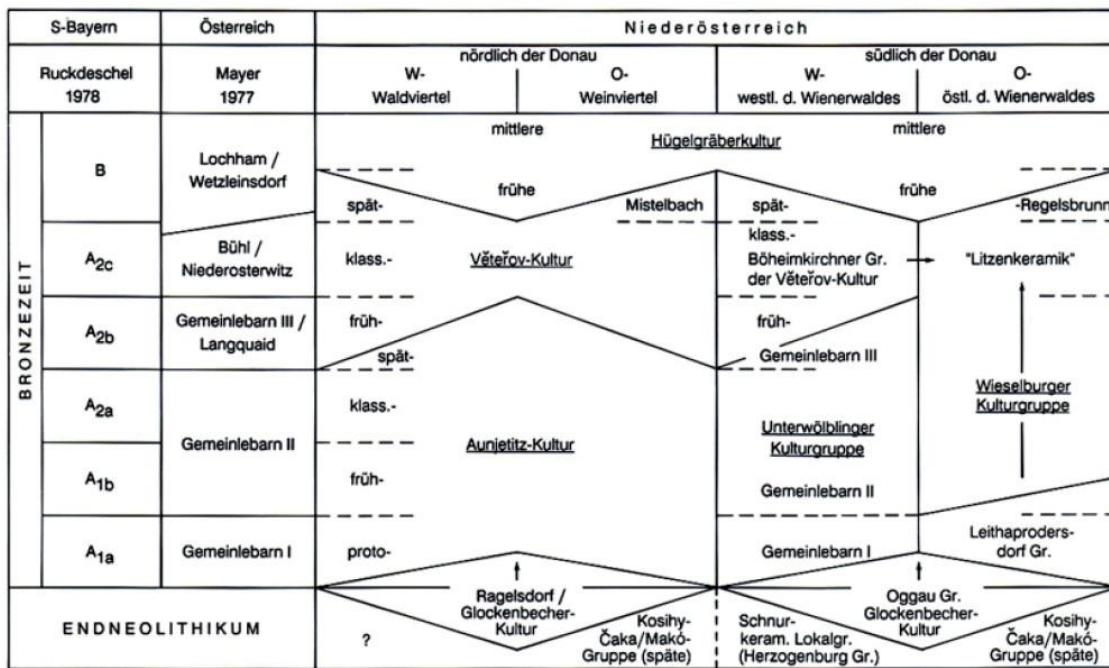


Figure 2: chronology of early Bronze Age cultures in southern Bavaria, Austria and Lower Austria north and south of the Danube (by J.-W. NEUGEBAUER, 1991, Figure 9/2)

Most of the Traisen-Valley findings are classified as part of the *Unterwölbling* culture.

Even though Franzhausen I (714 burials) contains graves belonging to *Gemeinlebarn I, II* and *III* – the early, middle and late period of the *Unterwölbling* culture - the majority of individuals derive from the *Gemeinlebarn II* layer, as do the burials in Pottenbrunn-Ratzersdorf (81 burials). The investigated graves of Franzhausen II (1,400 burials) and Gemeinlebarn F (258 burials) show typical characteristics of *Gemeinlebarn III/Langquaid*, which means they were established approximately 100 years after the former two.

In this late period of the early Bronze Age, the *Unterwölbling* culture is strongly influenced by the late *Aunjetitz* culture (*Věteřov* culture). The major representative of the so-called *Böheimkirchner* group of the *Věteřov* culture with *Bell Beaker* type burials is Gemeinlebarn F (NEUGEBAUER-MARESCH, NEUGEBAUER, 2001). Local traditions and external cultural influences, as well as trade connections within the Traisen-Valley, were analysed by J.-W. NEUGEBAUER (1994), and J.-W. NEUGEBAUER and C. NEUGEBAUER-MARESCH (2001), who focused on burial customs and patterns in the grave goods of the final neolithic *Beaker* cultures and the early Bronze Age.

An extensive demographic analysis of the area was carried out by PROSSINGER and TESCHLER-NICOLA (1992) who investigated morbidity and mortality rates and showed that the life expectancies (e^x) for individuals from the younger necropolis Franzhausen II and Gemeinlebarn F were very similar (27.2 and 28.6 yrs) and higher than the ones for the slightly older sites of Franzhausen I and Pottenbrunn-Ratzersdorf (23.9 and 24.0 yrs). This may possibly be interpreted as a result of improved local living conditions.

In order to reconstruct these conditions within the Traisen-Valley in early Bronze Age more accurately, it is necessary to examine paleopathologically the existing skeletal material. Up until now this has only been carried out on the cemetery of Pottenbrunn-Ratzersdorf (GEROLD, 1997).

1.2 Gemeinlebarn F state of the art

The skeletal remains are relatively poorly preserved which is typical of the Traisen Valley. The graves and the holes left by the plunderers were filled with gravel mixed with humus and fine sand. This mix is particularly deficient in lime and very permeable to water. Consequently, the ingress of moisture and deeply rooting plants severely damaged the bone material. Furthermore, children's graves were probably not very deep, thus the majority have been destroyed by recent ploughing work.

HEINRICH and TESCHLER-NICOLA (1991) examined the skeletal remains of the existing 224 individuals and estimated the sex and the age at death of each individual. TESCHLER-NICOLA and PROSSINGER (1992) demographically analysed early Bronze Age cemeteries of the Lower Traisen Valley.

The number of deaths (d_x) for the age categories 0 – 5 yrs and 5 – 10 yrs is relatively high, but not uncommon for those days. The average life expectancy of the Gemeinlebarn F individuals at birth was 28.6 years ($N=224$).

After the metrical characteristics of the social groups had been analyzed, the question of social differences within this late early Bronze Age population was raised for the first time. By using multivariate CLUSTER-analysis, P. STADLER

(1991) was able to divide the population into different social classes which are based on the type of artefacts, grave dimensions and grade of deprivation. The average body height was 167.8 cm for males and 158.9 cm for females. After the results pertaining to the different social classes had been calculated, it appeared that the male “upper” class with an average height of 169.2 cm was significantly taller than the male “lower” class with an average height of 166.4 cm. The difference in the average cranial length is 4 cm (“upper” class: 187.9 mm; “lower” class: 183.9 mm) (TESCHLER-NICOLA, 1989).

Furthermore, rich males appear to have larger and more robust bones, especially in the region of the upper extremities. Significant differences between males in the two social classes were also obtained from various measurements on the humerus, radius, ulna, clavicle, scapula and femur. No social distinctions were detected between females regarding body height and cranial measurements. The only differences occurred for the shortest bone circumference of the right ulna (rich females: 30.5 mm; poor females 28.8 mm) and the upper transverse diameter of the left femur (rich females: 31.3 mm; poor females: 29.2 mm) (TESCHLER-NICOLA, 1989).

These results comply with the perpetual correlation between body height and social rank that has been reported by several authors in the past (e.g. SEIDLER and TIMISCHL, 1987; BOGIN, 1998), and also with the observation that the effect is less significant or negligible in females than it is in males (e.g. SCHUHMACHER and KNUßMANN, 1979; BIELICKI and CHARZEWSKI, 1983).

2. Hypothesis

Up until today, authors such as SHENNAN (1993) presume the local two-level settlement hierarchies in Central Europe to have developed late in the early Bronze Age, between 1700 and 1500 BC. This thesis gives a more precise picture of the social differences in the early Bronze Age burial site of Gemeinlebarn F.

The investigation of pathologies and degenerative joint conditions provides more details regarding the purported social and sex related differences within this population (see chapter 1.2). Many authors have found correlations between body height and the level of stress (e.g. SCHUMACHER and KNUßMANN, 1979) and according to LARSON (1995), "individuals who are short for their age tend to have a higher frequency of physiological stress indicators". STINI (1988) shows that body height, muscle growth and maturation are strongly linked to diet and level of activity, and that stress is responsible for slowing down these processes in males. He suggests that in cases of chronic malnutrition, the body is unable to compensate this condition and adolescent body growth is stopped by attainment of sexual maturity.

Consequently, the hypothesis that the smaller individuals belonging to the lower class are more prone to physical stress and degenerative changes is postulated in this thesis.

3. Material

The 258 Early Bronze Age burials of the Lower Austrian necropolis Gemeinlebarn F were excavated between 1973 and 1981 by Johannes-Wolfgang NEUGEBAUER who also published the site's archaeology in 1991. It is dated as late Early Bronze Age (Gemeinlebarn III/ A2; 1880 – 1680 cal. BC) and the archaeological material suggests it was in use over a period of approximately 80 to 100 years.

Originally, the cemetery stretched over an estimated area of 25,500m² (220m x 130m) and was orientated north-south (Figure 3). Between 1973 and 1981 it was possible to excavate around 19,500 m² (76.5%). The rest had already been destroyed by gravel mining, mainly in the north, and the construction of two detached houses within the left half of the cemetery.

Apart from burial 213, a cremation, all individuals were buried in single, flat graves (inhumation), lying on their side with arms and legs bent at various degrees. Male individuals were buried lying on their left side with their head orientated north and females on their right side with their head orientated south, thus both sexes were facing east (*Bell Beaker* type burial custom).

Johannes-Wolfgang NEUGEBAUER proved the use of box-shaped or tree trunk coffins in more than 50% of the cases (NEUGEBAUER, 1991). Most “upper” class burials in which valuable grave goods had been found contained coffins, whereas burials with less valuable or no grave goods at all lacked a coffin. Further, he assumes that the burials were respectively marked above ground by small grave mounds and wooden and/or stone stelae.

The dimensions of the graves also correlate with the individual's social rank: “upper” class individuals were buried at a greater depth than “lower” class individuals and the degree of deprivation is also notably higher.

243 graves (94.18%) were (mainly contemporarily) robbed and only 14 (as well as the cremation) showed no signs of interference. 36 were found more or less empty and 9 disturbed burials included the skeletal remains of neighbouring

individuals which, amongst other things, reflects the impiety of the grave plunderers.

Apart from ceramics, the remaining excavated artefacts are made of bronze, gold, amber and bone. They include axes and daggers, as well as belt hooks, pins (predominantly globe-headed and roll-headed pins), rings (solid rings, lock rings and spiral-ended rings), solid bracelets, spiral-ended bracelets, spiral beads, spiral tutuli, cone- and hat-shaped tutuli, metal strips, amber beads, one bone ring (possibly human) and one tooth amulet (canine from *Canis l. f. familiaris*);

The skeletal remains from Gemeinlebarn F necropolis are stored in the Anthropological Department of the Natural History Museum in Vienna.

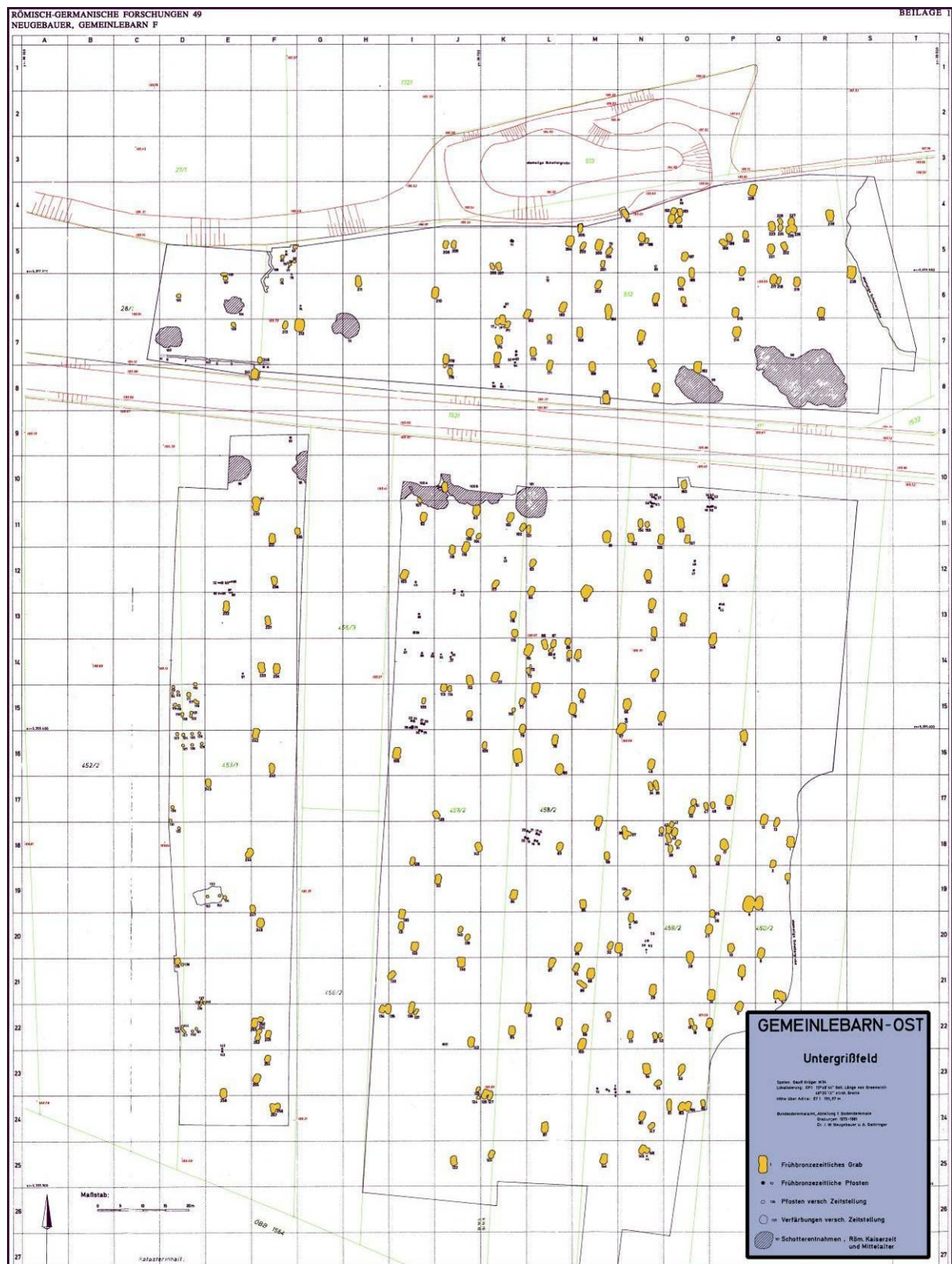


Figure 3: overall plan of the early Bronze Age necropolis Gemeinlebern F, Lower Austria

4. Methods

4.1 Existing anthropological data

Age and sex estimation of the Gemeinlebarn F individuals is taken from HEINRICH & TESCHLER-NICOLA (1991), who combined anthropological and archaeological features in order to present a more precise demographic picture. The grade of the individual preservation is adapted from NEUGEBAUER (1991) (Appendix 1):

- **grade 1:** skeletal remains completely preserved: small, naturally caused erosions tolerated (see Appendix 1, A)
- **grade 2:** skeletal remains mainly preserved: majority of bones present, in particular skull and majority of long bones (see Appendix 1, B)
- **grade 3:** skeletal remains partly preserved: around 50% of skeletal remains present, including around 50% of long bones (see Appendix 1, C)
- **grade 4:** skeletal remains poorly preserved: less than half of the skeletal remains present, mainly negligible bone material (see Appendix 1, D)
- **grade 5:** no skeletal remains found (see Appendix 1, E)

The various skeletal parts themselves are marked on the individual's findings sheet as "+" if present, as "p" when partly present, or as "-", when missing. The population is divided into "upper class" (wealth=1) and "lower class" individuals (wealth=2), the social classification being primarily based on grave dimensions, grave goods and the degree of disturbance through grave robbery by STADLER (1991).

4.2 Documentation of pathological and degenerative joint conditions

The skeletal remains were investigated macroscopically and/or by using a reflected-light microscope and unusual or uncertain pathological cases were put aside for more precise investigation (x-ray) and/or photography.

The individual dental condition (Appendix 2 and 3) including molar abrasion, caries location and size, linear and spotted hypoplasia, calculus and periodontal changes was designated following SCHULTZ (1988):

Tooth status abbreviations:

- IL: intravital loss, ossification of alveole
- IT: isolated tooth
- PD: deciduous tooth replaced by permanent tooth
- PL: postmortal loss
- X: alveolar bone missing/evaluation impossible/tooth not erupted

Grades of abrasion:

- grade 1: no signs of abrasion
- grade 2: signs of abrasion on enamel
- grade 3: dentin-spots visible (*enamel imperfecta*)
- grade 4: connected dentin-spots
- grade 5: exposed dentin with enamel left
- grade 6: abrasion down to root, no enamel left

Intensity of calculus, linear enamel hypoplasia (LEH), periodontal disease:

- 0: no signs
- I: slight signs
- II: moderate signs
- III: average signs
- IV: strong signs
- V: very strong signs
- X: evaluation impossible

Size of caries:

- 0: no signs of caries
- I: pinhead-size
- II: sesame seed-size
- III: peppercorn-size
- IV: rice grain-size
- V: half of crown destroyed (molars)
- VI: crown fully destroyed (molars)
- X: evaluation impossible

Pathological modifications on the cranium (see Appendix 4), as well as the post-cranium (see Appendix 5) were recorded, the right and left elements being scored separately.

Degenerative changes of vertebrae and joints were also documented on the basis of SCHULTZ (1988) (see Appendix 6 and 7):

- **grade 0:** normal, fit joint/articular surface;
- **grade 1:** joint/articular surface shows no pathological changes, but small signs of wear;
- **grade 2:** joint/articular surface slightly pathological: slight marginal lipping (osteophytes less than 3 mm) and less than 50% of the surface shows slight degenerative or productive changes; no eburnation but surface may include some porosity;
- **grade 3:** joint/articular surface slightly pathological: more than 50% of surface shows slight degenerative or productive changes; slight marginal lipping (osteophytes less than 3 mm); no eburnation but surface may include some porosity;
- **grade 4:** joint/articular surface pathological: severe marginal lipping (osteophytes greater than 3 mm) and severe degenerative or productive changes on less than 50% of surface; surface may include substantial porosity and eburnation;
- **grade 5:** joint/articular surface heavily pathological: severe marginal lipping (osteophytes greater than 3 mm) and severe degenerative or productive changes on more than 50% of surface; surface may include substantial porosity and eburnation;
- **grade 6:** destroyed joint/articular surface: complete or near complete (>80%) destruction of articular surface (including margin);
- **grade 7:** evaluation impossible (e.i.);
- **grade 8:** joint/articular surface missing (m.).

The generated data was analyzed with SPSS 13.0 (SPSS Inc.). The X^2 -Test was applied for larger samples, while the *Fisher's Exact Test* was used to determine significant differences for small sample sizes. The significance level was p less than 0.05.

5. Results

Burial 1

Sex: female?

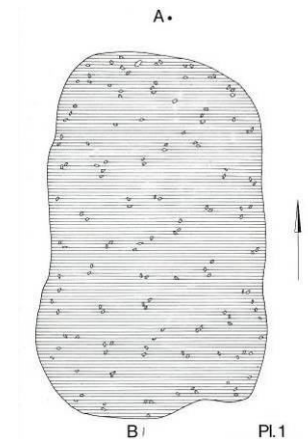
Age: 15 – 18 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.	X	X	X								X		X	X	X	X
caries	0	0	0								0		0	0	0	0
leh	0	0	0								II		0	0	0	0
calculus	0	0	0								I		0	I	I	0
abrasion	1	2	3								-		-	3	2	1
status	IT	IT	IT	PL	PL	PL	PL	PL	PL	PL	23	PL	25	IT	IT	IT
status	X	47	46	PL	44	43	PL	IT	IT	32	33	34	35	36	37	X
abrasion		3	3		-	-		-	-	-	-	-	-	3	3	
calculus		0	0		I	0		0	0	0	0	0	0	I	0	
leh		0	0		I	II		I	I	I	II	I	I	0	0	
caries		0	0		0	0		0	0	0	0	0	0	0	0	
paradont.		X	X		X	X		X	X	X	X	X	X	X	X	



Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: proliferative process found in right transverse sinus; distinct signs of cribra orbitalia in both orbits;
- Viscerocranium: no visible pathological modifications;
- Postcranium: most epiphyses missing, bone surface of skeletal remains mainly too eroded for evaluation;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 2

Sex: ?

Age: adult

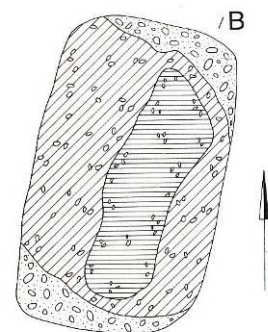
Wealth: upper class (?)

Preservation: grade 5

Tooth status:[illegible]

Existing skeletal remains:

		Frontale
r.	l.	Parietale
r.	l.	Temporale
		Occipitale
		Maxilla
		Mandibula
r.	l.	Clavicula
r.	l.	Scapula
r.	l.	Humerus
r.	l.	Radius
r.	l.	Ulna
r.	l.	Ossa manus
r.	l.	Os coxae
r.	l.	Femur
r.	l.	Tibia
r.	l.	Fibula
r.	l.	Ossa pedis
		Sternum
		Costae
		Vernbrae
		Sacrum



A.

PI. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 3

Sex: female

Age: 15 – 18 yrs

Wealth: lower class

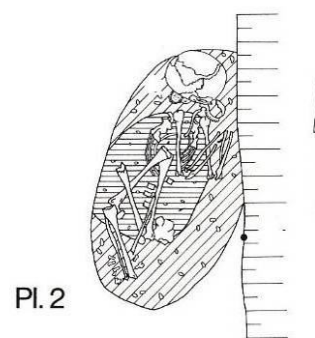
Preservation: grade 2

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	+	p	+	p	p	p	-	p	p	p	p	p	p	+	+	p	p	p	p	-



Pathologies:

- Neurocranium: distinct signs of cribra orbitalia (Plate II a) in roof areas of both orbits;
- Viscerocranium: missing;
- Postcranium: possible insertion enthesopathy on trapezoid ligament of left clavicle; inflammatory process around deltoid tuberosity on right humerus; accentuated longitudinal striations (slight signs of periostitis) distinguishable on right humerus, left femur and right tibia;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 4

Sex: male

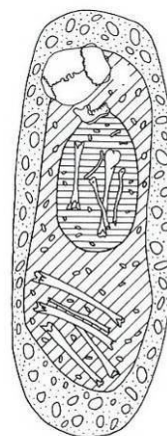
Age: 19 – 23 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
leh	0	0	0	0	0	I	I	0	I	I	I	I	0	0	0	
calculus	0	0	0	0	0	0	0	0	0	0	0	I	I	I	0	
abrasion	2	2	4	-	-	-	-	-	-	-	-	-	-	4	2	
status	IT	IT	IT	IT	14	13	IT	IT	IT	IT	IT	IT	IT	IT	IT	PL
status	?	47	46	45	44	43	42	41	PL	32	33	34	PL	IT	IT	?
abrasion		2	3	-	-	-	-	-	-	-	-	-		3	2	
calculus		0	I	II	I	0	II	II		I	0	0		0	0	
leh		0	0	0	0	II	II	I		II	II	0		0	0	
caries		0	0	0	0	0	0	0		0	0	0		0	0	
paradont.		X	X	X	X	X	I	I		I	X	0		X	X	



- deformed upper right I²: possibly small accessory lingual cusp with associated root;

Pl. 3

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: most fragments covered with sinter, evaluation impossible;
- Viscerocranium: no visible pathological modifications;
- Postcranium: most bone fragments covered with sinter, epiphyses missing, but accentuated longitudinal striations (slight signs of periostitis) distinguishable on small, remaining bone surfaces of left femur, right femur, left tibia and right tibia;

Vertebrae: missing;

Joints: evaluation impossible;

Burial 5

Sex: male

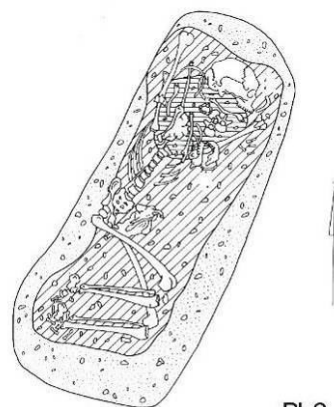
Age: 19 – 23 yrs

Wealth: lower class

Preservation: grade 1

Tooth status:

paradont.	0	I	I	I	I	X	I				I	I		II	II	X
caries	0	0	0	0	0	0	0				0	0	0	0	0	0
leh	I	I	I	II	II	II	I				I	II	I	I	I	I
calculus	I	I	I	I	0	I	I				I	I	I	I	I	0
abrasion	2	3	3	-	-	-	-				-	-	-	3	3	1
status	18	17	16	15	14	13	12	PL	PL	22	23	24	PL	26	27	28
status	48	47	46	45	44	43	42	PL	PL	PL	33	PL	35	36	37	38
abrasion	2	2	3	-	-	-	-				-		-	4	2	2
calculus	0	I	I	0	0	0	I				0		I	0	I	0
leh	0	0	0	I	I	II	I				II		I	I	I	0
caries	0	0	0	0	0	0	0				0		0	0	0	0
paradont.	0	0	X	X	X	X	I				X		X	I	I	0



Pl. 3

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	+	p	p	+	+	+	p	+	+	+	p	p	+	+	+	p	p	p	p	+

Pathologies:

- Neurocranium: internal frontal hyperostosis near sagittal sulcus on endocranial surface of frontal bone (Plate V b); frontal sinus contains granular appositions; cribra orbitalia in both orbits;
- Viscerocranium: no visible pathological modifications;
- Postcranium: left clavicle less massive than right clavicle which also shows slight marginal lipping on its tuberosity of the costoclavicular ligament; no visible pathological modifications on upper limb bones except for post-mortal fractures; accentuated longitudinal striations (slight signs of periostitis) found on both femurs and the right tibia;

Vertebrae:

- Cervical vertebrae: dens axis and the right cranial articular surface of C2 have developed grade 2 marginal lipping, whereas remaining articular surfaces show grade 1 modifications; slight osteophyte development observable on cervical vertebral bodies;
- Thoracic vertebrae: articular surfaces rated grade 1/grade 2; Schmorl's nodes observable on caudal side of vertebral bodies; slight osteophyte development on some thoracic vertebral bodies;

- Lumbar vertebrae: existing articular surfaces rated grade 2; Schmorl's nodes found on cranial and caudal sides of lumbar vertebrae bodies; slight osteophyte development on all lumbar vertebral bodies;

Joints:

	right	left
shoulder joint	e.i.	1
elbow joint	0	1
proximal wrist	0	e.i.
radio-ulnar joint	e.i.	0
hip joint	0.5	0.5
knee joint	0	e.i.
proximal ankle	0.16	0
distal ankle	0	0.5

Burial 6

Sex: female?

Age: 50 – 80 yrs

Wealth: upper class

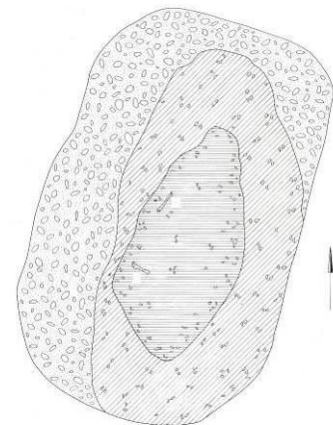
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

	r.		Frontale
	r.	r.	Parietale
	r.	r.	Temporale
			Occipitale
			Maxilla
			Mandibula
	r.	r.	Clavicula
	r.	r.	Scapula
	r.	r.	Humerus
	r.	r.	Radius
	r.	r.	Ulna
	p	r.	Ossa manus
	r.	r.	Os coxae
	r.	r.	Femur
	p	r.	Tibia
	r.	r.	Fibula
	r.	r.	Ossa pedis
			Sternum
			Costae
			Vertebrae
			Sacrum



PI. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: eroded fragments, therefore evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 7

Sex: male

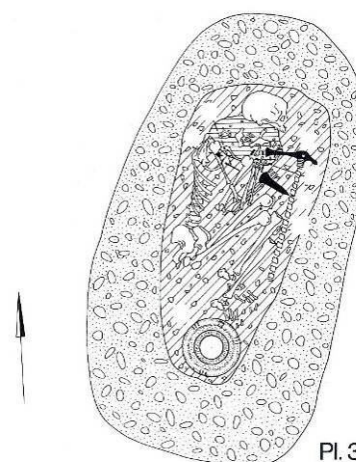
Age: 40 – 50 yrs

Wealth: upper class

Preservation: grade 1

Tooth status:

paradont.	I	III		II	II	II	II	II	II	II		X	II	X	X	
caries	0	0		0	0	0	0	0	0	0		0	0	0	0	
leh	0	0		0	0	0	I	I	I	I		0	0	0	0	
calculus	I	III		II	II	II	II	I	II	II		II	III	II	II	
abrasion	2	5		-	-	-	-	-	-	-		-	-	5	4	
status	18	17	IL	15	14	13	12	11	21	22	PL	24	25	26	27	PL
status	48	IL	IL	45	IL	43	42	41	31	32	33	34	PL	IL	IL	IL
abrasion	4			-		-	-	-	-	-	-					
calculus	0			0		0	I	II	II	II	II	II				
leh	0			0		I	0	0	0	0	I	I				
caries	0			0		0	0	0	0	0	0	0				
paradont.	IV			II		III	III	II	II	III	II	X				



- tooth 18: microdont;
- tooth 48: apical process probably caused by periodontal disease;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
+	+	+	+	+	+	-	p	p	p	p	p	p	p	+	p	p	p	p	p	p

Pathologies:

- Neurocranium: slight cribra orbitalia on left orbital roof, whereas no signs can be found in right orbita;
- Viscerocranium: no visible pathological modifications;
- Postcranium: possible insertion enthesopathy on left clavicle (where m. trapezius inserts) and left radial tuberosity; acromial extremity on right clavicle extremely modified, either related to pseudoarthrosis or more probably epigenetic variation (since feature can also be found on other clavicles of sample); slight signs of arthritis on existing metacarpals, digits, tarsals, metatarsals and phalanges; formation of osteophytes (exostoses) on distal ends of both tibias (lateral sides), probably related to overstraining of muscles; well-healed fracture found on middle fragment of an unidentifiable rib (right side);

Vertebrae:

- Cervical vertebrae: occipital condyles and dens axis show severe marginal lipping (grade 5); the cranial articular surfaces of C1 developed grade 3 (right side) and

grade 4 (left side) marginal lipping, whereas caudal articular surfaces show grade 2 degenerative modifications; cranial articular surfaces of C2 both rated grade 3, whereas grade 5 marginal lipping found on the right caudal articular surface (left one missing); the only existing articular surface of C3 (cranial, right) also shows grade 5 modifications; massive osteophyte development observable on cervical vertebral bodies;

- Thoracic vertebrae: existing articular surfaces rated grade 4/grade 5; Schmorl's nodes observable on vertebral bodies; severe osteophyte development on all existing thoracic vertebral bodies;
- Lumbar vertebrae: existing articular surfaces rated grade 4/grade 5; Schmorl's nodes found on all existing lumbar vertebral bodies (one also contains an impression of the cranial plate); severe osteophyte development on all lumbar vertebral bodies;

Joints:

	right	left
shoulder joint	m.	2
elbow joint	2.5	2.5
proximal wrist	2	m.
radio-ulnar joint	3	2
hip joint	2	1.75
knee joint	1.6	2.15
proximal ankle	2.75	2
distal ankle	3.25	1.75

Burial 8

Sex: ?

Age: adult

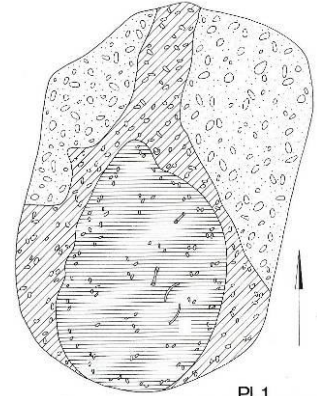
Wealth: upper class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing (bone fragments not available for examination);

Vertebrae: missing;

Joints: missing;

Burial 9

Sex: male

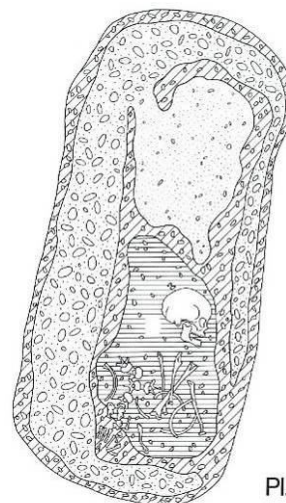
Age: 25 – 35 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.	I	I	I	I	X	X	X		X	X	X	X	I	X	X	X
caries	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
leh	I	I	I	I	I	I	I		I	I	I	I	I	I	I	I
calculus	I	I	I	0	0	0	0		0	0	0	0	0	0	0	0
abrasion	2	3	4	-	-	-	-		-	-	-	-	-	4	3	2
status	18	17	16	15	14	13	12	PL	21	22	23	24	25	26	IT	IT
status	48	47	46	45	44	43	42	41	PL	32	33	34	35	36	37	38
abrasion	2	3	3	-	-	-	-	-		-	-	-	-	3	3	2
calculus	0	I	I	0	0	0	0	I		0	0	0	I	I	I	I
leh	I	I	I	I	I	I	I	I		I	I	I	I	I	I	I
caries	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
paradont.	I	I	X	I	X	X	X	X		X	X	I	X	X	I	I



Pl. 3

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	p	p	p	p
+	p	p	p	p	p	+	-	+	p	+	p	p	-	-	-	-	p	p	p	p

Pathologies:

- Neurocranium: possible perimortal fractures on left parietal bone (approx. 5cm long, parallel to sagittal suture, almost extended to lambda suture) and on right frontal bone (approx. 2.5cm long, medial to the frontal tuber); small tile-shaped appositions (internal hyperostosis) on frontal endocranium; slight cribra orbitalia on left orbital roof, whereas no signs detected in right orbit;
- Viscerocranium: no visible pathological modifications;
- Postcranium: no visible pathological modifications;

Vertebrae:

- Cervical vertebrae: the only existing articular surface (caudal, right) on an indefinable cervical vertebra developed grade 3 marginal lipping;
- Thoracic vertebrae: existing articular surfaces rated grade 3/grade 4;
- Lumbar vertebrae: existing articular surfaces rated grade 3; Schmorl's nodes found on all existing lumbar vertebral bodies; osteophyte development on all lumbar vertebral bodies;

Joints:

	right	left
shoulder joint	e.i.	m.
elbow joint	0.5	e.i.
proximal wrist	m.	3
radio-ulnar joint	e.i.	3
hip joint	m.	m.
knee joint	m.	3
proximal ankle	m.	2
distal ankle	e.i.	2

Burial 10

Sex: female?

Age: ~ 5 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

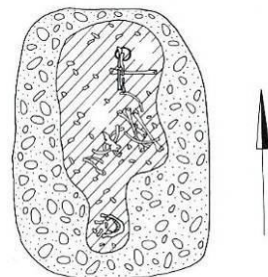
paradont.			X								
caries			0								
leh			0								
calculus			0								
abrasion			-								
status	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL	
status	IT	IT	IT	PL	PL	PL	PL	PL	PL	IT	
abrasion	4	4	-								4
calculus	0	0	0								0
leh	0	0	0								0
caries	0	0	0								0
paradont.	X	X	X								X

Permanent tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	X	PL	PL	PL	PL	PL	42	PL	PL	32	PL	PL	PL	PL	PL	PL	X
abrasion							-			-							
calculus							-			-							
leh							0			0							
caries							-			-							
paradont.							-			-							

Existing skeletal remains:

			Frontale
r.	i.	p.	Parietale
r.	i.	p.	Temporale
			Occipitale
			Maxilla
p.	p.	p.	Mandibula
p.	p.	p.	Clavicula
p.	p.	p.	Scapula
p.	p.	p.	Humerus
p.	p.	p.	Radius
p.	p.	p.	Ulna
r.	r.	r.	Ossa manus
r.	r.	r.	Os coxae
r.	r.	r.	Femur
r.	r.	r.	Tibia
r.	r.	r.	Fibula
r.	r.	r.	Ossa pedis
			Sternum
p.	p.	p.	Costae
p.	p.	p.	Ventricbrae
			Sacrum



Pl. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: mandible heavily eroded: evaluation impossible;
- Postcranium: fragments heavily eroded: evaluation impossible;

Vertebrae: evaluation impossible;

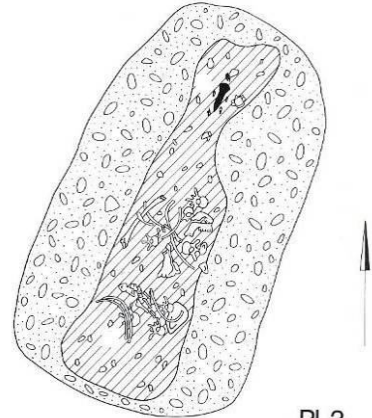
Joints: missing;

Burial 11

Sex: male
Age: 30 – 40 yrs
Wealth: upper class
Preservation: grade 4

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	-	47	46	PL	44	43	PL	PL	31	32	33	34	35	36	37	-	
abrasion		3	4		-	-			-	-	-	-	-	4	3		
calculus		I	X		0	0			0	0	0	0	0	0	0		
leh		I	X		II	X			X	X	II	II	II	0	0		
caries		0	0		0	0			0	0	0	0	0	0	0		
paradont.		X	X		X	X			X	X	X	X	X	II	II		



Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
	+		Mandibula
	r.	l.	Clavicula
p	p		Scapula
	r.	l.	Humerus
	r.	l.	Radius
p	p		Ulna
	r.	l.	Ossa manus
p	p		Os coxae
	r.	l.	Femur
	r.	l.	Tibia
	r.	l.	Fibula
	r.	l.	Ossa pedis
p	p		Sternum
p	p		Costae
p	p		Vertebrae
p	p		Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no visible pathological modifications on mandible; inverted mandibular angle;
- Postcranium: possible insertion enthesopathy on the tuberosity of the costoclavicular ligament of the left clavicle; most bone surfaces too eroded for further evaluation;

Vertebrae:

- Cervical vertebrae: existing cranial articular surfaces show grade 2 marginal lipping, whereas caudal articular surfaces show grade 1 marginal lipping;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: osteophyte development and Schmorl's nodes distinguishable on existing vertebral bodies;

Joints:

	right	left
shoulder joint	m.	e.i.
elbow joint	m.	m.
proximal wrist	m.	m.
radio-ulnar joint	m.	m.
hip joint	m.	m.
knee joint	e.i.	m.
proximal ankle	e.i.	m.
distal ankle	1.83	m.

Burial 12

Sex: female

Age: 35 – 60 yrs

Wealth: upper class

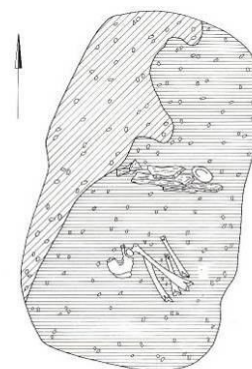
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	-	-	-	p	p	p	-	-	-	p	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: remains heavily eroded, evaluation impossible;

Vertebrae: the only existing cervical vertebra with slightly arthritic vertebral body and existing articular surfaces show grade 1 marginal lipping;

Joints: missing;

Burial 13

Sex: female

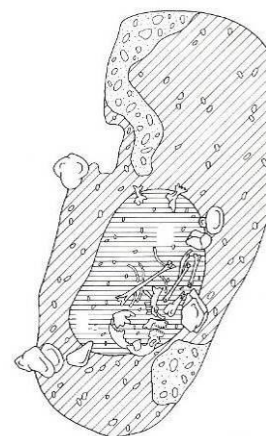
Age: 50 – 80 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.	X	X	X	II		X				X	X	X		II		X
caries	0	IV	IV	0		0				0	0	0		0		V
leh	0	0	0	X		X				X	X	X		0		0
calculus	0	0	0	II		I				0	I	0		I		0
abrasion	3	4	4	-		-				-	-	-		4		3
status	IT	IT	IT	15	PL	13	PL	PL	PL	22	23	24	PL	26	PL	IT
status	PL	PL	PL	PL	PL	IT	PL	PL	PL	IT	IT	PL	PL	IT	PL	PL
abrasion						-				-	-			5		
calculus						I				I	I			II		
leh						X				X	X			X		
caries						0				0	III			0		
paradont.						X				X	X			X		



Pl. 2

- most teeth completely abraded (in particular frontal teeth); caries extended to pulpa in all cases; signs of paradontitis also on alveolar ridge of mandible (right side);

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: slight signs of inflammation where transversal sinus joins sagittal sinus on inside of occipital bone;
- Viscerocranium: enlarged mandibular foramen (right side) with surrounding porotic bone surface;
- Postcranium: most bone surfaces too eroded for further evaluation;

Vertebrae: evaluation impossible;

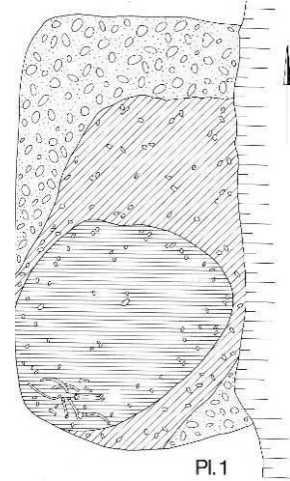
Joints: evaluation impossible;

Burial 14

Sex: male
Age: 25 – 35 yrs
Wealth: upper class
Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	48	47	46	45	44	43	42	IT	IT	32	33	34	35	36	37	38	
abrasion	3	3	4	-	-	-	-	-	-	-	-	-	-	4	3	3	
calculus	0	I	0	0	0	0	0	0	0	I	0	0	I	I	I	I	
leh	0	0	0	0	0	II	I	0	0	I	II	0	0	0	0	0	
caries	X	X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
paradont.	I	II	III	X	X	X	X	X	X	I	X	X	II	III	III	II	



- inflamed area around lower right M₃, apical process by lower right M₂ and M₁ caused by paradontosis; additional bone development on the lingual side of the left M₂ and M₁ and on the lingual side between the right P₂ and the right M₃;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no visible pathological modifications on mandible;
- Postcranium: possible insertion enthesopathy on left radial tuberosity; no other visible pathological modifications found;

Vertebrae:

- Cervical vertebrae: existing articular surfaces of C1 and C2 show grade 1 marginal lipping;
- Thoracic vertebrae: grade 1/grade 2 marginal lipping on existing articular surfaces;
- Lumbar vertebrae: osteophyte development and Schmorl's nodes distinguishable on existing vertebral bodies;

Joints:

	right	left
shoulder joint	1	1
elbow joint	e.i.	1.5
proximal wrist	1	e.i.
radio-ulnar joint	0	1
hip joint	e.i.	e.i.
knee joint	e.i.	e.i.
proximal ankle	0.75	m.
distal ankle	1	e.i.

Burial 15

Sex: female

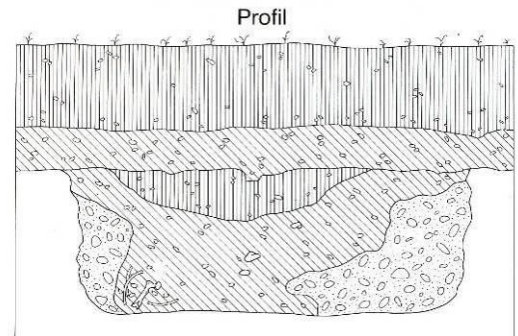
Age: 25 – 35 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.										X	X					
caries										0	0					
leh										0	0					
calculus										0	0					
abrasion										-	-					
status	X	PL	PL	PL	PL	PL	PL	PL	PL	IT	IT	PL	PL	PL	PL	X
status	48	47	46	PL	PL	PL	PL	PL	PL	32	33	34	35	36	37	38
abrasion	2	3	3							-	-	-	-	4	3	3
calculus	II	II	II							I	II	II	II	II	II	I
leh	0	0	0							0	0	0	0	0	0	0
caries	0	0	0							0	0	0	0	0	0	0
paradont.	II	II	II							X	X	X	II	II	II	0



Existing skeletal remains:

p	Frontale
p	Parietale
p	Temporale
p	Occipitale
p	Maxilla
+	Mandibula
-	Clavicula
p	Scapula
p	Humerus
p	Radius
+	Ulna
p	Ossa manus
p	Os coxae
p	Femur
p	Tibia
p	Fibula
p	Ossa pedis
p	Sternum
p	Costae
p	Vertebrae
p	Sacrum

Pathologies:

- Neurocranium: slight signs of inflammation where transversal sinus joins sagittal sinus on inside of occipital bone;
- Viscerocranium: no visible pathological modifications found on existing fragments;
- Postcranium: accentuated longitudinal striations (slight signs of periostitis) found on both humeri, right ulna and right radius; possible signs of perimortal fractures on right ulna and right radius (distal ends); slight signs of inflammation below medial surface of right calcaneus;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: existing articular surfaces have developed grade 3 marginal lipping; osteophyte development on existing vertebral bodies;
- Lumbar vertebrae: porotic articular surfaces with grade 3 marginal lipping;

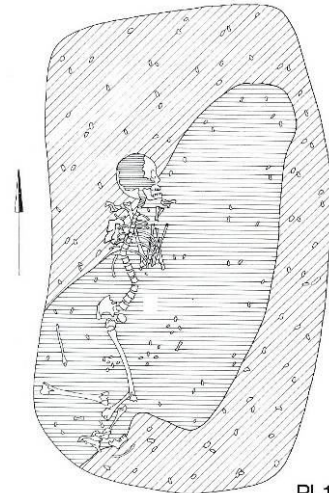
Joints:

	right	left
shoulder joint	e.i.	1
elbow joint	0	0
proximal wrist	0.88	m.
radio-ulnar joint	1	m.
hip joint	m.	m.
knee joint	m.	m.
proximal ankle	1	m.
distal ankle	1.5	1

Sex: male?
Age: 30 – 40 yrs
Wealth: lower class
Preservation: grade 3

Tooth status:

paradont.				X	X	X			X							
caries				0	0	0			0							
leh				0	0	0			0							
calculus				0	0	0			0							
abrasion				-	-	-			-							
status	PL	PL	PL	IT	IT	IT	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL
status	48	47	46	45	44	43	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL
abrasion	3	4	4	-	-	-	-									
calculus	0	I	0	0	0	0	0									
leh	0	0	0	0	0	0	0									
caries	0	0	0	0	0	0	0									
paradont.	X	II	II	II	II	X	X									



Pl. 1

Existing skeletal remains:

Frontale	Frontale
Parietale	Parietale
Temporale	Temporale
Occipitale	Occipitale
Maxilla	Maxilla
Mandibula	Mandibula
Clavicula	Clavicula
Scapula	Scapula
Humerus	Humerus
Radius	Radius
Ulna	Ulna
Ossa manus	Ossa manus
Os coxae	Os coxae
Femur	Femur
Tibia	Tibia
Fibula	Fibula
Ossa pedis	Ossa pedis
Sternum	Sternum
Costae	Costae
Vertebrae	Vertebrae
Sacrum	Sacrum

- diverted internal occipital crest with sulcus of occipital sinus and two associated sulci of marginal sinuses;

Pathologies:

- Neurocranium: perimortal fractures distinguishable on frontal and temporal bone fragments; intensified digital impressions (increased intracranial pressure/intracranial hypertension);
- Viscerocranium: no visible pathological modifications found on existing fragments;
- Postcranium: bone thickening just below the olecranon of left ulna, probably due to a well-healed sprain fracture (Plate II c), most bones show intensified muscle insertion points, which can be related to overstraining; exostoses found on fragments of left iliac fossa; possible perimortal fracture of right femur (mid-shaft);

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: no evaluation possible for most fragments; grade 2 marginal lipping distinguishable on articular surfaces of two unidentifiable thoracic vertebrae;
- Lumbar vertebrae: Schmorl's nodes on existing vertebral body;

Burial 17/1 (2nd individual)

Sex: ?

Age: 8 – 13 yrs

Wealth: upper class

Preservation: grade 4

Deciduous tooth status:

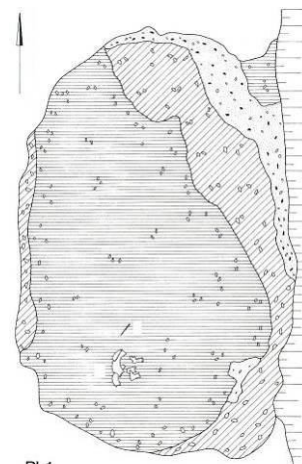
paradont.																				
caries																				
leh																				
calculus																				
abrasion																				
status	PL	PL	PL	X	X	X	X	PL	PL	PL										
status	PL	PL	PL	X	X	X	X	PL	PL	IT										
abrasion																			3	
calculus																			0	
leh																			0	
caries																			0	
paradont.																			X	

Permanent tooth status:

paradont.																				
caries																				
leh																				
calculus																				
abrasion																				
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	X	PL	PL	PL	PL	PL	PL	PL	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	X
abrasion											-				-	2	1			
calculus											-				-	0	-			
leh											I				II	I	I			
caries											-				-	0	-			
paradont.											X				X	X	X			

Existing skeletal remains:

Frontale																				
Parietale																				
Temporale																				
Occipitale																				
Maxilla																				
Mandibula																				
Clavicula																				
Scapula																				
Humerus																				
Radius																				
Ulna																				
Ossa manus																				
Os coxae																				
Femur																				
Tibia																				
Fibula																				
Ossa pedis																				
Sternum																				
Costae																				
Vertebrae																				
Sacrum																				



Pl. 1

Pathologies:

- Neurocranium: small, completely eroded fragments, evaluation impossible;
- Viscerocranium: small, completely eroded fragments, evaluation impossible;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 17/2 (main burial)

Sex: female

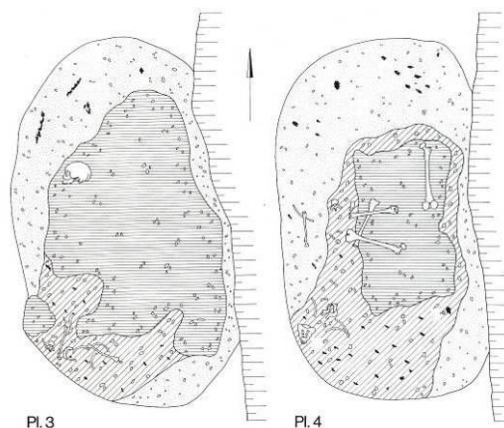
Age: 22 – 30 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.	X	X	X	II	II	II	II		II	II	II	II	I	II	II	II
caries	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
leh	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
calculus	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
abrasion	2	3	4	-	-	-	-	-	-	-	-	-	-	4	3	2
status	18	17	16	15	14	13	12	PL	21	22	23	24	25	26	27	28
status	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
abrasion	2	3	4	-	-	-	-	-	-	-	-	-	-	4	3	2
calculus	I	I	I	I	I	0	0	0	0	0	0	0	0	I	I	I
leh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
paradont.	I	II	II	II	II	X	X	X	X	X	X	X	II	II	I	I



Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
+	+	p	p	p	p	p	-	-	-	+	+	p	p	-	+	p	p	p	p	p

Pathologies:

- Neurocranium: severe parietal porosity on the ectocranial surface (left and right), with area of porosity extending into frontal bone (grade 2); the impression of the right transverse sinus is twice as large as the one on the left; slight cribra orbitalia in left orbit, no signs of cribra orbitalia found on right orbital roof; possible perimortal trauma on left parietal and on right parietal just above the lamdoid suture;
- Viscerocranium: porotic changes on alveolar ridge of left maxilla (from first incisor to canine);
- Postcranium: inflammatory process distinguishable on acromial extremity of left clavicle; left clavicle also contains well-healed intravital fracture of shaft leaving bone deformed; slight arthritic changes distinguishable on existing metacarpals, tarsals, metatarsals and phalanges of the foot; slight signs of periostitis found on left femur, left fibula and both tibias;

Vertebrae:

- Cervical vertebrae: existing articular surfaces show grade 2 marginal lipping;
- Thoracic vertebrae: existing articular surfaces show grade 2 arthritic changes and formation of osteophytes observed on vertebral bodies;

- Lumbar vertebrae: osteophyte development and Schmorl's nodes distinguishable on existing vertebral bodies;

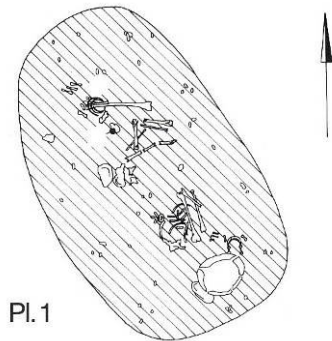
Joints:

	right	left
shoulder joint	m.	m.
elbow joint	1.5	2.5
proximal wrist	1	2
radio-ulnar joint	1	2
hip joint	2	2
knee joint	1.13	1.33
proximal ankle	1.75	2
distal ankle	2	2.25

Sex: female
Age: 15 – 18 yrs
Wealth: ?
Preservation: grade 2

Tooth status:

paradont.			X	X	X		X	X	X							
caries			0	0	0		0	0	0							
leh			I	0	0		I	I	I							
calculus			I	I	I		I	0	I							
abrasion			2	-	-		-	-	-							
status	X	PL	IT	IT	IT	PL	IT	IT	IT	PL	PL	PL	PL	PL	PL	X
status	48	47	46	IT	IT	43	42	41	PL	32	PL	IT	IT	36	PL	38
abrasion	X	1	3	-	-	-	-	-		-		-	-	3		X
calculus	X	I	I	I	I	I	0	I		I		I	I	0		X
leh	0	II	II	I	I	I	I	I		I		II	I	II		X
caries	X	0	0	0	0	0	0	0		0		0	0	0		X
paradont.	X	X	X	X	X	X	X	X		X		X	X	X		X



Pl. 1

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: evaluation impossible except for internal lamina which shows no pathological modifications;
- Viscerocranium: missing;
- Postcranium: possible signs of periostitis found on left femur fragment; slight signs of periostitis distinguishable on left tibia; otherwise evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 19

Sex: female?

Age: ~ 3 yrs

Wealth: ?

Preservation: grade 4

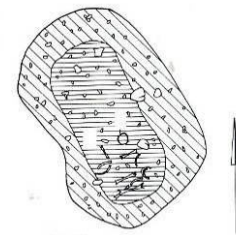
Deciduous tooth status:

paradont.										
caries										
leh										
calculus										
abrasion										
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	85	84	IT	PL	PL	PL	PL	PL	IT	IT
abrasion	2	3	-						3	3
calculus	0	0	0						0	0
leh	0	0	0						0	0
caries	0	0	0						0	0
paradont.	X	X	X						X	X

Permanent tooth status:

[illegible]

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 20

Sex: ?

Age: ~ 3 yrs

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

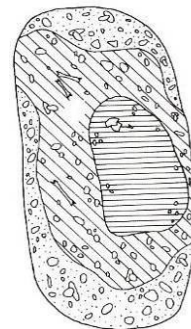
paradont.										
caries										
leh										
calculus										
abrasion										
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	IT	IT	PL	PL	PL	PL	PL	PL	74	75
abrasion	2	2							2	2
calculus	1	0							0	0
leh	0	0							0	0
caries	0	0							0	0
paradont.	X	X							X	0

Permanent tooth status:

[illegible]

Existing skeletal remains:

		Frontale
	r. l.	Parietale
	r. l.	Temporale
		Occipitale
		Maxilla
	p.	Mandibula
	r. l.	Clavicula
	r. l.	Scapula
	r. l.	Humerus
	r. l.	Radius
	r. l.	Ulna
	r. l.	Ossa manus
	r. l.	Os coxae
	r. l.	Femur
	p.	Tibia
	r. l.	Fibula
	r. l.	Ossa pedis
		Sternum
		Costae
	p.	Vertebrae
		Sacrum



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 21/1 (2nd individual)

Sex: ?

Age: 15 - 18 yrs

Wealth: ?

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	p	p	-	-	-	-	-

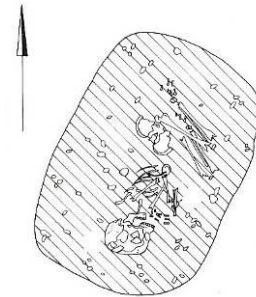
- less bones available for examination than can be seen on drawing;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;



Pl. 2

Burial 21/2 (main burial)

Sex: female?

Age: 6 – 7 yrs

Wealth: ?

Preservation: grade 2

Deciduous tooth status:

[illegible]

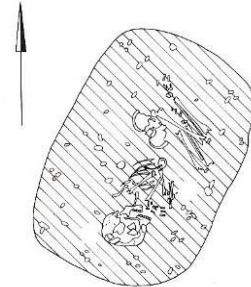
Permanent tooth status:

paradont.																	X	
caries																	0	
leh																	II	
calculus																	0	
abrasion																	1	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	X	
status	X	47	PL	45	44	43	42	IT	IT	32	33	34	35	36	PL	X		
abrasion							-	-	-						2			
calculus							0	I	I						II			
leh							I	I	I						0			
caries							0	0	0						0			
paradont.							X	X	X						0			

- few permanent teeth erupted, therefore evaluation impossible; spotted enamel hypoplasia and enamel imperfecta on 36;

Existing skeletal remains:

p	Frontale
p	Parietale
p	Temporale
-	Occipitale
p	Maxilla
p	Mandibula
-	Clavicula
-	Scapula
p	Humerus
p	Radius
p	Ulna
p	Ossa manus
p	Oss coxae
-	Femur
p	Tibia
p	Fibula
-	Ossa pedis
-	Sternum
p	Costae
-	Vertebrae
-	Sacrum



Pl. 2

Pathologies:

- Neurocranium: intensified digitate impressions (intracranial hypertension); milky-white apposition on internal lamina (frontal bone) close to sagittal sinus; orbital remains too eroded for evaluation;
- Viscerocranium: no visible pathological modifications;
- Postcranium: evaluation impossible except for both ulnae, where slight signs of periostitis observable;

Vertebrae: missing;

Joints: missing;

Burial 22

Sex: female?

Age: ~ 7 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.	X		X							
caries	III		0							
leh	0		0							
calculus	I		0							
abrasion	4		-							
status	55	PL	IT	PD	PD	PD	PD	PL	PL	PL
status	85	84	IT	PD	PD	PD	PD	PL	IT	IT
abrasion	4	4	-						4	4
calculus	I	I	0						0	I
leh	0	0	0						0	0
caries	III	0	II						III	0
paradont.	X	X	X						X	X

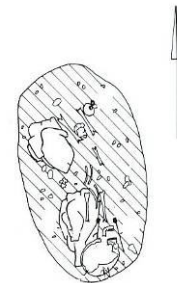
Permanent tooth status:

[illegible]

- caries extended to pulpa in the case of 55 and the lower deciduous molars, whereas it only affects occlusal enamel on lower right deciduous canine;
- spotted enamel hypoplasia on 46; no permanent teeth erupted completely, except for lower incisors and existing first molars;

Existing skeletal remains:

D	D	Frontale
P	P	Parietale
P	P	Temporale
L	L	Occipitale
		Maxilla
P	P	Mandibula
L	L	Clavicula
L	L	Scapula
P	P	Humerus
L	L	Radius
L	L	Ulna
L	L	Ossa manus
L	L	Os coxae
P	P	Femur
L	L	Tibia
L	L	Fibula
L	L	Ossa pedis
L	L	Sternum
		Costae
		Vertebrae
		Sacrum



Pl. 2

Pathologies:

- Neurocranium: orbital remains too eroded for evaluation, otherwise no visible pathological modifications, only small bone fragments available;
- Viscerocranium: no visible pathological modifications;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 23

Sex: female

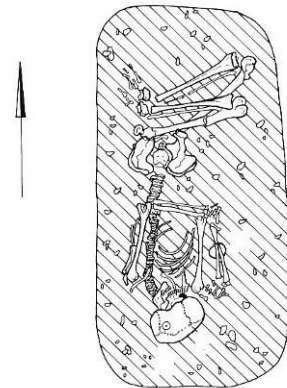
Age: 25 – 35 yrs

Wealth: lower class

Preservation: grade 1

Tooth status:

paradont.	X	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
caries	I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
leh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
calculus	I	I	I	I	I	0	0	0	0	I	0	I	I	I	I	I	
abrasion	2	3	4	-	-	-	-	-	-	-	-	-	-	-	4	2	
status	IT	17	16	15	14	13	IT	IT	IT	IT	23	24	25	26	27	PL	
status	48	47	46	45	44	43	IT	PL	IT	IT	PL	34	35	36	37	IT	
abrasion	3	3	4	-	-	-	-		-	-		-	-	3	3	3	
calculus	I	I	I	I	I	I	0		I	I		I	I	I	I	I	
leh	0	0	0	0	0	0	0		0	0		0	0	0	0	0	
caries	III	0	0	0	0	0	0		0	0		0	0	0	0	V	
paradont.	0	0	0	0	0	0	X		X	X		X	X	X	X	X	



Pl. 2

- extreme abrasion of incisors; third molars with enamel imperfecta which led to caries in all existing cases: on the lower right it extended to pulpa and on the lower left it caused an apical abscess; spotted enamel hypoplasia found on lower right M₂;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	+	+	+	p	p	p	p	p	p	-	-	p	p

Pathologies:

- Neurocranium: orbital remains too eroded for evaluation, otherwise no visible pathological modifications;
- Viscerocranium: no visible pathological modifications except apical process by lower left M₃;
- Postcranium: accentuated longitudinal striations (slight signs of periostitis) distinguishable on right clavicle, right ulna, left radius, both femurs and fibulas, as well as right tibia;

Vertebrae: evaluation impossible;

Joints:

	right	left
shoulder joint	1	1
elbow joint	0	0
proximal wrist	e.i.	m.
radio-ulnar joint	e.i.	e.i.
hip joint	0.5	1
knee joint	1	1
proximal ankle	0	0.5
distal ankle	m.	m.

Burial 24

Sex: ?

Age: 6 - 8 yrs

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

paradont.	X	X	0					X		X
caries	I	I	0					0		0
leh	0	0	0					0		0
calculus	0	0	0					0		I
abrasion	4	4	-					-		3
status	IT	IT	53	PD	PD	PD	PD	63	PL	65
status	85	84	PL	PD	PD	PD	PD	IT	PL	PL
abrasion	4	4						-		
calculus	0	0						I		
leh	0	0						0		
caries	0	0						0		
paradont.	X	X						X		

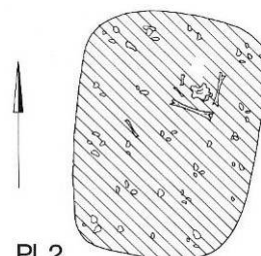
Permanent tooth status:

paradont.		X	X	X	X			X	X							X		
caries		X	0	X	X			0	0							0		
leh		0	0	II	II			I	I							0		
calculus		X	I	X	X			0	0							0		
abrasion		X	1	-	-			-	-							2		
status	X	IT	IT	IT	IT	13	12	IT	IT	22	23	24	25	26	PL	PL	X	
status	X	IT	IT	IT	44	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X	
abrasion		X	1	-														
calculus		X	0	X														
leh		0	0	I														
caries		X	0	X														
paradont.		X	X	X														

- mesial caries on 55 and distal caries on 54;
- spotted enamel hypoplasia on the first molar on the lower right; no permanent teeth erupted completely, except for lower incisors and existing first molars;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	p	p	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	p	r.
-	-	p	p	p	p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pathologies:

- Neurocranium: only small eroded fragments left; evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: missing;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 25

Sex: female

Age: 50 – 60 yrs

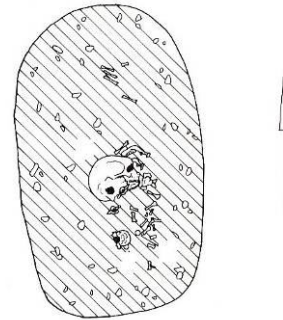
Wealth: upper class

Preservation: grade 4

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	IL	IL	IL	45	44	43	42	IL	IL	32	PL	IL	PL	IL	IL	IL	IL
abrasion				-	-	-	-			-							
calculus				I	0	0	0			0							
leh				0	0	0	X			X							
caries				0	0	0	0			0							
paradont.				III	III	III	IV			IV							

Pl. 2



- 32 and 42 completely abraded; hypercementosis on all existing roots;

Existing skeletal remains:

		Frontale
+	r.	Parietale
+	r.	
+	r.	Temporale
d	d	
d	d	
b	b	Occipitale
		Maxilla
b	b	Mandibula
	r.	Clavicula
	r.	
	r.	Scapula
	r.	
	r.	Humerus
	r.	
	r.	Radius
	r.	
	r.	Ulna
	r.	
	r.	Ossa manus
d	d	
d	d	Os coxae
	r.	Femur
	r.	
	r.	Tibia
	r.	
	r.	Fibula
	r.	
	r.	Ossa pedis
d	d	
d	d	Sternum
	r.	Costae
	r.	
b	b	Vertebrae
		Sacrum

Pathologies:

- Neurocranium: porotic hyperostosis distinguishable around internal occipital tuberosity which is surrounded by tile-shaped appositions; left transversal sulcus is „filled“ with new porotic bone tissue; possible perimortal fractures found on left parietal bone and just above the right lambdoid suture; orbital remains too eroded for evaluation;
- Viscerocranium: no visible pathological modifications, except for significant signs of periodontal disease on existing alveolar ridge;
- Postcranium: marginal lipping (grade 1/grade 2) on proximal articular surfaces of existing carpals, metacarpals and phalanges; articular joint surfaces between first and second thumb phalanx (left and right) dorsally prolonged;

Vertebrae:

- Cervical vertebrae: grade 2/grade 3 degenerative changes on articular surfaces of C1 and C2; the third existing fragment contains massive changes (grade 6) on its left and grade 4 (cranial)/grade 2 (caudal) on its right articular surfaces;
- Thoracic vertebrae: missing;

- Lumbar vertebrae: only one existing vertebral body fragment which shows signs of a severe compression fracture, probably due to demineralisation of the bone/osteomalacia (Plate II d);

Joints: missing;

Burial 26

Sex: female?

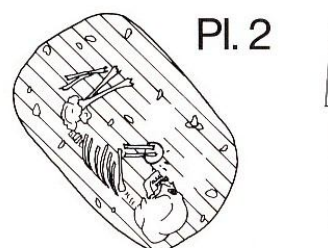
Age: 8 – 16 mths.

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.	X	X				X		X	X	X
caries	0	0				0		0	0	X
leh	0	0				0		0	0	0
calculus	X	0				0		0	0	X
abrasion	X	1				-		-	1	X
status	IT	IT	PL	PL	PL	IT	PL	IT	IT	IT
status	IT	IT	PL	PL	PL	IT	PL	PL	IT	75
abrasion	X	1				-			1	X
calculus	X	0				0			0	X
leh	0	0				0			0	0
caries	X	0				0			0	X
paradont.	X	X				X			0	X



- formation of first molars just commenced;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	-	p	-	-	p	+	-	p	p	p	-	p	p	p	-

Pathologies:

- Neurocranium: cribra orbitalia in both orbital roofs;
- Viscerocranium: area between mandibular notch and mandibular foramen appears porotic, to a greater degree on the left than on the right;
- Postcranium: slight signs of periostitis found on left ulna and radius (right radius: evaluation impossible);

Vertebrae: missing;

Joints: missing;

Burial 27/1 (2nd individual)

Sex: ?

Age: 4 - 5 yrs

Wealth: upper class

Preservation: grade 1

Deciduous tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0	0	0	0
leh	0	0	0	0	0	0	0	0	0	0
calculus	0	0	0	0	0	0	0	0	0	0
abrasion	2	2	-	-	-	-	-	-	2	2
status	IT	IT	IT	IT	IT	IT	62	63	64	65
status	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
abrasion	2	2	-	-	-	-	-	-	2	2
calculus	0	0	0	0	0	0	0	0	0	0
leh	0	0	0	0	0	0	0	0	0	0
caries	0	0	0	0	0	0	0	0	0	0
paradont.	X	X	X	X	X	X	X	X	X	X

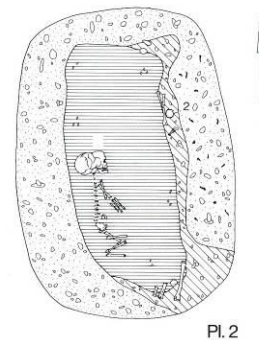
Permanent tooth status:

paradont.			X			X		X	X					X	X	
caries			X			X		X	X	X				X	X	
leh			I			0		I	I	II				I	0	
calculus			X			X		X	X	X				X	X	
abrasion			X			-		-	-	-				X	X	
status	X	PL	IT	PL	PL	IT	PL	IT	IT	IT	23	24	25	IT	IT	X
status	X	PL	IT	PL	PL	IT	PL	PL	PL	IT	IT	PL	PL	PL	PL	X
abrasion			X			-				-	-					
calculus			X			X				X	X					
leh			I			I				I	0					
caries			X			X				X	X					
paradont.			X			X				X	X					

- no permanent teeth erupted;
- 23, 24 and 25 inside the maxillary bone, therefore evaluation impossible;

Existing skeletal remains:

	Frontale
r. l.	Parietale
p	Temporale
p	Occipitale
p	Maxilla
p	Mandibula
r. l.	Clavicula
r. l.	Scapula
r. l.	Humerus
p	Radius
p	Ulna
p	Ossa manus
p	Os coxae
p	Femur
p	Tibia
p	Fibula
r. l.	Ossa pedis
r. l.	Sternum
.	Costae
p	Vertebrae
p	Sacrum



Pathologies:

- Neurocranium: only small eroded fragments left; milky-white apposition covers internal lamina (frontal bone);
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 27/2 (main burial)

Sex: female?

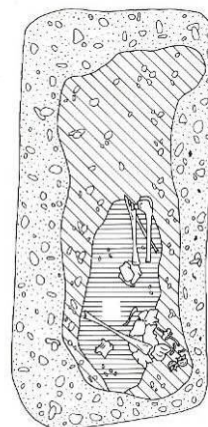
Age: 30 – 35 yrs

Wealth: upper class

Preservation: grade 2

Tooth status:

paradont.						X				X	X	X	X						
caries						0				0	0	0	0						
leh						0				0	0	0	0						
calculus						0				I	0	0	0						
abrasion						-				-	-	-	-						
status	PL	PL	PL	PL	PL	IT	PL	PL	IT	IT	IT	IT	IT	PL	PL	PL	PL	PL	PL
status	PL	PL	PL	PL	IT	IT	PL	IT	IT	IT	IT	IT	IT	34	35	36	37	38	
abrasion						-	-		-	-	-	-	-	-	3	3	2		
calculus						0	0		0	0	0	0	0	0	I	I	0	0	
leh						0	0		0	0	0	0	0	0	0	0	0	0	
caries						0	0		0	0	0	0	0	0	0	0	0	0	
paradont.						X	X		X	X	X	X	X	I	X	X	0		



PI. 4

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
-	-	-	-	-	p	p	p	p	p	p	-	-	p	p	-	p	-	p	p	-

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: accentuated longitudinal striations (slight signs of periostitis) on left tibia, otherwise evaluation impossible;

Vertebrae: evaluation impossible;

Joints:

	right	left
shoulder joint	m.	2
elbow joint	e.i.	m.
proximal wrist	m.	1
radio-ulnar joint	m.	1
hip joint	m.	e.i.
knee joint	m.	2
proximal ankle	m.	m.
distal ankle	m.	m.

Burial 28

Sex: male

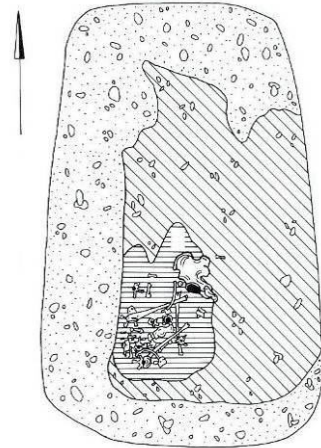
Age: 30 – 40 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.	X															
caries	0															
leh	0															
calculus	0															
abrasion	2															
status	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	48	47	46	45	44	43	PL	PL	PL	PL	33	34	35	36	37	38
abrasion	3	3	4	-	-	-					-	-	-	4	4	3
calculus	0	II	II	II	II	II					I	II	0	0	0	0
leh	0	0	0	0	0	0					0	0	0	0	0	0
caries	0	0	0	0	0	0					0	0	0	0	0	0
paradont.	X	X	X	I	X	X					X	X	X	X	X	X



Pl. 4

Existing skeletal remains:

p	Frontale
r	Parietale
i	Temporale
l	Occipitale
.	Maxilla
.	Mandibula
p	Clavicula
r	Scapula
i	Humerus
l	Radius
.	Ulna
.	Ossa manus
p	Oss coxae
p	Femur
p	Tibia
p	Fibula
r	Ossa pedis
i	Sternum
l	Costae
p	Vertebrae
p	Sacrum

Pathologies:

- Neurocranium: porotic hyperostosis distinguishable on external lamina of a small number of frontal-fragments;
- Viscerocranium: missing;
- Postcranium: marginal lipping (grade 2) on proximal articular surfaces of existing right metacarpals (I, II, III, IV); grade 1 degenerative changes on distal articular surfaces of right metacarpals and proximal articular surfaces of existing left metacarpals (II, IV); plantar bone spur formation on left metacarpus I; formation of plantar ridges on all existing phalanges which also show degenerative changes of grade 1 to 3 on their proximal articular surfaces and grade 1 degenerative changes on their distal articular surfaces; accentuated longitudinal striations (slight signs of periostitis) on remaining bone surface of right tibia;

Vertebrae:

- Cervical vertebrae: grade 4 marginal lipping on the three existing fragments;
- Thoracic vertebrae: grade 2 marginal lipping on the four existing fragments; three vertebral bodies show Schmorl's nodes;
- Lumbar vertebrae: evaluation impossible;

Joints:

	right	left
shoulder joint	m.	m.
elbow joint	1.5	m.
proximal wrist	0	m.
radio-ulnar joint	2	m.
hip joint	e.i.	1
knee joint	m.	0
proximal ankle	1	1.5
distal ankle	3	1.6

Burial 29

Sex: male

Age: 24 – 30 yrs

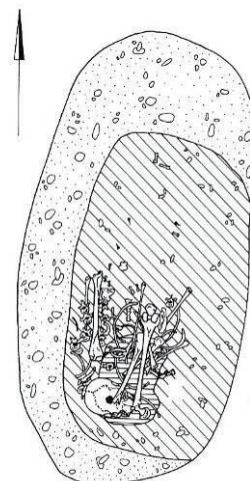
Wealth: upper class

Preservation: grade 2

Tooth status:

paradont.		I	I	I	I	I	I	X	X			II	I	I	I	
caries		0	0	0	0	0	0	0	0			0	0	0	0	
leh		0	0	0	0	I	I	I	I			0	I	I	I	
calculus		I	I	I	0	0	I	0	0			I	I	I	I	
abrasion		2	3	-	-	-	-	-	-			-	-	3	2	
status	PL	17	16	15	14	13	12	11	21	PL	PL	24	25	26	27	PL
status	-	47	46	PL	44	43	42	41	31	32	33	*	35	36	37	-
abrasion		2	3		-	-	-	-	-	-	-		-	3	2	
calculus		I	I		0	I	I	0	I	I	I		0	I	0	
leh		0	I		0	I	I	I	I	I	I		I	I	0	
caries		0	0		0	0	0	0	0	0	0		0	0	0	
paradont.		I	I		I	I	I	II	II	I	I		I	I	I	

- lower M₃s undeveloped, tooth 34 currently not available for investigation;



Pl. 4

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Pathologies:

- Neurocranium: slight cribra orbitalia found in both orbits; small porotic apposition just behind right external acoustic meatus;
- Viscerocranium: no visible pathological modifications, except for signs of periodontal disease (see above);
- Postcranium: exostoses formed on right olecranon; slight signs of periostitis found on all existing long bones, as well as on inward part of some of the rib fragments and superior parts of iliac fossa and pubic ramus; talar articular surfaces of both calcanei and calcaneal articular surfaces of both tali dorsally prolonged which infers individual had „flat feet“ (pes planus); arthritic metatarsals and phalanges; articular surfaces of right patella extremely bulky;

Vertebrae:

- Cervical vertebrae: articular surfaces include grade 2 and grade 3 marginal lipping;
- Thoracic vertebrae: articular surfaces of first eight thoracic vertebrae all rated grade 2, whereas others show grade 3 degenerative changes; lacuna formation on three vertebral bodies and Schmorl's nodes observable on remaining existing

vertebral bodies (except Th1); slight osteophyte development in some thoracic vertebral bodies;

- Lumbar vertebrae: articular surfaces rated grade 2/grade 3; Schmorl's nodes found on cranial and caudal sides of existing lumbar vertebral bodies;

Joints:

	right	left
shoulder joint	1	2
elbow joint	0.37	0.5
proximal wrist	m.	1.5
radio-ulnar joint	0.5	0
hip joint	1	e.i.
knee joint	1	2.15
proximal ankle	1.75	1.75
distal ankle	2.16	2.3

Burial 30

Sex: female?

Age: ~ 10 yrs

Wealth: ?

Preservation: grade 2

Tooth status:

paradont.			X	X	X	X	X	X	X	X	X	X	X	X		
caries			0	0	0	0	0	0	0	0	0	0	0	0		
leh			0	0	I	I	0	X	I	0	I	I	0	0		
calculus			1	0	0	0	I	0	0	I	I	0	I	I		
abrasion			2	-	-	-	-	-	-	-	-	-	4	2		
status	X	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	dm ²	IT	PL	X
status	X	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	PL	PL	IT	PL	X
abrasion			2	3	-	-	-	-	-	-	-			3		
calculus			0	I	0	0	I	I	I	I	I			I		
leh			0	0	I	0	I	0	0	0	0	I		0		
caries			0	0	0	0	0	0	0	0	0			0		
paradont.			X	X	X	X	X	X	X	X	X			X		



- surface of upper right I¹ too eroded for evaluation of LEH; upper left dm² not replaced;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.

Pathologies:

- Neurocranium: evaluation impossible for internal and external lamina; possible signs of cribra orbitalia in right orbital roof;
- Viscerocranium: no visible pathological modifications found on mandible;
- Postcranium: evaluation impossible for most bone surfaces; some rib fragments show slight signs of periostitis on inside which possibly indicates pleuritis;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 31/1 (2nd individual)

Sex: ?

Age: 13 – 14 yrs

Wealth: lower class

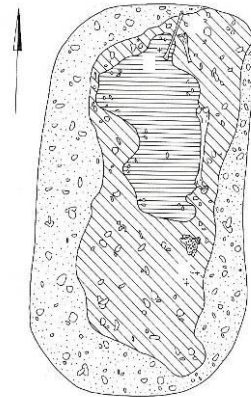
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	r.	r.	-	-	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	p	-	-	-	-	-	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 31/2 (main burial)

Sex: female

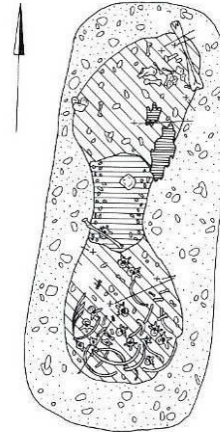
Age: 19 – 21 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.									X						
caries									0						
leh									X						
calculus									0						
abrasion									-						
status	X	PL	PL	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	X
status	X	PL	46	PL	PL	PL	PL	PL	PL	PL	34	35	36	37	38
abrasion			3								-	-	3	2	1
calculus			0								0	0	0	0	0
leh			0								0	0	0	0	0
caries			0								0	0	0	0	0
paradont.			X								X	X	X	X	X



Pl. 4

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
	p	p	Mandibula
	r.	l.	Clavicula
	p	p	Scapula
	r.	l.	Humerus
	+ +		Radius
	r.	l.	Ulna
			Ossa manus
	p	p	Os coxae
			Femur
	+ +		Tibia
	p	p	Fibula
	p	p	Ossa pedis
	p	p	Sternum
	p	p	Costae
	p	p	Vertebrae
	p	p	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: no visible pathological modifications; evaluation impossible for majority of long bones;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 32/1 (2nd individual)

Sex: male?

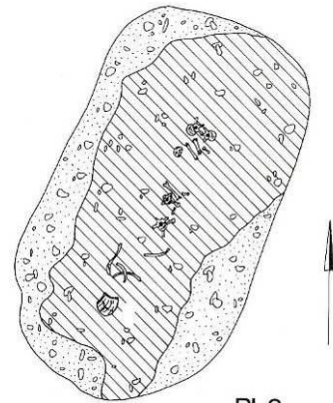
Age: 19 – 23 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	IT	IT	46	45	44	43	PL	PL	31	32	33	34	IT	36	37	PL	PL
abrasion	1	2	3	-	-	-			-	-	-	-	-	3	2		
calculus	0	I	I	0	0	I			II	II	I	0	0	0	I		
leh	0	0	0	0	0	0			0	0	0	0	0	0	0		
caries	0	0	0	0	0	0			0	0	0	0	0	0	0		
paradont.	X	X	X	X	X	X			X	X	X	X	X	X	X		



Pl. 2

Existing skeletal remains:

		Frontale
r.	l.	Parietale
r.	l.	Temporale
		Occipitale
		Maxilla
p.	p.	Mandibula
r.	l.	Clavicula
p.	p.	Scapula
p.	p.	Humerus
r.	l.	Radius
p.	p.	Ulna
p.	p.	Ossa manus
p.	p.	Os coxae
r.	l.	Femur
r.	l.	Tibia
r.	l.	Fibula
r.	l.	Ossa pedis
p.	p.	Sternum
		Costae
p.	p.	Vertebrae
		Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing (except teeth);
- Postcranium: evaluation impossible;

Vertebrae:

- Cervical vertebrae: grade 1 marginal lipping on two existing fragments; right caudal articular surface of C1 shows grade 2 degenerative changes (due to slight porosity on surface);
- Thoracic vertebrae: missing;
- Lumbar vertebrae: missing;

Joints: missing;

Burial 32/2 (main burial)

Sex: female

Age: 13 – 14 yrs

Wealth: ?

Preservation: grade 2

Deciduous tooth status:

paradont.	X	X	X							X
caries	0	0	0							0
leh	0	0	0							0
calculus	0	0	0							0
abrasion	4	4	-							4
status	55	IT	IT	PD	PD	PD	PD	PL	PL	IT
status	PL	PL	PL	PD	PD	PD	PD	PL	PL	PL
abrasion										
calculus										
leh										
caries										
paradont.										

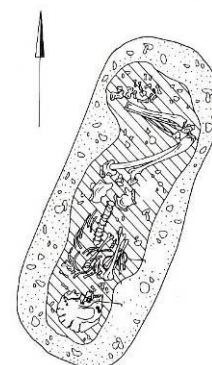
Permanent tooth status:

paradont.		X	0	X	X	X	X	X	X	X	X	X	X	X	
caries		0	0	0	0	0	0	0	0	0	0	0	0	0	
leh		0	0	0	0	I	I	I	I	I	I	0	0	0	
calculus		0	0	0	0	0	0	0	0	0	0	0	0	0	
abrasion		1	2	-	-	-	-	-	-	-	-	-	2	1	
status	X	17	16	15	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	X
status	X	PL	PL	PL	PL	IT	PL	PL	IT	PL	PL	PL	PL	PL	X
abrasion						-			-						
calculus						0			0						
leh						I			I						
caries						0			0						
paradont.						X			X						

- no permanent teeth erupted, except incisors and ¹M¹;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



Pl. 3

Pathologies:

- Neurocranium: left sigmoid sinus impression notably larger than the one on the right (Plate V d);
- Viscerocranium: slightly inflamed alveolar ridge on right half of maxilla (left side missing);
- Postcranium: accentuated longitudinal striations (slight signs of periostitis (Plate II b)) found on all existing long bones; small tile-shaped appositions found on left iliac fossa and porotic hyperostosis on left and right iliac fossa, as well as left pubic bone at the insertion point of the obturatorius internus muscle;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 33

Sex: female?

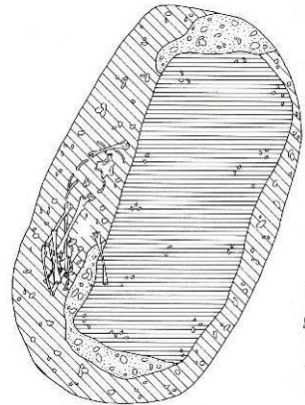
Age: 15 – 18 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	48	47	46	45	44	43	42	41	PL	32	33	34	35	36	37	38	
abrasion	X	1	3	-	-	-	-	-		-	-	-	-	2	1	X	
calculus	X	0	0	0	0	0	0	II		I	0	0	0	I	0	X	
leh	X	0	0	0	I	I	I	I		0	0	0	0	0	0	X	
caries	X	0	0	0	0	0	0	0		0	0	0	0	0	0	X	
paradont.	X	0	X	X	X	X	X	X		X	X	0	0	X	X	X	



Pl. 3

Existing skeletal remains:

	r.	.	Frontale
	r.	i.	Parietale
	r.	i.	Temporale
	.	.	Occipitale
	.	.	Maxilla
	+	.	Mandibula
	r.	i.	Clavicula
	r.	i.	Scapula
	p	p	Humerus
	p	p	Radius
	.	.	Ulna
	p	p	Ossa manus
	r.	i.	Os coxae
	p	p	Femur
	r.	i.	Tibia
	p	p	Fibula
	p	p	Ossa pedis
	.	.	Sternum
	p	p	Costae
	p	p	Vertebrae
	p	p	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no pathological modifications found on mandible;
- Postcranium: evaluation impossible for most fragments; no visible modifications found on right ulna and left fibula;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 34

Sex: ?

Age: 22 – 80 yrs

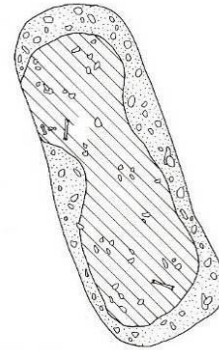
Wealth: lower class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 35

Sex: male

Age: 50 – 60 yrs

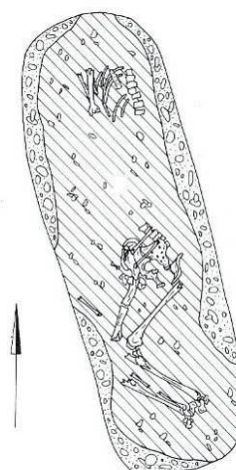
Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.			X					X						X	X	X
caries			0					0						0	0	0
leh			0					X						0	0	0
calculus			0					X						II	I	II
abrasion			5					-						4	3	3
status	PL	PL	IT	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	IT	IT	IT
status	PL	PL	IT	IT	44	43	IT	IT	PL	PL	PL	PL	IL	IL	PL	IT
abrasion			5	-	-	-	-	-								5
calculus			II	II	II	II	X	X							I	
leh			0	0	0	0	X	X							0	
caries			0	0	0	0	I	0							0	
paradont.			X	X	X	X	X	X								X

- incisors completely abraded, therefore no information on hypoplasia or calculus;
mesial pinhead-size caries on lower right incisor;
hypercementosis found on existing molars;



Pl. 2

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.

Pathologies:

- Neurocranium: endocranial osteoma, approx. 3x3mm in size (early stages of hyperostosis) found on small fragment (probably originating from the frontal bone); maxillary sinuses show porotic surfaces (maxillary sinusitis);
- Viscerocranium: evaluation impossible;
- Postcranium: slight signs of periostitis distinguishable on left radius, both femurs and tibias and right fibula; right tibia and right fibula developed exostoses on their distal ends (facing one another); a small longish impression can be observed on medial facies of left patella;

Vertebrae: evaluation impossible;

Joints:

	right	left
shoulder joint	m.	m.
elbow joint	1	m.
proximal wrist	e.i.	1
radio-ulnar joint	1	m.
hip joint	m.	m.
knee joint	m.	2
proximal ankle	1	1
distal ankle	1	e.i.

Burial 36/1 (main burial)

Sex: female?

Age: 24 – 30 yrs

Wealth: upper class

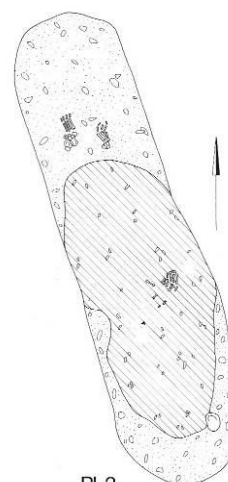
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
-	-	-	-	-	-	-	-	-	-	-	p	p	p	-	-	p	p	-	p	p



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 36/2 (2nd individual)

Sex: ?

Age: 0 – 12 mths.

Wealth: ?

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
-	-	-	-	-	-	-	-	p	p	-	-	-	-	-	-	-	-	-	-	-

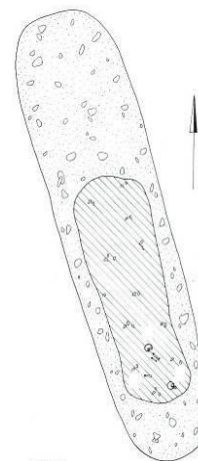
- skeletal remains probably originate from burial 37

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;



Pl. 4

Burial 37

Sex: ?

Age: sub-adult

Wealth: ?

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

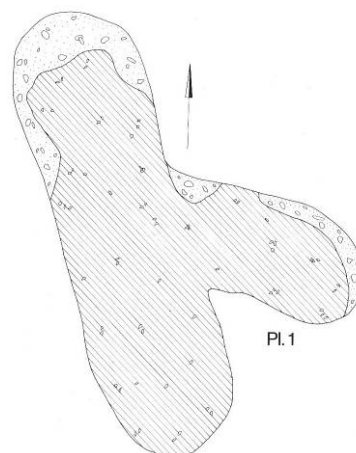
- additional skeletal remains found in burial 36 probably originate from burial 37

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;



Burial 38

Sex: ?

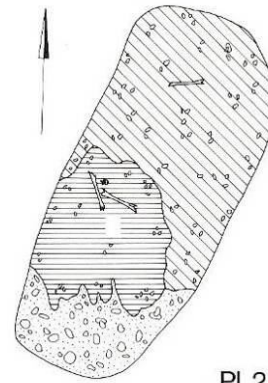
Age: ~ 4 yrs

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

paradont.										
caries										
leh										
calculus										
abrasion										
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL
abrasion			-							
calculus			0							
leh			0							
caries			0							
paradont.			X							



Pl. 2

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 39

Sex: female?

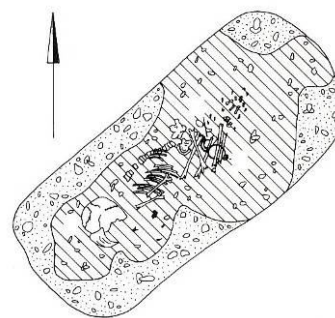
Age: 8 – 10 yrs

Wealth: ?

Preservation: grade 2

Deciduous tooth status:

paradont.									X		
caries									0		
leh									0		
calculus									0		
abrasion									-		
status	PL	X	PL	PD	PD	PD	PD	IT	X	PL	
status	IT	X	X	PD	PD	PD	PD	X	X	IT	
abrasion	4									4	
calculus	0									0	
leh	0									0	
caries	0									0	
paradont.	X									X	



Pl. 2

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: missing;
- Postcranium: slight signs of periostitis found on right femur and both tibias and fibulas;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 40

Sex: female?

Age: ~ 5 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0	0	0	0
leh	0	0	0	0	0	0	0	0	0	0
calculus	0	0	0	0	0	0	0	0	0	0
abrasion	2	2	-	-	-	-	-	-	2	2
status	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
status	IT	IT	IT	IT	PL	IT	PL	PL	IT	IT
abrasion	2	2	-	-	-	-	-	-	2	2
calculus	0	0	0	0		0			0	0
leh	0	0	0	0		0			0	0
caries	0	0	0	0		0			0	0
paradont.	X	X	X	X		X			X	X

Permanent tooth status:

paradont.		X	X				X	X	X	X					X		
caries		X	X				X	X	X	X					X		
leh		X	0				I	I	I	I					0		
calculus		X	X				X	X	X	X					X		
abrasion		X	X				-	-	-	-					X		
status	X	IT	IT	PL	PL	PL	IT	IT	IT	IT	PL	PL	PL	PL	IT	PL	X
status	X	PL	IT	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	X
abrasion			X				-								X		
calculus			X				X								X		
leh			0				0								0		
caries			X				X								X		
paradont.			X				X								X		

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.



Pl. 2

Pathologies:

- Neurocranium: internal occipital tuberosity and sigmoid sinuses appear quite porotic;
- Viscerocranium: evaluation impossible;
- Postcranium: no visible pathological modifications on remaining long bone surfaces, but majority of long bones too eroded for evaluation;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 41

Sex: male?

Age: ~ 4 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.	X	X		X		X	X	X		X
caries	0	0		0		0	0	0		0
leh	0	0		0		0	0	0		0
calculus	0	0		0		0	0	0		0
abrasion	2	2		-		-	-	-		2
status	IT	IT	*	IT	PL	IT	IT	IT	PL	IT
status	IT	IT	*	PL	IT	PL	PL	PL	IT	IT
abrasion	2	2			-				2	2
calculus	0	0			0				0	0
leh	0	0			0				0	0
caries	0	0			0				0	0
paradont.	X	X			X				X	X

- * tooth fragmented

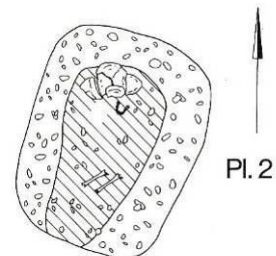
Permanent tooth status:

paradont.			X				X			X				X		
caries			X				X			X				X		
leh			0				0			0				0		
calculus			X				X			X				X		
abrasion			X				-			-				X		
status	X	PL	IT	PL	PL	PL	IT	PL	PL	IT	PL	PL	PL	IT	PL	X
status	X	PL	IT	PL	PL	IT	PL	IT	IT	PL	PL	PL	PL	IT	PL	X
abrasion			X				-			-	-				X	
calculus			X				X			X	X				X	
leh			0				1			0	0				0	
caries			X				X			X	X				X	
paradont.			X				X			X	X				X	

- no permanent teeth erupted; spotted enamel hypoplasia found on lower molars;

Existing skeletal remains:

D	D	Frontale
D	D	Parietale
D	D	Temporale
D	D	Occipitale
D	D	Maxilla
D	D	Mandibula
D	D	Clavicula
D	D	Scapula
D	D	Humerus
D	D	Radius
D	D	Ulna
D	D	Ossa manus
D	D	Os coxae
D	D	Femur
D	D	Tibia
D	D	Fibula
D	D	Ossa pedis
D	D	Sternum
D	D	Costae
D	D	Vertebrae
D	D	Sacrum



Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 42

Sex: ?

Age: 10 – 12 yrs

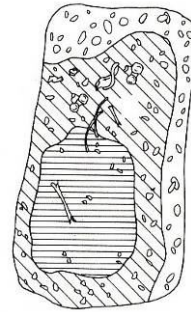
Wealth: ?

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 43

Sex: female

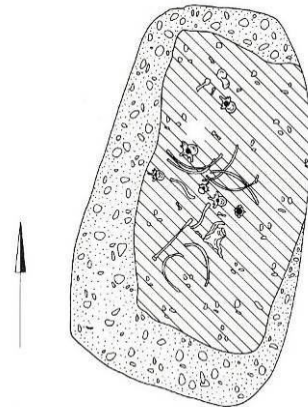
Age: 22 – 24 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	X	47	46	45	44	43	42	41	31	32	33	34	35	36	37	X	
abrasion		2	3	-	-	-	-	-	-	-	-	-	-	3	2		
calculus		0	0	0	I	I	I	I	I	I	I	I	I	I	0		
leh		0	I	I	I	II	II	II	II	II	I	I	I	I	0		
caries		0	0	0	0	0	0	0	0	0	0	0	0	0	0		
paradont.		0	0	0	0	X	X	X	X	X	X	X	0	0	0		



Pl. 3

- spotted enamel hypoplasia on existing molars;

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
	+		Mandibula
	p.	+	Clavicula
	p.	p.	Scapula
	r.	l.	Humerus
	p.		Radius
	r.	l.	Ulna
	r.	l.	Ossa manus
	p.	p.	Os coxae
	r.	l.	Femur
	r.	l.	Tibia
	r.	l.	Fibula
	p.	p.	Ossa pedis
	p.	p.	Sternum
	p.		Costae
	p.	p.	Vertebrae
			Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible for mandible;
- Postcranium: articular surfaces of all existing metacarpals rated grade 3; the left metatarsal II shows a small medial impression (pressure-induced atrophy), probably caused by a space-demanding process within soft tissue;

Vertebrae:

- Cervical vertebrae: right caudal articular surface of C1 shows grade 2 degenerative changes, evaluation impossible for C2;
- Thoracic vertebrae: articular surfaces of existing thoracic vertebra rated grade 1/grade 2;
- Lumbar vertebrae: evaluation impossible;

Joints: missing;

Burial 44

Sex: male?

Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 1

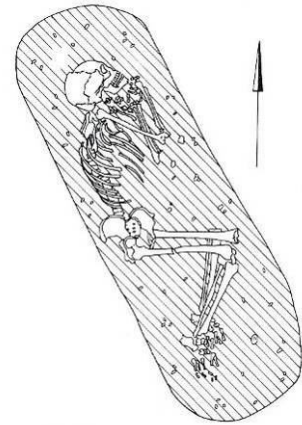
Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

	r.	p	Fontale
	r.	p	Parietale
	r.	p	Temporale
	r.	p	Occipitale
	.	.	Maxilla
	.	.	Mandibula
	+	+	Clavicula
	r.	p	Scapula
	.	.	Humerus
	+	+	Radius
	r.	p	Ulna
	r.	p	Ossa manus
	p	p	Os coxae
	r.	p	Femur
	+	+	Tibia
	r.	p	Fibula
	+	+	Ossa pedis
	p	p	Sternum
	p	p	Costae
	p	p	Ventribrae
	p	p	Sacrum

- cranium currently unavailable!



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: grade 2 degenerative changes on distal articular surfaces of existing metacarpals and metatarsals; exostoses formed on edges of auricular surfaces of left and right ilium and on both tuber calcanei, as well as on both patellae; signs of periostitis distinguishable on both femurs, tibiae and fibulae;

Vertebrae:

- Cervical vertebrae: existing articular surfaces show grade 2 marginal lipping; existing vertebral bodies probably exposed to high pressure which left vertebral bodies deformed leaving anterior parts lower than the posterior ones; osteophyte development;
- Thoracic vertebrae: missing;
- Lumbar vertebrae: missing;

Joints:

	right	left
shoulder joint	2	1
elbow joint	0.5	e.i.
proximal wrist	1.5	1.5
radio-ulnar joint	2	1
hip joint	1	1
knee joint	1	1
proximal ankle	1.5	1.25
distal ankle	0.83	0.75

Burial 45

Sex: male?

Age: 35 – 45 yrs

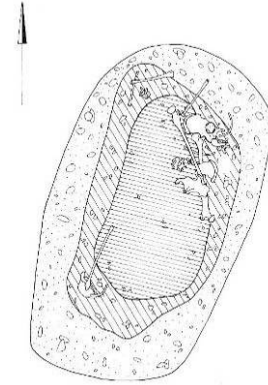
Wealth: upper class

Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: grade 2 degenerative changes on articular surfaces of existing metacarpals and grade 3 on existing metatarsals; exostoses formed on both olecranons and massively on existing left patella; slight signs of periostitis found on both ulnae and left radius as well as on both femurs, tibiae and fibulae;

Vertebrae:

- Cervical vertebrae: missing;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: Schmorl's nodes and osteophytes found on vertebral body fragments;

Joints:

	right	left
shoulder joint	m.	3
elbow joint	m.	2
proximal wrist	1.5	m.
radio-ulnar joint	e.i.	e.i.
hip joint	e.i.	2
knee joint	1	e.i.
proximal ankle	2	1.5
distal ankle	1.25	1.67

Burial 46

Sex: male

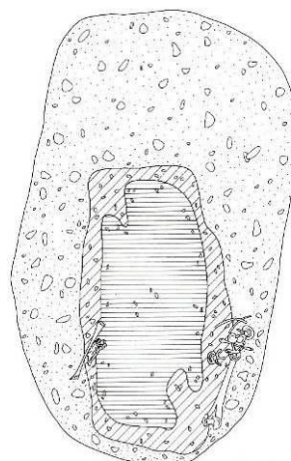
Age: 35 – 45 yrs

Wealth: upper class

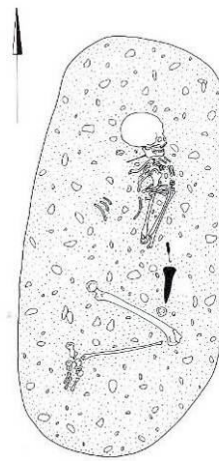
Preservation: grade 2

Tooth status:

paradont.		X	X		II	II				X	II	II	II	II	II	X	II		
caries		0	0		0	0				0	0	0	0	0	0	0	0		
leh		0	0		0	0				0	0	0	0	0	0	0	0		
calculus		0	0		0	0				0	0	0	0	0	I	I	I		
abrasion		4	6		-	-				-	-	-	-	-	-	6	4		
status	X	17	16	PL	14	13	IL	IL		21	22	23	24	25	26	27		X	
status	48	47	46	45	44	43	42	41		31	32	33	34	35	36	37	38		
abrasion	4	4	5	-	-	-	-	-		-	-	-	-	-	5	4	4		
calculus	II	I	I	II	II	II	II	II		I	II	II	II	II	0	I	0		
leh	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0		
caries	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0		
paradont.	II	X	X	X	II	X	X	X		II	II	II	II	II	II	II	II		



Pl. 3



Pl. 4

Existing skeletal remains:

Frontale																			
Parietale	r.	l.	r.	l.															
Temporale	r.	l.	r.	l.															
Occipitale																			
Maxilla																			
Mandibula	r.	l.	r.	l.															
Clavicula	r.	l.	r.	l.															
Scapula	r.	l.	r.	l.															
Humerus	r.	l.	r.	l.															
Radius	r.	l.	r.	l.															
Ulna	r.	l.	r.	l.															
Ossa manus	r.	l.	r.	l.															
Os coxae	r.	l.	r.	l.															
Femur	r.	l.	r.	l.															
Tibia	r.	l.	r.	l.															
Fibula	r.	l.	r.	l.															
Ossa pedis	r.	l.	r.	l.															
Sternum																			
Costae																			
Vertebrae																			
Sacrum																			

Pathologies:

- Neurocranium: severe parietal porosity on ectocranial surface (left and right); severe porotic changes also found on ectocranial surfaces of frontal and occipital bones (grade 2); possible signs of cribra orbitalia;
- Viscerocranium: severe porotic changes on anterior surface of left maxilla and right side of mandible (Pars alveolaris);
- Postcranium: small appositions (periostitis) found on both humeri; signs of wear on existing metacarpals, metatarsals and digits; peri-articular thickening of one of the phalanges;

Vertebrae:

- Cervical vertebrae: missing;
- Thoracic vertebrae: missing;
- Lumbar vertebrae: Schmorl's nodes distinguishable on existing vertebral bodies;

Joints:

	right	left
shoulder joint	3	2
elbow joint	2	0.75
proximal wrist	1.5	2
radio-ulnar joint	2	m.
hip joint	2	1.5
knee joint	1.25	1
proximal ankle	2	1.25
distal ankle	1.88	1.5

Burial 47

Sex: female?

Age: ~ 4 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.	0	0	X			X		X	X	X
caries	0	0	0			0		0	0	0
leh	0	0	0			0		0	0	0
calculus	1	1	0			0		0	1	0
abrasion	2	4	-			-		-	4	3
status	55	54	IT	PL	PL	IT	PL	IT	IT	IT
status	IT	IT	PL	PL	PL	PL	PL	PL	74	75
abrasion	3	4							4	3
calculus	1	1							0	0
leh	0	0							0	0
caries	0	0							0	0
paradont.	X	X							X	X

Permanent tooth status:

paradont.		X	X				X	X	X		X				X		
caries		X	X				X	X	X		X				X		
leh		I	I				I	I	I		I				I		
calculus		X	X				X	X	X		X				X		
abrasion		X	X				-	-	-		-				X		
status	X	IT	IT	15	14	13	IT	IT	IT	22	IT	PL	PL	IT	PL	X	
status	X	IT	IT	45	44	43	IT	41	IT	32	IT	IT	35	IT	IT	X	
abrasion		X	X				-		-		-	-			X	X	
calculus		X	X				X		X		X	X			X	X	
leh		0	I				I		I		II	I			I	I	
caries		X	X				X		X		X	X			X	X	
paradont.		X	X				X		X		X	X			X	X	

- no permanent teeth erupted

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

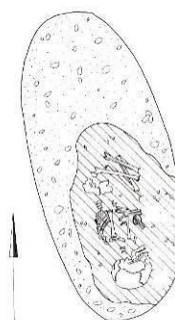
- fewer bones available for evaluation than can be seen on drawing;

Pathologies:

- Neurocranium: slightly inflamed area around internal occipital tuberosity; preliminary signs of cribra orbitalia found in right orbit;
- Viscerocranium: evaluation impossible;
- Postcranium: accentuated longitudinal striations (slight signs of periostitis) found on right ulna, otherwise evaluation impossible;

Vertebrae: missing;

Joints: missing;



Pl. 2

Burial 48

Sex: male?

Age: ~ 5 yrs

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

paradont.	X	X		X		X	X	X	X	X
caries	0	0		0		0	0	0	0	0
leh	0	0		0		0	0	0	0	0
calculus	1	0		0		0	0	0	1	1
abrasion	2	4		-		-	-	-	3	3
status	IT	IT	PL	IT	PL	IT	IT	IT	IT	IT
status	IT	IT	PL	PL	PL	PL	PL	PL	IT	IT
abrasion	3	3							3	3
calculus	0	1							0	0
leh	0	0							0	0
caries	0	0							0	0
paradont.	X	X							X	X

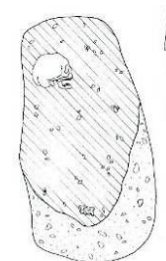
Permanent tooth status:

paradont.			X				X	X	X	X				X	X	X	
caries			X				X	X	X	X				X	X	X	
leh			I				II	I	I	II				II	I	I	
calculus			X				X	X	X	X				X	X	X	
abrasion			X				-	-	-	-				-	X	X	
status	X	PL	IT	PL	PL	PL	IT	IT	IT	IT	PL	PL	IT	IT	IT	IT	X
status	X	IT	IT	IT	PL	IT	IT	IT	PL	IT	PL	PL	IT	PL	IT	IT	X
abrasion		X	X	X		-	-	-		-				-		X	
calculus		X	X	X		X	X	X		X				X		X	
leh		I	0	I		II	0	0		0				I		I	
caries		X	X	X		X	X	X		X				X		X	
paradont.		X	X	X		X	X	X		X				X		X	

- spotted enamel hypoplasia on lower second deciduous molars;
- no permanent teeth erupted;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.	p.



Pl. 2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: missing;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 49

Sex: ?

Age: sub-adult

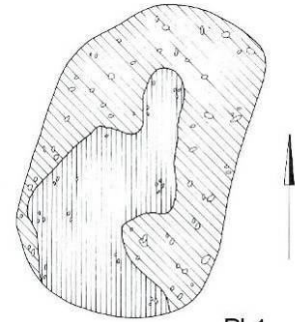
Wealth: ?

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 50

Sex: male?

Age: 13 – 14 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

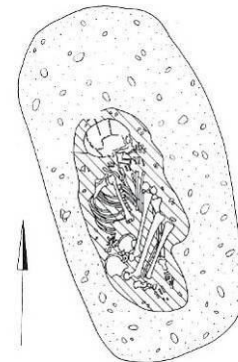
paradont.										
caries										
leh										
calculus										
abrasion										
status	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
status	85	PD	PD	PD	PD	PD	PD	PD	PD	75
abrasion	4									4
calculus	0									I
leh	0									0
caries	0									0
paradont.	X									X

Permanent tooth status:

paradont.								X		X	X	X	X	X	X	
caries								0		0	0	0	0	0	0	
leh								I		0	I	I	II	0	0	
calculus								0		0	0	0	0	0	0	
abrasion								-		-	-	-	-	2	1	
status	X	PL	PL	PL	PL	PL	PL	IT	PL	IT	IT	IT	IT	26	27	X
status	X	47	46	X	44	43	IT	IT	IT	PL	IT	34	X	36	37	X
abrasion		2	2		-	-	-	-		-	-			2	2	
calculus		0	I		0	0	0	I	0		0	0		0	0	
leh		I	I		II	I	0	0	0		I	I		I	I	
caries		0	0		0	0	0	0	0		0	0		0	0	
paradont.		0	0		X	X	X	X	X		X	X		0	0	

Existing skeletal remains:

Frontale	p	r	l
Parietale	p	p	p
Temporale	p	r	l
Occipitale	p	p	p
Maxilla	p	p	p
Mandibula	p	p	p
Clavicula	p	r	l
Scapula	p	p	p
Humerus	p	r	l
Radius	p	r	l
Ulna	p	r	l
Ossa manus	p	-	p
Os coxae	p	p	p
Femur	p	r	l
Tibia	p	p	+
Fibula	p	p	p
Ossa pedis	p	r	l
Sternum	-	-	-
Costae	p	p	p
Vertebrae	p	-	-
Sacrum	-	-	-



Pl. 2

Pathologies:

- Neurocranium: no visible pathological modifications;
- Viscerocranium: no visible pathological modifications; persisting deciduous molars in lower jaw;
- Postcranium: no visible pathological modifications; evaluation impossible for most long bones;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 51

Sex: ?

Age: ~ 8 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.			X	X						
caries			0	0						
leh			0	0						
calculus			0	I						
abrasion			-	-						
status	PL	PL	IT	IT	PD	PD	PD	PL	PL	PL
status	IT	IT	IT	PD	PD	PD	PD	PL	IT	IT
abrasion	3	3	-						4	4
calculus	0	0	0						0	0
leh	0	0	0						0	0
caries	0	0	0						0	0
paradont.	X	X	X						X	X

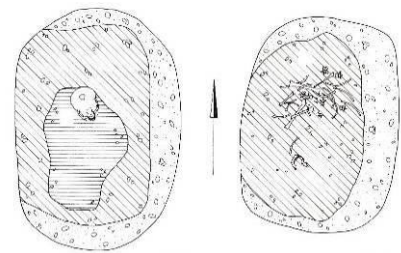
Permanent tooth status:

[illegible]

- only incisors and first molars erupted

Existing skeletal remains:

p	r	l		Frontale
p	p	p		Parietale
p	p	p		Temporale
p	p	p		Occipitale
p	p	p		Maxilla
p	p	p		Mandibula
p	p	p		Clavicula
-	-	-	r	Scapula
p	p	p		Humerus
p	p	p	r	Radius
p	p	p	l	Ulna
p	p	p	r	Ossa manus
p	p	p		Os coxae
-	-	-	r	Femur
p	p	p	r	Tibia
p	p	p	l	Fibula
-	-	-	r	Ossa pedis
-	-	-	l	Sternum
p	p	p		Costae
p	p	p		Vertebrae
p	p	p		Sacrum



Pl. 2

Pl. 3

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 52

Sex: female?

Age: 35 – 45 yrs

Wealth: lower class

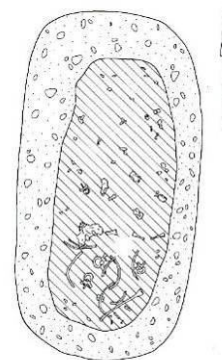
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	p	-	-	-	p	p	-	-	-	p	p	-	p	p



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: existing articular surfaces of left and right metatarsals, as well tarsals show grade 2 degenerative changes; evaluation impossible for all other remains;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 53

Sex: female

Age: 30 – 40 yrs

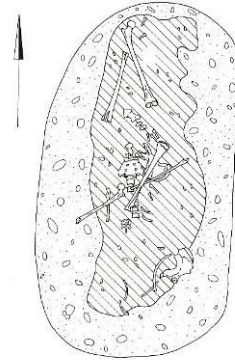
Wealth: lower class

Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: signs of periostitis found on both tibiae and on left fibula;

Vertebrae:

- Cervical vertebrae: evaluation impossible (only one existing fragment);
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: existing cranial articular surfaces show grade 3/grade 4 degenerative changes and existing caudal articular surfaces rated grade 3; no pathological modifications found on only existing vertebral body;

Joints: evaluation impossible;

Burial 54

Sex: male

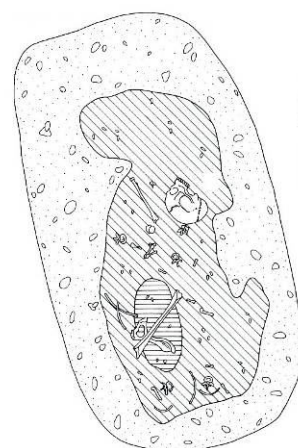
Age: 45 – 55 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.		X			X	X					X	X			*	
caries		0			0	0					0	0			0	
leh		I			X	X					X	X			0	
calculus		0			X	X					X	X			0	
abrasion		5			-	-					-	-			5	
status	IL	17	IL	IL	14	13	IL	PL	IL	PL	23	24	IL	IL	27	IL
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
abrasion																
calculus																
leh																
caries																
paradont.																



Pl. 4

- crowns of existing canines and premolars completely abraded;
- * tooth 27 apical process not caused by caries, possibly gingivitis;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Pathologies:

- Neurocranium: porosity found on the cranial basis (cervical side) of left sphenoid bone;
- Viscerocranium: no pathological modifications found;
- Postcranium: articular surfaces of all existing carpals (right pisiform and capitate bones) and metacarpals rated grade 2 or grade 3; the only rateable digit (I, right) shows grade 2 degenerative changes; signs of periostitis distinguishable on whole shaft of left femur;

Vertebrae:

- Cervical vertebrae: evaluation impossible for C2;
- Thoracic vertebrae: cranial articular surfaces of existing thoracic vertebra rated grade 3, caudal articular surfaces cannot be rated; no existing vertebral bodies;
- Lumbar vertebrae: cranial and caudal articular surfaces of the one existing lumbar vertebrae rated grade 3; no existing vertebral bodies;

Joints: evaluation impossible;

Burial 55

Sex: ?

Age: ~7 yrs

Wealth: ?

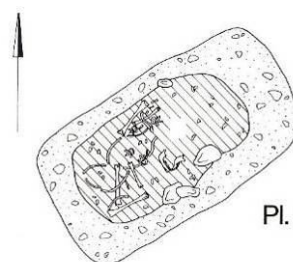
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
-	-	-	-	-	p	p	-	p	p	p	p	-	-	-	-	-	-	p	p	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no visible pathological modifications found on mandible;
- Postcranium: no visible pathological modifications found on right radius and both clavicles; evaluation impossible for all other remains;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 56

Sex: female

Age: 22 – 25 yrs

Wealth: lower class

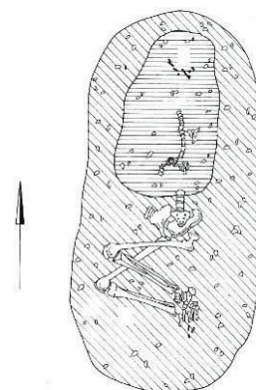
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: proximal articular surface of the only existing metacarpal bone (III, right) shows no degenerative changes; existing articular surfaces of metatarsals all rated grade 2; articular surface of left patella bumpy; evaluation impossible for long bones;

Vertebrae:

- Cervical vertebrae: grade 3 degenerative changes on existing articular surfaces of 5 cervical vertebrae; evaluation impossible for existing vertebral bodies;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: vertebral bodies with no notable modifications; evaluation impossible for articular surfaces;

Joints: evaluation impossible;

Burial 57

Sex: female

Age: 22 – 30 yrs

Wealth: lower class

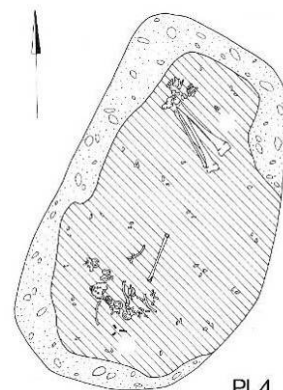
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	p	-	-	-	-	p	p	-	-	p	p	p	p	p	p



Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: articular surfaces of existing carpal bones rated grade 2, otherwise evaluation impossible;

Vertebrae: the only existing (caudal) articular surfaces on one thoracic vertebrae show grade 2 degenerative changes;

Joints: missing;

Burial 58

Sex: female

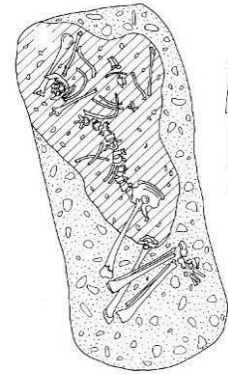
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
abrasion	2	2	3	-	-	-	-	-	-	-	-	-	-	3	3	2	
calculus	I	I	I	II	II	II	II	II	II	II	0	0	I	II	I	I	
leh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
paradont.	X	I	I	0	X	0	X	X	X	X	X	I	I	I	I	X	



Pl. 2

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
p	p		Mandibula
r.	r.	l.	Clavicula
p	p		Scapula
p	p		Humerus
r.	r.	l.	Radius
p	p		Ulna
r.	r.	l.	Ossa manus
p	p		Oss coxae
r.	r.	l.	Femur
p	p		Tibia
p	p		Fibula
r.	r.	l.	Ossa pedis
p	p		Sternum
-	-		Costae
p	p		Vertebrae
p	p		Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no pathological modifications found on mandible except for periodontal changes of grade I;
- Postcranium: signs of periostitis distinguishable on right femur, left tibia and both fibulas; existing tarsals and metatarsals show grade 3 degenerative changes;

Vertebrae:

- Cervical vertebrae: grade 3 degenerative changes on articular surfaces of the only existing vertebral fragment (C1);
- Thoracic vertebrae: articular surfaces of the existing thoracic vertebra rated grade 3;
- Lumbar vertebrae: existing articular surfaces show grade 3 degenerative changes; vertical intravital trauma of uncertain cause affecting left, ventral surface of L2 and L3 which is probably reason for formation of huge ventral bone spore (Plate II e); slight impression distinguishable on vertebral body (caudal side) of L5;

Joints:

	right	left
shoulder joint	2	2
elbow joint	1	1
proximal wrist	1	m.
radio-ulnar joint	1	e.i.
hip joint	1	1
knee joint	1	1
proximal ankle	1.67	1.67
distal ankle	1.75	1.75

Burial 59

Sex: male

Age: 19 – 23 yrs

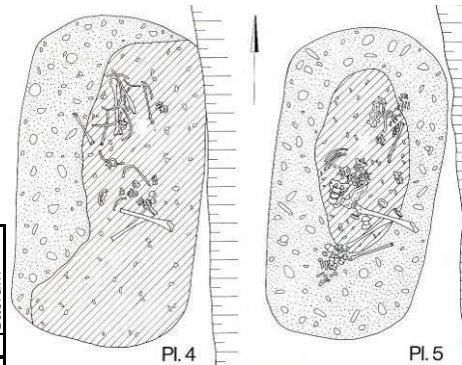
Wealth: lower class

Preservation: grade 2

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: slight signs of periostitis found on left humerus, both femurs and left tibia; cyst-like notch in front of calcaneal posterior articular surface with corresponding accessory bone growth on right talus;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: articular surfaces of existing thoracic vertebra rated grade 2/grade 3/grade 4, whereas vertebral bodies appear to be in a good condition;
- Lumbar vertebrae: existing articular surfaces show degenerative changes of grade 3/grade 4; evaluation impossible for vertebral bodies;

Joints:

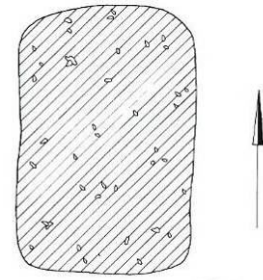
	right	left
shoulder joint	m.	1
elbow joint	m.	1
proximal wrist	1	1.5
radio-ulnar joint	e.i.	1
hip joint	m.	1
knee joint	2.25	3
proximal ankle	2	2.67
distal ankle	3.33	3.5

Sex: ?
Age: sub-adult
Wealth: ?
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 61

Sex: female

Age: 40 – 50 yrs

Wealth: upper class

Preservation: grade 2

Tooth status:

paradont.					X	X					X	X	X		X				
caries					0	X					0	0	0		0				
leh					0	X					0	X	0		0				
calculus					0	X					II	II	II		II				
abrasion					-	-					-	-	-		4				
status	PL	PL	PL	PL	IT	13	PL	PL	PL	IT	IT	IT	IT	PL	IT	PL	PL		
status	PL	IT	PL	45	44	43	PL	IT	IT	IT	33	34	IL	36	IT	PL			
abrasion		3		-	-	-		-	-	-	-	-		4/5	4				
calculus		I		II	II	II		II	II	II	II	II		0	0				
leh		0		0	0	0		0	0	0	0	0		0	0				
caries		0		0	0	0		0	0	0	0	0		IV	IV				
paradont.		X		X	X	X		X	X	X	X	X		X	X				

- tooth 13 has no crown left;

Existing skeletal remains:

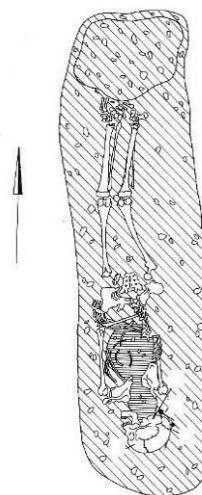
Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
+ p	+ p	+ p	+ p	+ p	+ p	- p	+ p	+ p	+ p	- p	- p	+ p	+ p	+ p	+ p	+ p	+ p	- p	+ p	+ p

- burial contains additional mandible (child, 12 – 15 yrs)

Pathologies:

- Neurocranium: coin-sized cyst-like impression adjacent to internal occipital tuberosity where transverse sinus merges with sagittal sinus;
- Viscerocranium: evaluation impossible;
- Postcranium: grade 3 degenerative changes found on existing articular surfaces of tarsals and metatarsals, some metatarsals even show grade 4 changes; the first anterior sacral foramina on right side of sacrum is narrower than on left; evaluation impossible for existing long bone surfaces;

Vertebrae: evaluation impossible;



Pl. 2

Joints:

	right	left
shoulder joint	2	2
elbow joint	2	2
proximal wrist	m.	m.
radio-ulnar joint	2	m.
hip joint	2	2
knee joint	2	2
proximal ankle	2	2
distal ankle	3.25	3.5

Burial 62

Sex: male

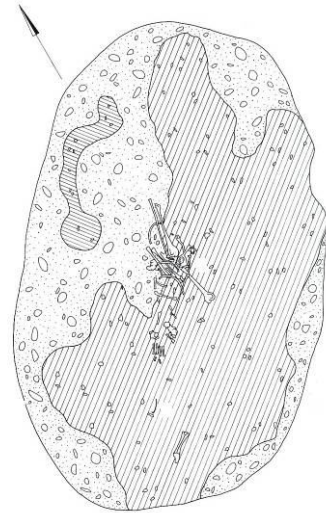
Age: 30 – 40 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	IL	45	44	43	42	41	31	32	33	34	35	36	37	38	
abrasion	3	3		-	-	-	-	-	-	-	-	-	-	4	3	3	
calculus	II	II		0	I	I	I	I	I	I	I	I	I	I	II	II	
leh	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
caries	IV	IV		0	0	0	0	0	0	0	0	IV	IV	0	0	0	
paradont.	I	I		X	X	X	X	X	X	X	X	I	I	I	I	I	



Pl. 2

- caries on mesial dental neck of 47 and on distal dental neck of 48 has extended to pulpa; 47 also shows occlusal caries rated II; 48 affected by occlusal, grade III caries;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no pathological modifications found on mandible except for grade I periodontal changes;
- Postcranium: signs of periostitis distinguishable on left tibia and left fibula; medial and lateral exostoses found just above left inferior fibular articular surface; exostoses also found in left calcaneal sulcus; left cuboid bone and lateral cuneiforme bone show grade 3 degenerative changes; grade 2 degenerative changes on existing articular surfaces of left and right metatarsals;

Vertebrae:

- Cervical vertebrae: grade 2 degenerative changes on left and right articular surfaces of C1;
- Thoracic vertebrae: cranial articular surfaces of existing thoracic vertebra rated grade 4 and caudal articular surfaces grade 3; no existing vertebral bodies;

Burial 64

Sex: female

Age: 45 – 55 yrs

Wealth: lower class

Preservation: grade 2

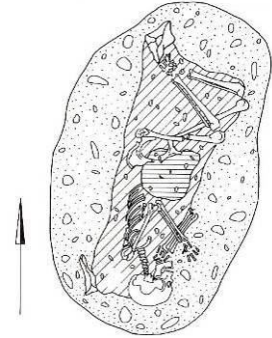
Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

- two undefinable teeth with only single roots remaining;

Existing skeletal remains:

Frontale	r.	l.
Parietale	r.	l.
Temporale	r.	l.
Occipitale	r.	l.
Maxilla	r.	l.
Mandibula	r.	l.
Clavicula	r.	l.
Scapula	r.	l.
Humerus	r.	l.
Radius	r.	l.
Ulna	r.	l.
Ossa manus	r.	l.
Os coxae	r.	l.
Femur	r.	l.
Tibia	r.	l.
Fibula	r.	l.
Ossa pedis	r.	l.
Sternum	r.	l.
Costae	r.	l.
Vertebrae	r.	l.
Sacrum	r.	l.



Pl. 3

- currently no cranial remains available;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: slight signs of periostitis on both humeri and femurs, right ulna and left tibia; distal articular surface on second digit of the right thumb as well as corresponding proximal articular surface on third digit dorsally elongated; all existing digital articular surfaces developed grade 3 marginal lipping;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: articular surfaces of existent thoracic vertebra rated grade 3/grade 4; no existing vertebral bodies;
- Lumbar vertebrae: evaluation impossible;

Joints:

	right	left
shoulder joint	e.i.	e.i.
elbow joint	m.	3
proximal wrist	m.	4
radio-ulnar joint	m.	1.6
hip joint	3	e.i.
knee joint	2	e.i.
proximal ankle	e.i.	m.
distal ankle	m.	m.

Burial 65

Sex: female

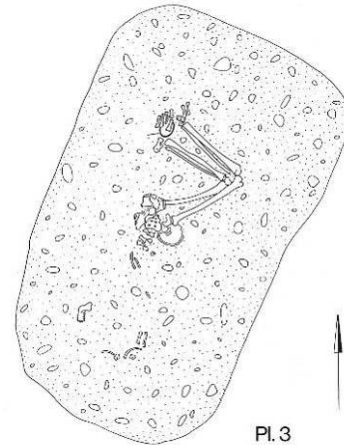
Age: 22 – 25 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	45	44	43	PL	PL	31	32	33	34	35	36	37	38	
abrasion	2	2	3	-	-	-	-	-	-	-	-	-	-	3	2	2	
calculus	I	0	I	0	0	0			0	0	0	0	0	I	0	I	
leh	0	0	0	0	0	0			0	0	0	0	0	0	0	0	
caries	0	0	0	0	0	0			0	0	0	0	0	0	0	0	
paradont.	0	0	0	0	0	X			X	X	X	0	0	0	0	0	



Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: articular surfaces of existing metacarpals rated grade 3, whereas articular surfaces of existing metatarsals show grade 2 degenerative changes; some metatarsals and the bones of the digits of the foot developed small exostoses; markedly accentuated longitudinal striations (periostitis) found on both femurs, tibias and fibulas;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: evaluation impossible, except for one lumbar vertebra which contains a Schmorl's node cranially;

Joints:

	right	left
shoulder joint	m.	m.
elbow joint	m.	m.
proximal wrist	m.	m.
radio-ulnar joint	m.	m.
hip joint	e.i.	1
knee joint	1.5	1.3
proximal ankle	1.3	1.5
distal ankle	3	2.25

Burial 66

Sex: male

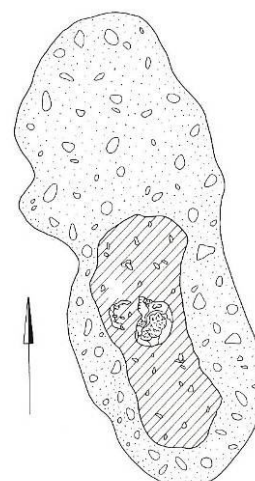
Age: 45 – 55 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

paradont.	X	X	X	X	X	X	X			X	X	X	X	X		
caries	0	0	0	0	0	0	0			0	0	III	0	0		
leh	0	0	0	X	0	0	0			0	0	0	0	0		
calculus	0	I	II	0	0	0	0			0	0	0	0	II		
abrasion	2	2	4	-	-	-	-			-	-	-	-	5		
status	IT	IT	IT	IT	IT	IT	IT	PL	PL	IT	IT	IT	IT	IT	PL	PL
status	IL	IL	IT	IT	IT	IT	PL	PL	PL	IT	PL	PL	IT	IT	IT	PL
abrasion			4	-	-	-				-			-	4	4	
calculus			X	I	0	X				I			0	0	0	
leh			X	0	X	X				X			X	0	0	
caries			X	0	0	0				0			X	0	0	
paradont.			X	X	X	X				X			X	X	X	



Pl. 2

- most teeth extremely abraded (except upper right M²/M³) which makes some of the evaluation impossible; first upper premolar suffers from peppercorn-sized caries on distal dental neck; hypercementosis on all existing upper molars;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	-	-	-	-	-	-	-	-	-	-	-	-	-	p.	-

Pathologies:

- Neurocranium: hyperostosis found on internal lamina of parietal and temporal bones (on the front halves of the bones), as well as in right sigmoid sinus;
- Viscerocranium: evaluation impossible;
- Postcranium: missing;

Vertebrae: evaluation impossible;

Joints: missing;

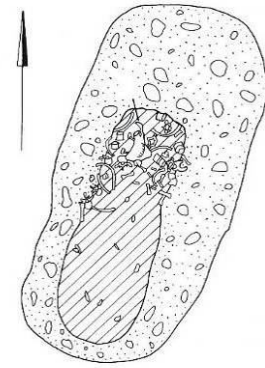
Burial 67

Sex: female?

Age: ~ 15 yrs

Wealth: ?

Preservation: grade 3

Tooth status:[illegible]

Pl. 4

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
	+		Mandibula
	p	p	Clavicula
	r.	l.	Scapula
	p	p	Humerus
	r.	l.	Radius
	r.	l.	Ulna
	r.	l.	Ossa manus
	p	p	Oss coxae
	r.	l.	Femur
	r.	l.	Tibia
	r.	l.	Fibula
	r.	l.	Ossa pedis
	p	p	Sternum
	p	p	Costae
	p	p	Vertebrae
	p	p	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible for mandible;
- Postcranium: articular surfaces of existing carpal bones show grade 2 degenerative changes, articular surfaces of existing tarsal bones rated grade 3;

Vertebrae:

- Cervical vertebrae: existing articular surfaces show grade 3 marginal lipping;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: evaluation impossible;

Joints: missing;

Burial 68

Sex: female?

Age: ~ 7 yrs

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

paradont.					X														
caries					0														
leh					0														
calculus					0														
abrasion					-														
status	PL	PL	PL	X	IT	PL	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	IT	PL	IT	X	PD	PD	PD	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
abrasion	4		-																
calculus	0		0																
leh	0		0																
caries	0		0																
paradont.	X		X																

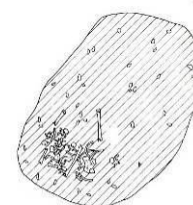
Permanent tooth status:

paradont.																			
caries																			
leh																			
calculus																			
abrasion																			
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	X	IT	IT	PL	IT	43	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	X
abrasion		X	2		-	-		-	-	-	-	-	-	-	-	-	-	-	
calculus		X	0		X	X		0	0	0	X	X	X	X	X	X	X	X	
leh		I	0		II	X		I	I	I	I	I	II	II	II	II	II	II	
caries		X	0		X	X		0	0	0	X	X	X	X	X	X	X	X	
paradont.		X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	

- hardly any permanent teeth erupted; enamel imperfecta found on all existing molars and buccal as well as lingual spotted enamel hypoplasia on existing incisors;

Existing skeletal remains:

Frontale																			
Parietale																			
Temporale																			
Occipitale																			
Maxilla																			
Mandibula																			
Clavicula																			
Scapula																			
Humerus																			
Radius																			
Ulna																			
Ossa manus																			
Os coxae																			
Femur																			
Tibia																			
Fibula																			
Ossa pedis																			
Sternum																			
Costae																			
Vertebrae																			
Sacrum																			



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 69

Sex: male?

Age: ~ 4 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.	X	X	X	X	X	X		X	X	X
caries	0	0	0	0	0	0		0	0	0
leh	0	0	0	0	0	0		0	0	0
calculus	0	0	0	0	0	0		0	0	0
abrasion	2	3	-	-	-	-		-	4	2
status	IT	IT	IT	IT	IT	IT	PL	IT	IT	IT
status	IT	IT	PL	IT	IT	IT	IT	IT	IT	IT
abrasion	2	3		-	-	-	-	-	3	2
calculus	0	0		0	0	0	0	0	0	0
leh	0	0		0	0	0	0	0	0	0
caries	0	0		0	0	0	0	0	0	0
paradont.	X	X		X	X	X	X	X	X	X

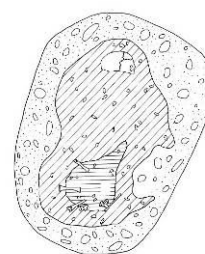
Permanent tooth status:

paradont.			X	X	X			X						X		
caries			X	X	X			X		X				X		
leh			I	X	X			I		I				I		
calculus			X	X	X			X		X				X		
abrasion			X	-	-			-		-				X		
status	X	PL	IT	IT	IT	PL	PL	IT	PL	IT	23	24	25	IT	PL	X
status	X	PL	IT	45	44	43	PL	IT	IT	PL	PL	IT	PL	IT	PL	X
abrasion			X					-	-			-		X		
calculus			X					X	X			X		X		
leh			I					0	0			II		I		
caries			X					X	X			X		X		
paradont.			X					X	X			X		X		

- evaluation only possible for isolated teeth; upper right premolars not sufficiently developed to allow evaluation;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.				r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.			
p. p.	p. p.	- +	p. p.	p. p.	p. p.	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	p. p.	p. p.	-



Pl. 2



Pl. 3

Pathologies:

- Neurocranium: milky-white apposition covering the right parietal internal lamina, especially towards sagittal suture; most other cranial fragments too eroded for evaluation; intensified sagittal sulcus on occipital bone;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 70

Sex: female?

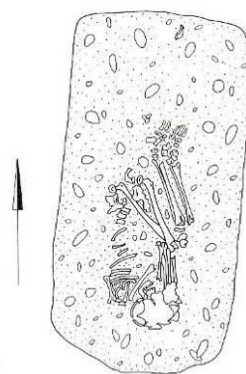
Age: 12 – 14 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.	X	0	0	0	0	X	X	X	X	X	X	X	X	0	0	X
caries	X	0	0	0	0	X	0	0	0	0	0	0	X	0	0	X
leh	0	0	0	I	II	I	I	II	II	II	0	0	0	0	0	0
calculus	X	0	0	0	0	X	0	0	0	0	0	0	X	0	0	X
abrasion	X	2	2	-	-	-	-	-	-	-	-	-	-	2	2	X
status	IT	17	16	15	14	13	12	11	21	23	63	24	25	26	27	IT
status	X	47	46	45	44	43	42	41	31	32	33	34	35	36	37	X
abrasion		2	3	-	-	-	-	-	-	-	-	-	-	3	2	
calculus		0	0	0	0	0	I	I	I	I	0	0	X	0	0	
leh		0	0	II	II	III	I	I	I	I	III	II	I	0	0	
caries		0	0	0	0	0	0	0	0	0	0	0	X	0	0	
paradont.		0	0	0	0	0	0	0	0	0	0	0	X	0	0	



Pl. 3

- microdont upper right I²; non-existent upper left I² and upper left canine has taken its place; the canine's place is taken by the deciduous canine which is still existent; upper and lower P² not completely erupted;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: ossification of right jugular fossa (Plate V e); round impression (approx. 1cm diameter) where transversal sinus joins sagittal sinus (internal occipital tuberosity); possible cribra orbitalia distinguishable on right orbital roof;
- Viscerocranium: no pathological modifications found on existing bones; evaluation impossible for mandible;
- Postcranium: appositions found on right femur and both fibulas, possibly indicating Barlow's disease; evaluation impossible for all other skeletal remains;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 71

Sex: female

Age: 30 – 40 yrs

Wealth: lower class

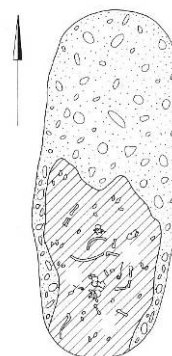
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	p	p	-	-	-	-	-	p	-	-	p	p	-	p	p



Pl. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 72

Sex: female?

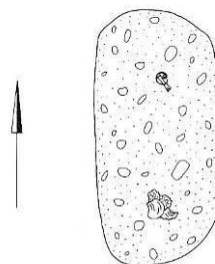
Age: 6 – 12 mths.

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

paradont.	X	X				X		X		X
caries	X	X				X		X		X
leh	X	X				X		X		X
calculus	X	X				X		X		X
abrasion	X	X				-		-		X
status	IT	IT	PL	PL	PL	IT	PL	IT	PL	IT
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
abrasion										
calculus										
leh										
caries										
paradont.										



Pl. 2

- tooth surfaces completely eroded;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.				r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.			
-	p	p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: missing;
- Postcranium: missing;

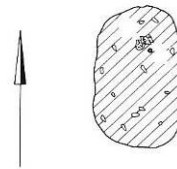
Vertebrae: missing;

Joints: missing;

Sex: female?
Age: 0 – 2 mths.
Wealth: lower class
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x



Existing skeletal remains:

p	Fontale
r	Parietale
r	
p	Temporale
p	
p	Occipitale
	Maxilla
	Mandibula
r	Clavicula
r	
r	Scapula
r	
r	Humerus
r	
r	Radius
r	
r	Ulna
r	
r	Ossa manus
r	
r	Os coxae
r	
r	Femur
r	
r	Tibia
r	
r	Fibula
r	
r	Ossa pedis
r	
	Sternum
	Costae
p	Vertebrae
	Sacrum

Pl. 2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: missing;
- Postcranium: missing (bone fragments not available for examination);

Vertebrae: evaluation impossible;

Joints: missing;

Burial 74/1 (2nd individual)

Sex: ?

Age: ~ 6 yrs

Wealth: upper class

Preservation: grade 2

Deciduous tooth status:

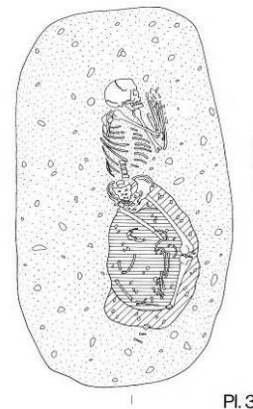
paradont.	X	X		X		X	X		X	X
caries	0	0		0		0	0		0	0
leh	0	0		0		0	0		0	0
calculus	0	0		0		0	0		0	0
abrasion	4	4		-		-	-		4	4
status	IT	IT	PL	IT	PL	IT	IT	PL	IT	IT
status	PL	IT	PL	PD	PD	PD	PL	PL	IT	PL
abrasion		4							4	
calculus		0							0	
leh		0							0	
caries		0							0	
paradont.		X							X	

Permanent tooth status:

paradont.		X	X				X	X	X	X	X	X		X	X	
caries		X	X				X	X	X	X	X	X		X	X	
leh		II	I				I	II	II	I	I	I		II	II	
calculus		X	X				X	X	X	X	X	X		X	X	
abrasion		X	X				-	-	-	-	-	-		X	X	
status	X	IT	IT	15	14	13	IT	IT	IT	IT	IT	IT	PL	IT	IT	X
status	X	PL	IT	45	IT	PL	IT	41	31	32	33	34	35	IT	IT	X
abrasion			X		-		-							X	X	
calculus			X		X		X							X	X	
leh			II		II		I							II	II	
caries			X		X		X							X	X	
paradont.			X		X		X							X	X	

- no permanent teeth erupted; all teeth extremely differentiated (e.g. labial ridges on shovel-shaped upper incisors);

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: possibly intensified digital impressions on internal lamina; widening of transversal sinus, where it merges into sagittal sinus (internal occipital tuberosity); possible cribra orbitalia distinguishable in right orbital roof;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 74/2 (main burial)

Sex: male

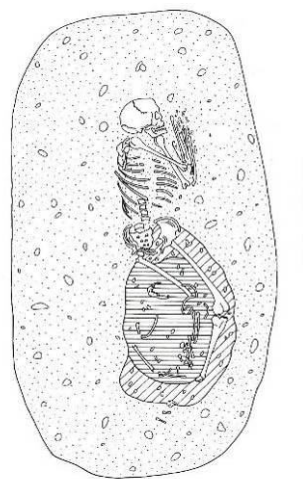
Age: 40 – 50 yrs

Wealth: upper class

Preservation: grade 2

Tooth status:

paradont.					X	X		X	X	X	X			X	X	
caries					0	0		0	0	0	0			0	0	
leh					X	0		0	0	0	0			0	0	
calculus					X	0		0	0	0	0			II	II	
abrasion					-	-		-	-	-	-			5	4	
status	PL	PL	PL	PL	IT	IT	PL	IT	21	22	23	IL	IL	IT	IT	PL
status	IT	47	IL	45	IL	43	42	IT	IT	32	33	34	IT	PL	PL	IT
abrasion	4	5		-	-	-	-	-	-	-	-	-	-			4
calculus	I	0		0		0	0	I	I	I	I	I	I			I
leh	0	0		X		0	X	0	0	0	0	0	0			0
caries	0	0		0		0	0	0	0	0	0	0	0			0
paradont.	X	X		X		X	X	X	X	X	X	X	X			X



Pl. 3

- crowns of 42, 45 and upper right P¹ completely abraded;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
+	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: intensified digital impressions, especially medially towards sagittal sulcus; slight porosity around both external auditory canals;
- Viscerocranium: evaluation impossible;
- Postcranium: articular surfaces of existing carpals and bones of the digits of the hands rated grade 3/grade 4; some metacarpals and metatarsals, as well as the bones of the digits of the hands and feet developed exostoses; slight signs of periostitis found on right femur; congenital dysplasia of hip (right iliac bone);

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: existing articular surfaces rated grade 4;
- Lumbar vertebrae: formation of osteophytes (Plate VI d) on all existing vertebral bodies;

Joints:

	right	left
shoulder joint	4	e.i.
elbow joint	e.i.	e.i.
proximal wrist	e.i.	m.
radio-ulnar joint	e.i.	m.
hip joint	3.75	3.5
knee joint	4	3.5
proximal ankle	e.i.	e.i.
distal ankle	e.i.	m.

Burial 75

Sex: female?

Age: 30 – 40 yrs

Wealth: lower class

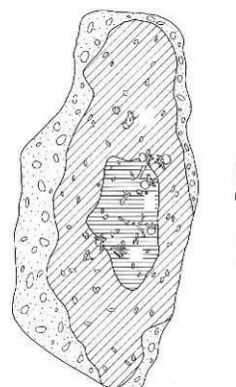
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 76

Sex: ?

Age: 20 – 80 yrs

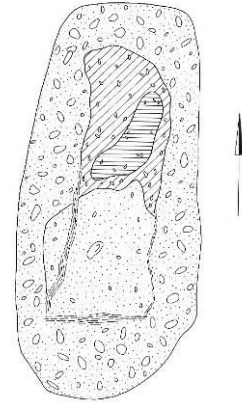
Wealth: upper class

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 77

Sex: male?

Age: 6 – 7 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.			X						X	
caries			0						0	
leh			0						0	
calculus			0						0	
abrasion			-						4	
status	PL	PL	IT	PL	X	X	PL	PL	IT	PL
status	PL	PL	PL	X	X	X	X	PL	IT	IT
abrasion									3	3
calculus									0	0
leh									0	0
caries									0	0
paradont.									X	X

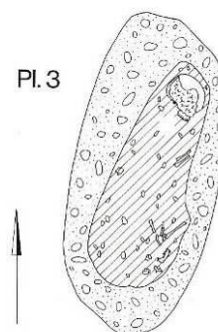
Permanent tooth status:

paradont.		X	X		X	X		X	X		X	X	X	X		
caries		X	X		X	X		X	X		X	X	X	X		
leh		X	X		I	I		X	X		I	I	I	X		
calculus		X	0		X	X		X	X		X	X	X	0		
abrasion		X	2		-	-		-	-		-	-	-	2		
status	X	IT	IT	PL	IT	IT	PL	IT	IT	PL	IT	IT	IT	IT	PL	X
status	X	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	X
abrasion		X												-		
calculus		X												X		
leh		I												I		
caries		X												X		
paradont.		X												X		

- no permanent teeth erupted, except for first molars; upper incisors and upper molars too eroded for evaluation;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 78

Sex: male

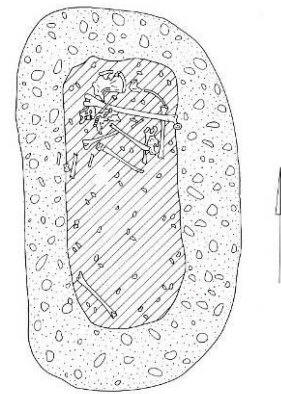
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	IT	IT	43	42	PL	31	32	33	34	35	36	37	38	
abrasion	3	4	4	-	-	-	-		-	-	-	-	-	4	4	3	
calculus	0	0	II	I	I	I	I		0	0	I	II	II	II	II	I	
leh	0	0	0	0	0	II	X		X	II	II	0	0	0	0	0	
caries	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	
paradont.	X	X	X	X	X	X	X		X	X	X	X	II	II	II	II	



- surfaces of 31 and 42 too eroded for evaluation of LEH;

Existing skeletal remains:

		Frontale
r.	r.	Parietale
r.	r.	Temporale
l.	l.	Occipitale
		Maxilla
p	p	Mandibula
p	p	Clavicula
r.	r.	Scapula
p	p	Humerus
p	p	Radius
p	p	Ulna
p	p	Ossa manus
p	p	Os coxae
r.	r.	Femur
r.	r.	Tibia
l.	l.	Fibula
p	p	Ossa pedis
p	p	Sternum
p	p	Costae
p	p	Vertebrae
p	p	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: exostoses found on distal end of left fibula (medially) and on digital bones of both hands, as well as on existing tarsals and metatarsals; slight signs of periostitis distinguishable on left femur and left fibula;

Vertebrae: evaluation impossible;

Joints: evaluation impossible, except for left distal ankle which is rated grade 3;

Burial 79

Sex: male?

Age: 22 – 80 yrs

Wealth: lower class

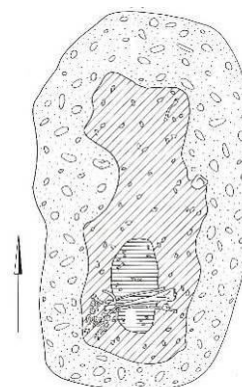
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	p	-	-	-	-	-	-	-	p	p	p	p	p	p	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: exostoses developed on distal ends of both fibulas (medially), as well as on existing tarsals and metatarsals; possible inflammation around proximal ends of metatarsals; slight signs of periostitis found on right tibia;

Vertebrae: missing;

Joints: missing;

Burial 80

Sex: male?

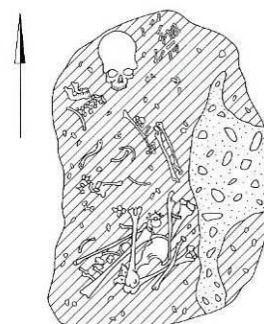
Age: 24 – 30 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
leh	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
calculus	I	0	0	0	0	0	0	0	0	0	0	0	0	I	I	0	0
abrasion	2	2	3	-	-	-	-	-	-	-	-	-	-	3	2	2	2
status	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
status	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
abrasion	2	3	3	-	-	-	-	-	-	-	-	-	-	3	3	2	
calculus	I	I	I	0	0	0	0	0	0	0	0	0	0	0	0	0	I
leh	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
paradont.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X



Pl. 3

- majority of teeth too eroded for evaluation of LEH and most upper teeth covered with sinter;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

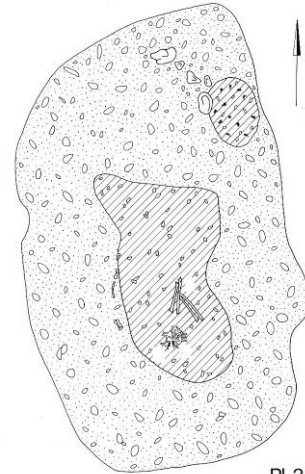
- Neurocranium: no visible pathological modifications found on internal lamina, evaluation impossible for the rest of the neurocranial remains;
- Viscerocranium: evaluation impossible;
- Postcranium: exostoses found on distal end of right radius (dorsally), superior pubic ramus (superiorly), distal end of left fibula (medially) and on existing tarsals and metatarsals; possibly slight signs of periostitis on right humerus;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: the right, cranial articular surface of the only thoracic vertebrae that can be evaluated rated grade 4; Schmorl's nodes found on the respective vertebral body;
- Lumbar vertebrae: articular surfaces evaluated show grade 4 degenerative changes; massive formation of osteophytes on all existing vertebral bodies;

Joints: evaluation impossible;

Sex: female?
Age: 22 – 25 yrs
Wealth: upper class
Preservation: grade 4

Tooth status:[illegible]

Pl. 3

Existing skeletal remains:

			Frontale
r.	p	r.	Parietale
l.	p	l.	
			Temporale
r.	p	r.	
l.	p	l.	
			Occipitale
r.	p	r.	Maxilla
l.	p	l.	Mandibula
			Clavicula
r.	p	r.	
l.	p	l.	Scapula
			Humerus
r.	p	r.	
l.	p	l.	Radius
			Ulna
r.	p	r.	Ossa manus
l.	p	l.	
			Oss coxae
r.	p	r.	
l.	p	l.	Femur
			Tibia
r.	p	r.	
l.	p	l.	Fibula
			Ossa pedis
r.	p	r.	
l.	p	l.	Sternum
			Costae
r.	p	r.	
l.	p	l.	Vertebrae
			Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 82

Sex: ?

Age: 30 – 40 yrs

Wealth: lower class

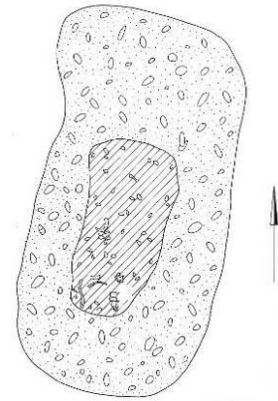
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

- upper right l^1 present, evaluation impossible

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: articular surfaces of existing metacarpals show grade 3 degenerative changes, otherwise evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 83

Sex: ?

Age: 15 – 21 yrs

Wealth: ?

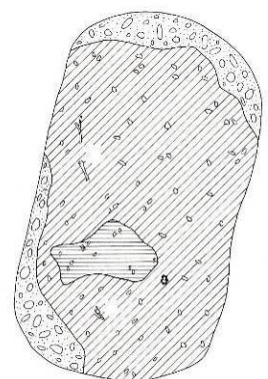
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	-	p	-	p	p	-	p	p	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: no visible pathological modifications on existing phalanges, otherwise evaluation impossible;

Vertebrae: missing;

Joints: evaluation impossible;

Burial 84

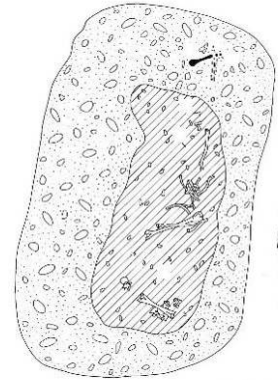
Sex: male

Age: 27 – 33 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

[illegible]

Pl. 3

- tooth surfaces completely eroded;

Existing skeletal remains:

p	Frontale
p	Parietale
p	Temporale
p	Occipitale
-	Maxilla
p	Mandibula
r	Clavicula
p	Scapula
p	Humerus
-	Radius
p	Ulna
p	Ossa manus
p	Os coxae
r	Femur
r	Tibia
r	Fibula
-	Ossa pedis
-	Sternum
p	Costae
p	Vertebrae
p	Sacrum

Pathologies:

- Neurocranium: signs of perimortal fracture on some of the small undefinable fragments (parietal/frontal bone);
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 85

Sex: male?

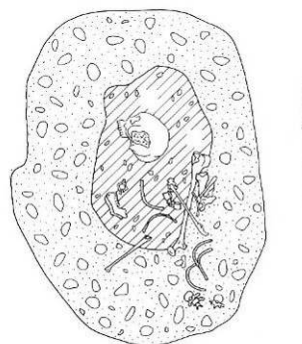
Age: 23 – 30 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.	X	X	X	I	I	X					0	0	I	I	X	X	X
caries	0	0	0	0	0	0					0	0	0	0	0	0	0
leh	0	0	I	I	I	I					0	I	0	0	0	0	0
calculus	0	0	0	0	0	I					I	I	I	I	I	0	0
abrasion	2	2	3	-	-	-					-	-	-	-	3	2	2
status	18	17	16	15	14	13	PL	PL	PL	PL	22	23	24	25	26	27	28
status	48	47	46	45	44	PL	PL	PL	PL	PL	32	33	34	35	36	37	38
abrasion	2	2	3	-	-						-	-	-	-	3	2	2
calculus	0	I	0	I	I						I	I	I	I	I	I	0
leh	0	0	0	0	0						II	II	I	I	I	X	0
caries	0	0	0	0	0						0	0	0	0	0	0	0
paradont.	0	0	X	0	0						X	X	0	0	X	0	0



Pl. 3

- surface of 37 too eroded for evaluation of LEH, 38 with enamel imperfecta;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: evaluation impossible for internal lamina; otherwise no visible pathological modifications;
- Viscerocranium: no visible pathological modifications;
- Postcranium: enthesopathy on left radial tuberosity, slight signs of periostitis found on left femur, tibia and fibula;

Vertebrae:

- Cervical vertebrae: existing articular surfaces rated grade 3/grade 4, including development of small subchondral cysts, except caudal articular surfaces of atlas which show grade 2 degenerative changes (evaluation impossible for cranial articular surfaces);
- Thoracic vertebrae: existing articular surfaces rated grade 3/grade 4, including development of small subchondral cysts;
- Lumbar vertebrae: existing articular surfaces rated grade 3/grade 4, including development of small subchondral cysts;

Joints:

	right	left
shoulder joint	e.i.	3
elbow joint	e.i.	m.
proximal wrist	2	m.
radio-ulnar joint	2	m.
hip joint	e.i.	e.i.
knee joint	m.	e.i.
proximal ankle	m.	2
distal ankle	m.	m.

Burial 86

Sex: female?

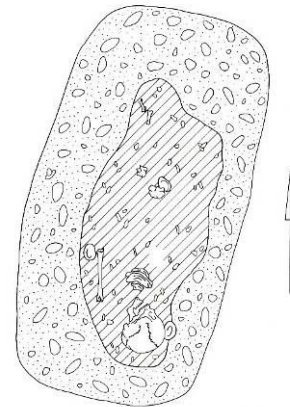
Age: 15 – 18 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

paradont.		X	X	X	X	X	X		X	X	X	X	X	X	X	
caries		0	0	0	0	0	0		X	0	0	0	0	0	0	
leh		0	I	I	0	II	0		X	0	I	I	0	0	0	
calculus		0	I	I	I	0	I		X	0	0	I	0	0	0	
abrasion		2	2	-	-	-	-		-	-	-	-	-	2	2	
status	X	IT	IT	IT	IT	IT	IT	PL	IT	IT	IT	IT	IT	IT	IT	X
status	X	IT	IT	IT	IT	IT	IT	IT	PL	IT	IT	IT	IT	IT	IT	X
abrasion		2	2	-	-	-	-	-	-	-	-	-	-	3	2	
calculus		I	I	0	0	I	I	I		I	0	0	0	0	0	
leh		I	0	II	I	I	I	0		0	0	I	0	0	0	
caries		0	0	0	0	0	0	0		0	0	0	0	0	0	
paradont.		X	X	X	X	X	X	X		X	X	X	X	X	X	



Pl. 2

- lower M₂s with enamel imperfecta; 21 not erupted, isolated deciduous incisor found instead which is too eroded for evaluation;

Existing skeletal remains:

Frontale	p	r	l
Parietale	p	r	l
Temporale	p	r	l
Occipitale	p		
Maxilla	p		
Mandibula	p		
Clavicula	r	l	
Scapula	r	l	
Humerus	p		
Radius	r	l	
Ulna	r	l	
Ossa manus	r	l	
Os coxae	p		
Femur	r	l	
Tibia	r	l	
Fibula	r	l	
Ossa pedis	r	l	
Sternum			
Costae			
Vertebrae			
Sacrum			

- small, left clavicle and rib-fragments from a second individual (fetus/ newborn) with no visible pathological modifications found within the same burial;

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: evaluation impossible;

Burial 87

Sex: female?

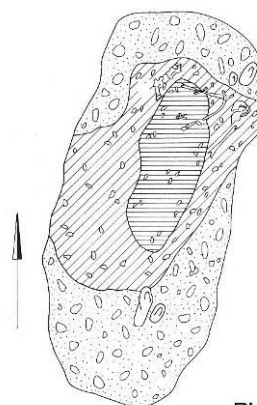
Age: 25 – 30 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

paradont.	X			X	X	X		X	X		X	X	X	X	X	X	
caries	0			0	0	0		0	0		0	0	0	0	0	0	
leh	0			0	0	I		I	X		I	I	0	X	X		
calculus	0			0	0	0		I	X		I	I	0	0	0		
abrasion	3			-	-	-		-	-		-	-	-	3	3		
status	IT	PL	PL	IT	IT	IT	PL	IT	IT	PL	IT	IT	IT	IT	IT	PL	
status	PL	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	PL	
abrasion		2												3			
calculus		0												0			
leh		0												0			
caries		0												0			
paradont.		X												X			



Pl. 2

- some teeth too eroded for certain evaluation;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	p	p	p	p
-	-	-	-	-	-	-	-	-	p	p	-	-	-	-	-	-	-	-	-	-

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 88

Sex: female

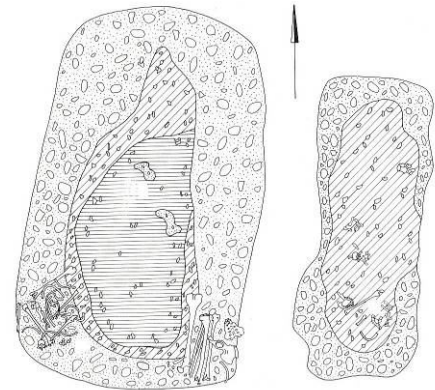
Age: 19 – 21 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.																			
caries																			
leh																			
calculus																			
abrasion																			
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	IT	IT	46	45	44	43	PL	PL	31	PL	PL	34	35	36	37	X			
abrasion	2	2	2	-	-	-			-			-	-	3	2				
calculus	0	0	0	0	0	0			I			0	0	0	0				
leh	0	0	I	II	I	I			I			I	I	0	0				
caries	0	0	0	0	0	0			0			0	0	0	0				
paradont.	X	X	X	X	X	X			X			X	X	X	X				



Pl. 3

Pl. 4

- lower right M₃ possibly belongs to another individual as it is not clear whether mandible contained an alveole for M₃ or not (mandible post-mortally broke off just behind M₂ and distal fragment missing); left M₃ non-existent;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: no visible pathological modifications on upper limb bones, otherwise evaluation impossible;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 89

Sex: female?

Age: 23 – 30 yrs

Wealth: lower class

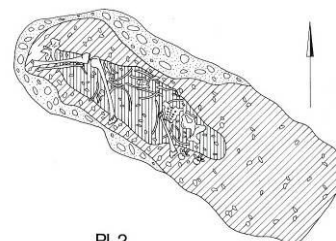
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	p	p	p	p	-	-	-	-	p	-	p	p	p	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: slight signs of periostitis on the inside of some rib fragments possibly indicate pleuritis, otherwise evaluation impossible;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

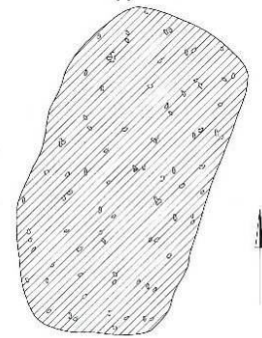
Sex: ?
Age: ~ 5 yrs
Wealth: ?
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

	r.	l.	Frontale
	p.		Parietale
	r.	l.	Temporale
	p.		Occipitale
	r.	l.	Maxilla
	p.		Mandibula
	r.	l.	Clavicula
	p.		Scapula
	r.	l.	Humerus
	p.		Radius
	r.	l.	Ulna
	p.		Ossa manus
	r.	l.	Os coxae
	p.		Femur
	r.	l.	Tibia
	p.		Fibula
	r.	l.	Ossa pedis
	p.		Sternum
	r.	l.	Costae
	p.		Ventricbrae
	r.	l.	Sacrum



Pathologies:

- Neurocranium: signs of inflammation on internal lamina of existing left temporal bone fragment, probably implying meningitis (Plate V c);
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 91

Sex: female?

Age: 22 – 30 yrs

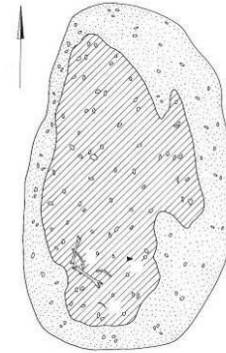
Wealth: upper class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: slight signs of periostitis found on left tibia and possibly on axillary margo of right scapula;

Vertebrae: missing;

Joints: evaluation impossible;

Burial 92

Sex: female?

Age: 30 – 40 yrs

Wealth: upper class

Preservation: grade 4

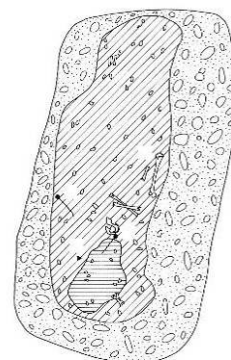
Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

- evaluation impossible for existing tooth fragments;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r. l.	r. l.	-	-	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	-	-	p	p
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible except for the facet of the atlas for dens axis (fovea dentis) which shows grade 3 marginal lipping;

Joints: missing;

Burial 93

Sex: female?

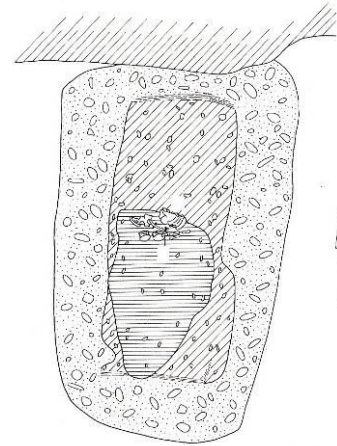
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	IL	IT	PL	PL	IT	PL	IT	PL	IT	IT	PL	PL	PL	PL	PL	PL	X
abrasion		4			-		-		-	-							
calculus		0			I		I		I	I							
leh		X			0		I		I	I							
caries		IV			0		0		0	0							
paradont.		X			X		X		X	X							



Pl. 2

- right, lower M₂ too eroded for evaluation of LEH but it contains rice grain-size caries on distal dental neck;

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
p	p	p	Mandibula
p	p	p	Clavicula
r.	r.	r.	Scapula
r.	r.	r.	Humerus
r.	r.	r.	Radius
r.	r.	r.	Ulna
p	p	p	Ossa manus
p	p	p	Os coxae
r.	r.	r.	Femur
r.	r.	r.	Tibia
r.	r.	r.	Fibula
r.	r.	r.	Ossa pedis
p	p	p	Sternum
p	p	p	Costae
p	p	p	Ventricbrae
			Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: local periostitis found on proximal end of right ulnar metaphysis; the existing articular surfaces of carpals rated grade 2; formation of exostoses on anterior surface of left patella;

Vertebrae:

- Cervical vertebrae: the only existing cranial articular surface rated grade 2, whereas the only existing caudal articular surface is rated grade 4, including the development of small subchondral cysts;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: the only existing cranial articular surface and the only existing caudal articular surface both rated grade 5, including development of subchondral cysts, caudal articular surface rated almost grade 6;

Joints: missing;

Burial 94

Sex: female?

Age: 27 – 33 yrs

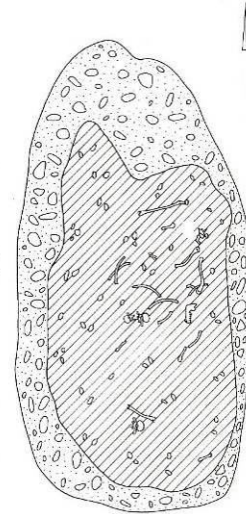
Wealth: lower class

Preservation: grade 4

Tooth status:

[illegible]

- occlusal caries extended to pulpa in lower right M₁ and lower left M₂;



Pl. 2

Existing skeletal remains:

	r.	l.	Frontale
	p	p	Parietale
	r.	l.	Temporale
	p	p	Occipitale
	r.	l.	Maxilla
	p	p	Mandibula
	r.	l.	Clavicula
	p	p	Scapula
	r.	l.	Humerus
	p	p	Radius
	r.	l.	Ulna
	p	p	Ossa manus
	r.	l.	Os coxae
	p	p	Femur
	r.	l.	Tibia
	p	p	Fibula
	r.	l.	Ossa pedis
	p	p	Sternum
	r.	l.	Costae
	p	p	Vertebrae
	r.	l.	Sacrum

- burial 94 contains a lower, left dm₁ (no pathological modifications) belonging to another individual;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: right post-alveolar area of mandible inflamed, as well as area below the alveole of left M₁, the latter with a possible apical process and formation of a porotic bulge;
- Postcranium: slight signs of periostitis distinguishable on left ulna and possibly left femur; anterior and medial articular surfaces of left and right calcaneal bones show grade 2 marginal lipping;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 95

Sex: male?

Age: 40 – 50 yrs

Wealth: lower class

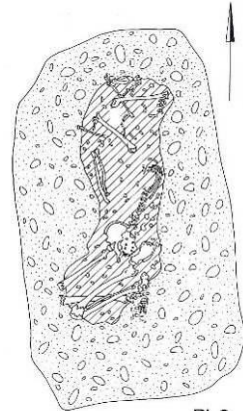
Preservation: grade 2

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

- surface of the only existing tooth (upper, right I²) too eroded for evaluation;

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: articular surfaces of existing tarsals and proximal articular surfaces of existing metacarpals rated grade 2; possible signs of inflammation on proximal articular surfaces of metatarsals; articular surface of fifth metatarsal on the left has extended to plantar side;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 96

Sex: male

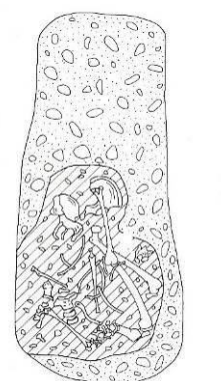
Age: 40 – 50 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

Tooth status:																	
paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	X	PL	IT	45	44	43	42	PL	PL	IT	33	34	35	IL	37	X	
abrasion				4	-	-	-	-			-	-	-	-		3	
calculus				IV	0	0	0	I			0	0	0	0		IV	
leh				I	0	0	X	0			X	X	X	0		I	
caries				0	0	0	0	0			0	0	0	0		0	
paradont.				IV	X	X	X	X			X	X	III	X		III	



PL 3

- some of the tooth surfaces too eroded for evaluation of LEH; pea-size apical process of lower, right M₁ probably caused by periodontitis;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: exostoses formed on both inferior ends of both clavicles and around the trochlear notch of right ulna, as well as on right trochlear fossa, distal ends of both fibulas, right patella and all existing tarsals, metatarsals and digital bones of the feet; slight signs of periostitis found on left clavicle and possibly on left tibia and both fibulas; small cyst-like impression found next to the articular surface (for the capitate bone) of the right hamate bone; the articular surfaces of the existing digital bones of the hand are rated grade 2;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: existing articular surfaces rated grade 4, including development of subchondral cysts and additional bone tissue;

- Lumbar vertebrae: existing articular surfaces rated grade 4, including development of massive subchondral cysts and additional bone tissue;

Joints:

	right	left
shoulder joint	e.i.	e.i.
elbow joint	2	1
proximal wrist	2.5	m.
radio-ulnar joint	1.5	m.
hip joint	1.5	1
knee joint	1.65	2
proximal ankle	1.25	3
distal ankle	2.86	3.5

Burial 97

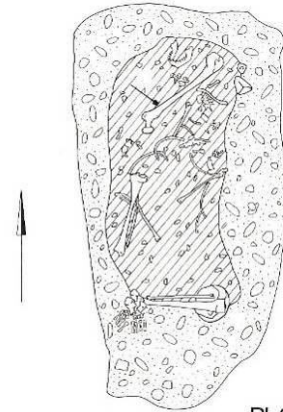
Sex: male?

Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

[illegible]

Pl. 2

- most teeth either covered in calculus or too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	r.	l.
Parietale	r.	l.
Temporale	r.	l.
Occipitale	r.	l.
Maxilla	p.	
Mandibula	p.	
Clavicula	r.	l.
Scapula	p.	
Humerus	r.	l.
Radius	p.	
Ulna	p.	
Ossa manus	p.	
Os coxae	r.	l.
Femur	r.	l.
Tibia	p.	
Fibula	p.	
Ossa pedis	r.	l.
Sternum	p.	
Costae	p.	
Vertebrae	p.	
Sacrum	p.	

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: existing carpals, metacarpals and digital bones of the hands show grade 2/grade 3 degenerative changes; digital bones of the hands also developed plantar ridges; remains of exostoses found just above fibular notch of left tibia and in both calcaneal and talar sulci;

Vertebrae:

- Cervical vertebrae: cranial articular surfaces of atlas dorsally prolonged; the only existing caudal articular surface (atlas) rated grade 3; osteophytes formed on the 2 existing vertebral bodies;
- Thoracic vertebrae: osteophyte development on the two existing vertebral bodies;
- Lumbar vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 98

Sex: male?

Age: 4 – 5 yrs

Wealth: ?

Preservation: grade 2

Deciduous tooth status:

paradont.	X	X								X	X
caries	0	0								0	0
leh	0	0								0	0
calculus	0	0								1	0
abrasion	3	3								3	2
status	55	54	PL	PL	PL	PL	PL	PL	PL	64	65
status	85	84	PL	PL	PL	PL	PL	PL	PL	74	75
abrasion	3	3								3	3
calculus	0	0								0	0
leh	0	0								0	0
caries	0	0								0	0
paradont.	X	X								0	0

Permanent tooth status:

paradont.										X									
caries										X									
leh										II									
calculus										X									
abrasion										X									
status	X	PL	PL	PL	PL	PL	PL	PL	PL	21	PL	PL	PL	PL	PL	PL	PL	PL	X
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	36	PL	PL	PL	PL	X
abrasion														X					
calculus														X					
leh														0					
caries														X					
paradont.														X					

- no permanent teeth erupted;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	-	-	-	p	p	p	-	-	-	-	-	-	p	p	-



Pl. 3

Pathologies:

- Neurocranium: porosity found in „curve“ of right sigmoid sinus (small fragment);
- Viscerocranium: no visible pathological modifications;
- Postcranium: small patch (~1 cm²) of porotic hyperostosis found on posterior, proximal end of left humeral metaphysis, most of the remaining shaft eroded; slight signs of periostitis distinguishable on left radius;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 99

Sex: female

Age: 22 – 25 yrs

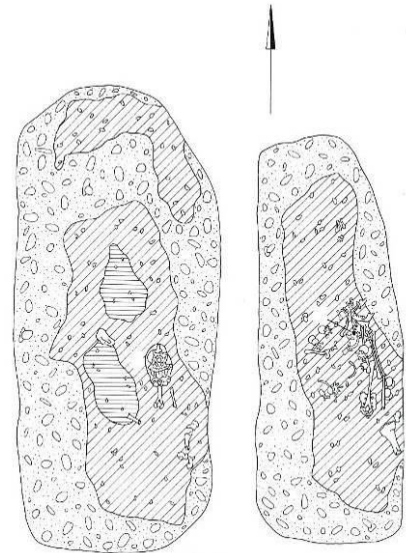
Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	X	47	46	45	44	IT	42	41	31	32	33	34	PL	36	37	X	
abrasion		2	3	-	-	-	-	-	-	-	-	-		3	2		
calculus		I	I	0	0	I	I	I	I	I	I	I		I	0		
leh		0	0	I	I	I	I	I	0	I	I	0		0	0		
caries		0	0	0	0	0	0	0	0	0	0	0		0	0		
paradont.		X	X	X	X	X	X	0	0	X	X	X		X	X		

- inferior half of root of lower right canine divided into two;



Pl. 1

Pl. 2

Existing skeletal remains:

p	Frontale
p	Parietale
p	Temporale
p	Occipitale
p	Maxilla
p	Mandibula
p	Clavicula
p	Scapula
p	Humerus
p	Radius
p	Ulna
p	Ossa manus
p	Os coxae
p	Femur
p	Tibia
p	Fibula
p	Ossa pedis
p	Sternum
p	Costae
p	Ventricbrae
p	Sacrum

Pathologies:

- Neurocranium: venous sinuses of dura mater as well as frontal and sphenoidal sinuses show no pathological modifications, otherwise evaluation impossible;
- Viscerocranium: no signs of pathological modification found within right maxillary sinus, otherwise evaluation impossible;
- Postcranium: articular surfaces of existing metatarsals and digital bones of the hand rated grade 0; no signs of periostitis found on the remaining long bone surfaces, otherwise evaluation impossible; Schmorl's nodes found on base of sacrum;

Vertebrae:

- Cervical vertebrae: one existing caudal articular surface (C1) rated grade 3, otherwise evaluation impossible;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: existing articular surfaces rated grade 3, slight impressions on caudal surfaces of existing vertebral bodies (Schmorl's nodes?);

Joints:

	right	left
shoulder joint	1	e.i.
elbow joint	1	m.
proximal wrist	m.	1
radio-ulnar joint	1	0.5
hip joint	e.i.	m.
knee joint	1	m.
proximal ankle	0	e.i.
distal ankle	3	1

Burial 100/1 (2nd individual)

Sex: male

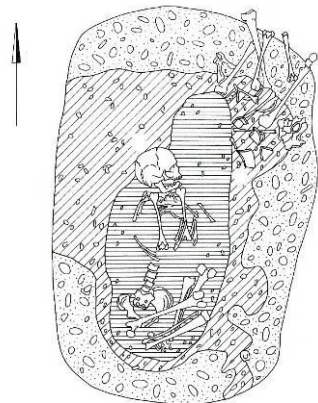
Age: 27 – 33 yrs

Wealth: upper class

Preservation: grade 2

Tooth status:

paradont.	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X
caries	0	0	0	I	III		0	0	0	0	0	0	0	0		0	0
leh	0	I	0	II	III		I	II	II	II	II	II	I			X	0
calculus	0	0	0	0	0		0	I	0	I	0	I	0			0	I
abrasion	2	3	3	-	-		-	-	-	-	-	-	-			3	2
status	18	IT	IT	IT	IT	PL	IT	IT	21	22	23	24	25	PL	IT	IT	
status	48	47	IL	IL	IT	PL	PL	PL	IT	IT	IT	PL	IL	IL	37	38	
abrasion	2	4			-				-	-	-				3	3	
calculus	0	0			0				I	I	0				I	I	
leh	0	0			I				I	I	II				0	0	
caries	0	II			0				0	0	0				0	0	
paradont.	X	X			X				X	X	X				X	X	



Pl. 3

- distal caries extended to pulpa on upper right P¹, upper right P² only slightly affected on mesial enamel; small growth found within lingual alveolar cavity of upper left M¹, indicating reduced root;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: no pathological modifications on internal lamina, evaluation impossible for external lamina;
- Viscerocranium: hyperostotic modification within right maxillary sinus caused by maxillary sinusitis (evaluation impossible for left maxillary sinus), no pathological modifications found within frontal sinuses;
- Postcranium: possible signs of periostitis found on right tibia, but evaluation impossible for almost every long bone;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: the only articular surface rated (right, cranial) developed grade 4 degenerative changes, including formation of a relatively large dent; evaluation impossible for all others;
- Lumbar vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 100/2 (main burial)

Sex: male

Age: 30 – 40 yrs

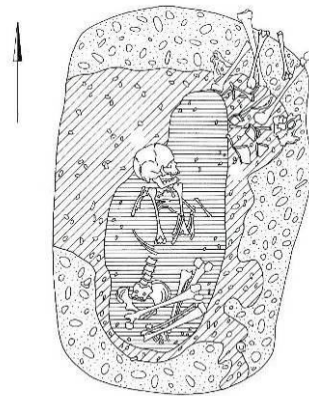
Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.																		
caries																		
leh																		
calculus																		
abrasion																		
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X	
status	IL	PL	IL	45	44	43	42	41	PL	32	33	34	35	36	37	IL		
abrasion				-	-	-	-	-		-	-	-	-	4	4			
calculus				I	I	I	II	I		I	I	I	I	I	I			
leh				0	0	0	0	0		0	0	0	0	0	0			
caries				0	0	0	0	0		0	III	0	0	0	0			
paradont.				II	II	II	II	III		II	III	II	II	II	II			

- distal caries on lower left canine only affects enamel; bulging hyperostosis found on lingual margin of lower left M₂ and former M₃; lower left M₂ also shows cemental growths on distal root;



Pl. 3

Existing skeletal remains:

Frontale	-	-	r.	l.
Parietale	-	-	r.	l.
Temporale	-	-	r.	l.
Occipitale	-	-	-	-
Maxilla	-	-	-	-
Mandibula	+	+	-	-
Clavicula	p	p	-	-
Scapula	p	p	-	-
Humerus	-	-	r.	l.
Radius	+	+	r.	l.
Ulna	p	+	-	-
Ossa manus	p	p	r.	l.
Os coxae	p	p	r.	l.
Femur	-	-	r.	l.
Tibia	p	+	p	d
Fibula	p	p	p	d
Ossa pedis	-	-	r.	l.
Sternum	p	p	-	-
Costae	p	p	-	-
Vertebrae	p	p	-	-
Sacrum	p	p	-	-

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible, except for dental pathologies;
- Postcranium: local periostitis found on superior acromial surface of left clavicle; slight signs of periostitis distinguishable on remaining surfaces of both ulnae and radii, as well as left femur, both tibiae and fibulae; osteochondrosis dissecans found on articular surface of right radial head; left radial tuberosity possibly suffered from enthesopathy; articular surfaces of existing carpals, metacarpals, digital bones of the hands and tarsals rated grade 3/grade 4; exostoses formed on some metacarpals, metatarsals and digital bones of the hands and feet, as well as on left patella; number IV proximal digital bone of the left hand contains a lateral notch just below the proximal articular surface, facing nr. V;

Vertebrae:

- Cervical vertebrae: one existing caudal articular surface (C2) rated grade 3; the cranially located disc knitted with only existing vertebral body; formation of osteophytes;
- Thoracic vertebrae: existing articular surfaces rated grade 3 and osteophytes formed on only existing vertebral body;
- Lumbar vertebrae: one caudal articular surface rated grade 4, massive formation of osteophytes on only existing vertebral body;

Joints:

	right	left
shoulder joint	e.i.	e.i.
elbow joint	3	2
proximal wrist	2	2
radio-ulnar joint	1	1.25
hip joint	e.i.	m.
knee joint	1	3.75
proximal ankle	1.5	1
distal ankle	2.2	2.43

Burial 101

Sex: female?

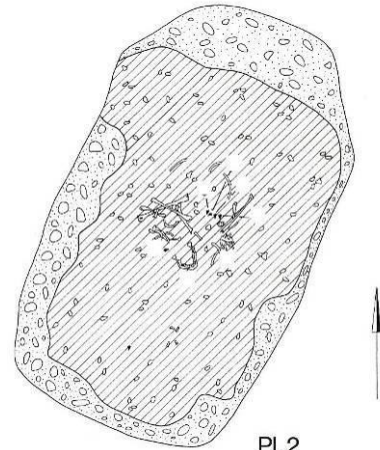
Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	IT	44	43	IT	PL	PL	PL	33	IT	IT	IT	IT	IT	IT
abrasion	2	3	3	-	-	-	-				-	-	-	3	3	2	
calculus	0	I	I	0	0	0	0				0	0	0	0	0	0	
leh	0	0	0	I	I	I	0				I	I	I	0	0	0	
caries	0	0	0	0	0	0	0				0	0	0	0	0	0	
paradont.	X	X	X	X	X	X	X				X	X	X	X	X	X	



Pl. 2

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae:

- Cervical vertebrae: one cervical vertebral body has developed anterior osteophytes, evaluation impossible for the rest;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: evaluation impossible;

Joints: missing;

Burial 102

Sex: ?

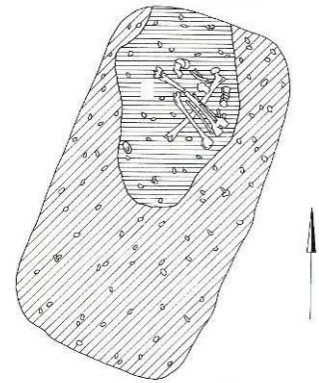
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	48	47	46	45	44	43	42	PL	PL	PL	PL	PL	34	35	36	37	38
abrasion	3	4	4	-	-	-	-						-	-	5	4	3
calculus	I	I	I	II	II	II	0						II	II	II	II	II
leh	I	I	I	I	I	I	0						I	II	X	I	I
caries	0	0	0	0	0	0	0						0	0	0	0	0
paradont.	I	I	I	I	X	X	X						X	X	X	X	X



Pl. 1

- surface of 36 too eroded for evaluation of LEH;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: small impression to left of mental protuberance (but not to right) which signifies either an epigenetic feature or possibly a traumatic injury; most of mandibular surface eroded completely;
- Postcranium: signs of periostitis found on left ulna, both femurs, tibias and fibulas; exostoses formed on third, right metacarpal and proximal ends of both femoral metaphyses (medially and adjacent to gluteal crest); two small exostoses also found on inferior edge of one of the few rib fragments; existing articular surfaces of metacarpals and digital bones of hands rated grade 2/grade3;

Vertebrae: evaluation impossible;

Joints:

	right	left
shoulder joint	e.i.	e.i.
elbow joint	m.	2
proximal wrist	2	2
radio-ulnar joint	m.	1
hip joint	e.i.	e.i.
knee joint	e.i.	e.i.
proximal ankle	e.i.	m.
distal ankle	m.	m.

Burial 103

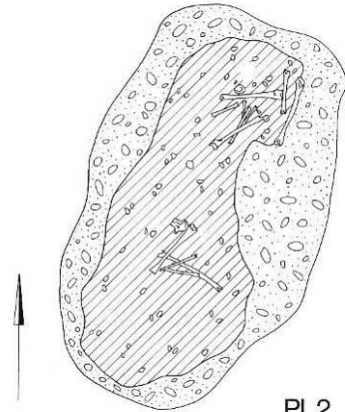
Sex: female?

Age: 19 – 30 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

[illegible]

Pl. 2

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
			Mandibula
	r.	l.	Clavicula
	r.	l.	Scapula
p	p	p	Humerus
p	p	p	Radius
p	p	p	Ulna
r.	r.	r.	Ossa manus
p	p	p	Os coxae
			Femur
p	p	p	Tibia
r.	r.	r.	Fibula
p	p	p	Ossa pedis
			Sternum
			Costae
			Vertebrae
			Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: each ulna possibly perimortally broken into three fragments; slightly porotic apposition found just below head of left femur, but since rest of femur surface too eroded for evaluation (just as the other long bones), impossible to determine if local or covering whole surface;

Vertebrae: missing;

Joints: evaluation impossible;

Burial 104

Sex: ?

Age: ?

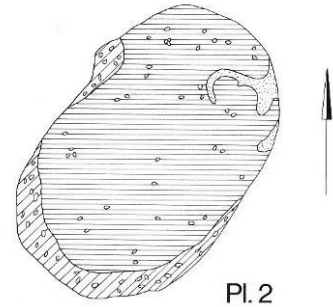
Wealth: ?

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 105

Sex: ?

Age: ?

Wealth: ?

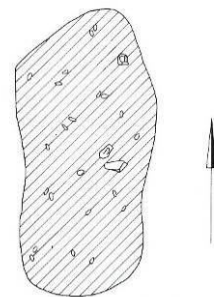
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	r.	r.	-	-	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl.1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 106

Sex: male

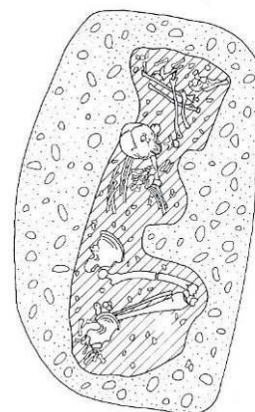
Age: 30 – 40 yrs

Wealth: upper class

Preservation: grade 2

Tooth status:

paradont.	I	I	II	II	II	I	0	0	X	I	I	I	I	X	I	I
caries	0	0	VI	0	0	0	0	0	0	0	0	0	0	0	0	0
leh	0	X	X	0	0	I	I	I	I	I	I	0	0	X	X	X
calculus	II	II	X	I	I	I	I	II	II	II	II	I	II	II	II	II
abrasion	2	3	6	-	-	-	-	-	-	-	-	-	-	4	3	2
status	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
abrasion																
calculus																
leh																
caries																
paradont.																



Pl. 4

- peppercorn to pea-size apical abscess around roots of upper right M¹;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Pathologies:

- Neurocranium: pea-size patch of porotic hyperostosis found on the middle of body of sphenoid bone, otherwise no visible pathological modifications;
- Viscerocranium: hyperostosis found on palate and tile-shaped appositions on upper left lingual alveolar ridge from M³ to P² (approx. 0.5 cm diameter), upper left lingual alveolar ridge also affected to a lesser degree; upper labial alveolar ridge shows signs of inflammation (paradontitis) on both sides extending from upper left I² to upper left P¹ and from upper right C to upper right M¹;
- Postcranium: right ulna and both radii possibly perimortally broken within upper third of shaft and left femur, tibia and fibula possibly in the middle of shaft; exostoses found on proximal end of right radius (dorsally), some of the existing digital bones of the hands and the feet, existing tarsals and metatarsals, as well as on the inside of two rib fragments; markedly accentuated longitudinal striations found on left tibia and fibula, local periostitis distinguishable on left tibia and left calcaneal bone, as well as on the inferior side of first left rib fragment (indicating pleuritis);

Vertebrae:

- Cervical vertebrae: existing articular surfaces show grade 3/grade 4 degenerative changes, cervical vertebral bodies developed osteophytes;
- Thoracic vertebrae: grade 3/grade 4 degenerative changes distinguishable on articular surfaces, including formation of small cysts-like impressions;
- Lumbar vertebrae: the only existing vertebral body contains impression of cranial plate;

Joints: evaluation impossible;

Burial 107

Sex: male?

Age: 30 – 40 yrs

Wealth: lower class

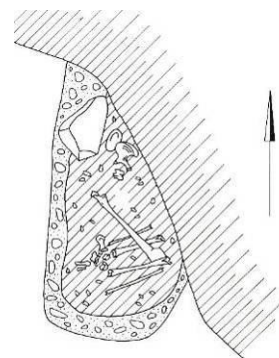
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r. l.	r. l.	-	-	-	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	p	p	p	p	p	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: signs of periostitis distinguishable on both tibias and both fibulas; perimortal fracture on left tibial shaft, part of anterior bone appears chipped; exostoses found on both calcaneal bones;

Vertebrae: missing;

Joints: missing;

Burial 108

Sex: ?

Age: 6 – 7 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.										
caries										
leh										
calculus										
abrasion										
status	PL	PL	PL	PD	PD	PD	PD	PL	PL	PL
status	85	84	83	PD	PD	PD	PD	PL	PL	IT
abrasion	4	4	-							4
calculus	0	I	0							I
leh	0	0	0							0
caries	0	0	0							0
paradont.	X	X	X							X

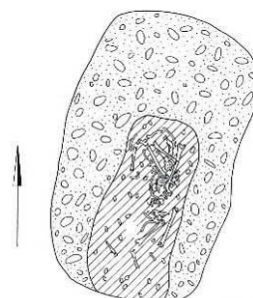
Permanent tooth status:

paradont.									X								
caries									0								
leh									II								
calculus									0								
abrasion									-								
status	X	PL	PL	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL	X
status	X	47	46	45	44	43	PL	PL	PL	32	33	34	PL	36	37	PL	X
abrasion		X	3	-	-	-				-	-	-		2	X		
calculus		X	0	X	X	X				0	X	X		0	X		
leh		II	II	X	X	II				II	II	II		II	II		
caries		X	0	X	X	X				0	X	X		0	X		
paradont.		X	0	X	X	X				X	X	X		0	X		

- no permanent teeth erupted, except incisors and first molars;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
-	-	-	-	-	p	p	-	p	p	p	p	-	p	p	-	p	p	-	p	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: possible signs of periostitis found on remaining bone surfaces of right ulna and right radius; definite signs of periostitis distinguishable on right tibia (only medial bone surface partially remaining);

Vertebrae: evaluation impossible;

Joints: missing;

Burial 109

Sex: male?

Age: ~ 4 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0	0	0	0
leh	0	0	X	0	0	X	X	0	0	0
calculus	0	0	0	0	0	0	0	0	0	0
abrasion	2	3	-	-	-	-	-	-	3	2
status	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
status	IT	84	IT	IT	PL	IT	IT	IT	IT	IT
abrasion	2	3	-	-	-	-	-	-	3	2
calculus	0	0	0	0	-	0	0	0	0	0
leh	0	0	0	0	-	X	X	0	0	0
caries	0	0	0	0	-	0	0	0	0	0
paradont.	X	X	X	X	-	X	X	X	X	X

Permanent tooth status:

paradont.			X					X	X						X		
caries			X					X	X						X		
leh			I					II	II						I		
calculus			X					X	X						X		
abrasion			X					-	-						X		
status	X	PL	IT	PL	PL	PL	PL	IT	IT	PL	PL	PL	PL	PL	IT	PL	X
status	X	PL	IT	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	IT	PL	X
abrasion			X						X						X		
calculus			X						X						X		
leh			I						I						I		
caries			X						X						X		
paradont.			X						X						X		

- surfaces of some teeth too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.
p	p	p	p	p	p	-	-	p	p	-	-	-	-	p	-	-	-	-	p	-



Pl. 2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 110

Sex: female?

Age: 1 – 2 mths.

Wealth: lower class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

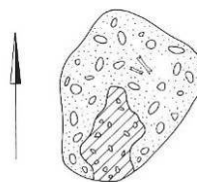
- only very small, unidentifiable bone fragments existing; evaluation impossible;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;



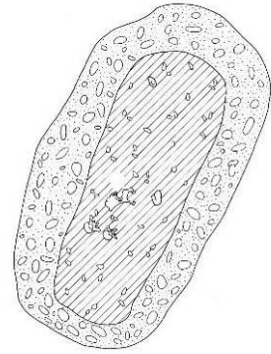
Pl. 2

Sex: female?
Age: 40 – 80 yrs
Wealth: upper class
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 112

Sex: ?

Age: ?

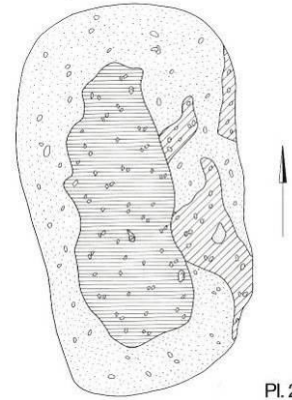
Wealth: upper class

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 113

Sex: male?

Age: 13 – 18 yrs

Wealth: ?

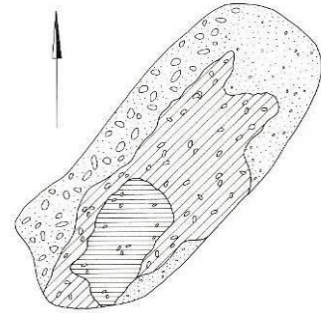
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

- lower left canine and I₂ present, but evaluation impossible for both teeth;

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 114

Sex: male?

Age: 3 – 4 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.	X	X			X	X		X	X	X
caries	0	0			0	0		0	0	0
leh	X	X			0	0		0	0	0
calculus	0	0			0	0		0	0	0
abrasion	2	3			-	-		-	3	2
status	IT	IT	PL	PL	IT	IT	PL	IT	IT	IT
status	PL	PL	IT	IT	PL	PL	PL	PL	IT	IT
abrasion			-	-					3	2
calculus			0	0					0	0
leh			0	0					0	0
caries			0	0					0	0
paradont.			X	X					X	X

Permanent tooth status:

paradont.			X						X						X		
caries			X						X						X		
leh			I						II						I		
calculus			X						X						X		
abrasion			X						-						X		
status	X	PL	IT	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	IT	PL	X
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	X
abrasion															X		
calculus															X		
leh															I		
caries															X		
paradont.															X		

- surfaces of upper, right molars too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



Pl. 2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 115

Sex: ?

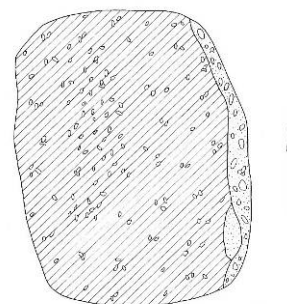
Age: ?

Wealth: ?

Preservation: grade 5

Tooth status:[illegible]

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 116

Sex: ?

Age: 8 – 12 yrs

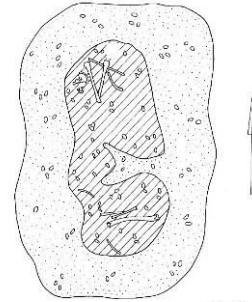
Wealth: ?

Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: evaluation of the bone surface impossible, but intensified digital impressions distinguishable; left inferior bulb of jugular vein much bigger than one on right;
- Viscerocranium: missing;
- Postcranium: no signs of pathological modification found on existing ulna and radius, whereas local periostitis (approx. 4 cm diameter) found on right tibia and right fibula on distal third of shaft (laterally on tibia and medially on fibula);

Vertebrae: evaluation impossible;

Joints: missing;

Burial 117

Sex: female?

Age: 50 – 80 yrs

Wealth: lower class

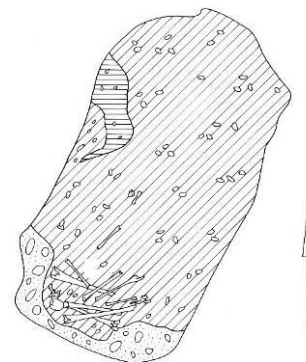
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	p	p	-	-	-	-	p	p	-	-	p	-	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: distal edge of right ulna fragment (proximal two-thirds of shaft left) and distal edge of left femur fragment (upper third of shaft left) show possible signs of perimortal impact; otherwise evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 118

Sex: ?

Age: 40 – 80 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r	r	r	-	-	r	r	r	r	r	r	r	r	r	r	r	r	-	-	p
-	-	-	-	-	-	-	-	-	-	-	p	-	p	p	p	-	-	-	-	-



Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 119

Sex: male?

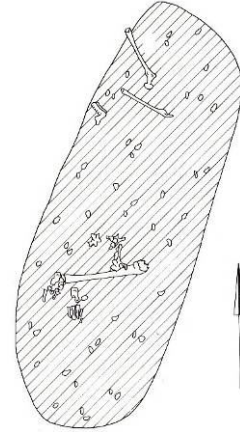
Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	IT	IT	IT	PL	IT	PL	IT	IT	IT	PL	IT	IT	IT	IT	PL	IT	IT
abrasion	3	3	4	-		-	-	-		-	-	-	4		3		
calculus	II	0	0	0		0	0	0		I	0	0	I		I		
leh	0	0	X	X		X	X	X		X	0	0	X		0		
caries	0	0	0	0		X	X	X		X	0	0	X		0		
paradont.	X	X	X	X		X	X	X		X	X	X	X		X		



Pl. 3

- some teeth too eroded for certain evaluations;

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
p	p		Mandibula
	r.	l.	Clavicula
	r.	l.	Scapula
p	p		Humerus
	r.	l.	Radius
	r.	l.	Ulna
p	p		Ossa manus
	r.	l.	Os coxae
	r.	l.	Femur
	r.	l.	Tibia
p	p		Fibula
	r.	l.	Ossa pedis
p	p		Sternum
	p		Costae
p	p		Vertebrae
			Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: the existing fragments of right humerus and both radii possibly perimortally broken; exostoses found on acromial end of right clavicle (anterior) and proximal end of right humerus; markedly accentuated longitudinal striations found on the remaining surfaces of left tibia; medial articular surface of left calcaneal bone rated grade 4;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: grade 5 degenerative changes distinguishable on only existing articular surface (caudal), including formation of big cyst-like impressions and considerable extra bone tissue;
- Lumbar vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 120

Sex: female?

Age: 8 – 9 yrs

Wealth: ?

Preservation: grade 2

Deciduous tooth status:

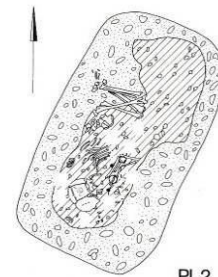
paradont.	X	X	X							
caries	0	0	0							
leh	0	0	0							
calculus	I	I	0							
abrasion	3	4	-							
status	IT	IT	IT	PD	PD	PD	PD	PL	PL	PL
status	85	84	PL	PD	PD	PD	PD	PL	PL	IT
abrasion	3	4								3
calculus	I	I								0
leh	0	0								0
caries	0	0								0
paradont.	0	0								X

Permanent tooth status:

paradont.		X	X	X	X	X			X	X	X		X			
caries		X	0	X	X	X			0	0	X		X			
leh		I	I	I	I	0			I	I	0		X			
calculus		X	0	X	X	X			0	0	X		X			
abrasion		X	2	-	-	-			-	-	-		-			
status	X	IT	IT	IT	IT	IT	PL	PL	IT	IT	IT	PL	IT	PL	PL	X
status	X	IT	46	45	44	IT	IT	IT	IT	PL	PL	PL	PL	IT	PL	X
abrasion		X	2			-	-	-	-					2		
calculus		X	0			X	I	0	0					0		
leh		I	0			0	0	0	0					I		
caries		X	0			X	0	0	0					0		
paradont.		X	0			X	X	X	X					X		

- no permanent teeth erupted, except incisors and first molars; upper left P² covered in sinter, therefore evaluation impossible;

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: internal lamina covered in sinter, therefore evaluation impossible; small patch of porotic hyperostosis found on remaining surface of one occipital fragment, but all other fragments too eroded for further information;
- Viscerocranium: evaluation impossible;
- Postcranium: small patch of periostitis found on one right femur fragment, but evaluation impossible for the rest of the bones;

Vertebrae: missing;

Joints: missing;

Burial 121

Sex: female

Age: 50 – 80 yrs

Wealth: upper class

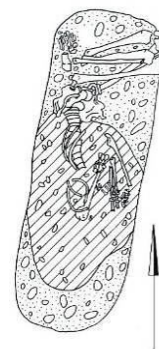
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
	r.	l.	Occipitale
	r.	l.	Maxilla
	r.	l.	Mandibula
	r.	l.	Clavicula
	r.	l.	Scapula
	r.	l.	Humerus
	r.	l.	Radius
	r.	l.	Ulna
	r.	l.	Ossa manus
	r.	l.	Os coxae
	r.	l.	Femur
	r.	l.	Tibia
	r.	l.	Fibula
	r.	l.	Ossa pedis
	r.	l.	Sternum
	r.	l.	Costae
	r.	l.	Vernbrae
	r.	l.	Sacrum



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: exostoses formed around right radial tuberosity, on existing metacarpals and metatarsals and on both lateral ends of left fibula; the second proximal digital bone of the left foot is twisted; all bones of diminished mass, indicating osteoporosis;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: existing articular surfaces developed grade 3/grade 4 marginal lipping, including formation of cyst-like impressions; Schmorl's nodes found on existing vertebral bodies;
- Lumbar vertebrae: massive osteophyte development and Schmorl's nodes distinguishable on the existing vertebral bodies;

Joints:

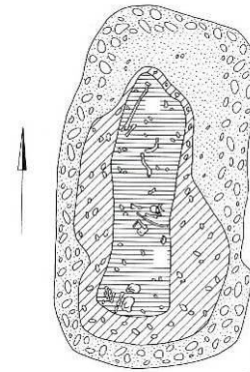
	right	left
shoulder joint	m.	m.
elbow joint	m.	1
proximal wrist	m.	m.
radio-ulnar joint	m.	2
hip joint	2	2
knee joint	m.	e.i.
proximal ankle	e.i.	2
distal ankle	2.25	2.33

Sex: male
Age: 30 – 40 yrs
Wealth: lower class
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: exostoses found on right calcaneal bone (between the posterior and the medial talar articular surface), otherwise evaluation impossible;

Vertebrae: the only rateable articular surface (caudal) of an unidentifiable cervical vertebra developed grade 4 degenerative changes, evaluation impossible for all other vertebrae;

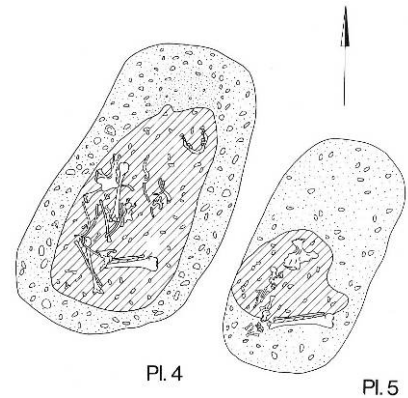
Joints: evaluation impossible;

Burial 123

Sex: male
Age: 40 – 60 yrs
Wealth: lower class
Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	IL	IL	IT	IT	IT	PL	PL	PL	IT	IT	IT	IL	IL	IL	
abrasion	3	3			-	-	-				-	-	-				
calculus	0	0			0	0	0				0	0	0				
leh	0	0			0	0	0				0	0	0				
caries	0	0			0	0	0				0	0	II				
paradont.	I	X			X	X	X				X	X	X				



- distal caries on lower left P₂ only affecting enamel;

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
p	p	p	Mandibula
	r.	l.	Clavicula
p	p	p	Scapula
p	p	p	Humerus
p	p	p	Radius
	r.	l.	Ulna
p	p	p	Ossa manus
p	p	p	Os coxae
	r.	l.	Femur
	r.	l.	Tibia
p	p	p	Fibula
r.	r.	r.	Ossa pedis
p	p	p	Sternum
	p	p	Costae
p	p	p	Vertebrae
	p	p	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible for mandible;
- Postcranium: articular surfaces of existing metacarpals and digital bones of the hand rated grade 1/grade 2; periostitis of uncertain extent found on remaining surface next to tibial tuberosity; exostoses formed on posterior calcaneal tuberosity;

Vertebrae: evaluation impossible;

Joints: evaluation impossible except for left humeral head which is rated grade 1;

Burial 124

Sex: female?

Age: 6 – 7 yrs

Wealth: lower class

Preservation: grade 3

Deciduous tooth status:

paradont.	X	X						X	X	X
caries	0	0						0	0	0
leh	0	0						0	0	0
calculus	0	0						0	0	0
abrasion	4	4						-	4	4
status	IT	IT	PL	PL	PL	PL	PL	IT	IT	IT
status	IT	IT	PL	PL	X	X	X	IT	IT	PL
abrasion	3	4						-	4	
calculus	0	0						0	0	
leh	0	0						0	0	
caries	0	0						0	0	
paradont.	X	X						X	X	

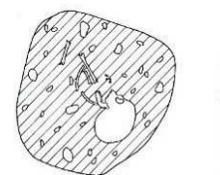
Permanent tooth status:

paradont.		X	X	X	X					X	X	X	X	
caries		X	X	X	X					X	X	X	X	
leh		II	X	II	II					II	II	X	II	
calculus		X	X	X	X					X	X	X	X	
abrasion		X	1	-	-					-	-	1	X	
status	X	IT	IT	IT	IT	PL	PL	PL	PL	PL	PL	IT	IT	IT
status	X	IT	IT	IT	IT	IT	IT	PL	PL	PL	PL	IT	IT	IT
abrasion		X	2	-	-	-	-					-	2	X
calculus		X	X	X	X	X	X					X	X	X
leh		II	X	II	II	II	X					I	X	X
caries		X	X	X	X	X	X					X	X	X
paradont.		X	X	X	X	X	X					X	X	X

- no permanent teeth erupted, except first molars, which are too eroded for evaluation (as well as the lower right I₂);

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



PI.1

PI.2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 125

Sex: female?

Age: 2 – 4 yrs

Wealth: ?

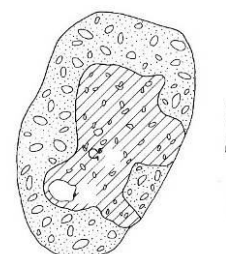
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 126

Sex: male?

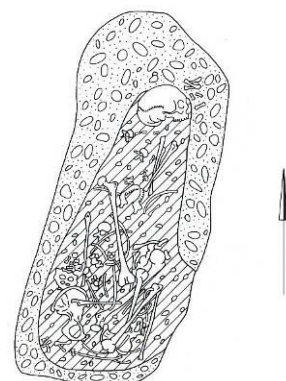
Age: 40 – 50 yrs

Wealth: lower class

Preservation: grade 1

Tooth status:

paradont.		X	X	X	X		X			X	X	X	I	X	X	X
caries		0	0	0	0		0			0	0	0	0	0	0	0
leh		0	0	0	0		0			I	I	I	X	X	X	I
calculus		0	0	0	0		0			0	0	0	0	0	I	I
abrasion		4	5	-	-		-			-	-	-	-	5	4	3
status	PL	17	16	15	14	PL	IT	PL	PL	22	23	24	25	26	27	IT
status	PL	47	46	45	*	43	42	41	31	PL	33	34	35	36	37	38
abrasion		3	4	-		-	-	-	-		-	-	-	4	4	3
calculus		I	I	I		I	0	0	0		0	I	0	I	I	0
leh		0	0	0		0	0	0	0		X	I	I	0	0	0
caries		0	0	0		0	0	0	0		0	0	0	0	0	0
paradont.		X	X	X		X	X	X	X		X	X	I	I	I	III



Pl. 4

- acute inflammation beneath lingual alveolar ridge of tooth 38 and apical abscess in alveole of 38 probably related to paradontosis;
* tooth found, but unavailable for examination;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
+	+	+	+	p	p	p	p	+	+	+	p	p	+	+	p	p	p	p	p	p

Pathologies:

- Neurocranium: no pathological modifications found on internal lamina, except for slightly intensified digital impressions; evaluation impossible for external lamina;
- Viscerocranium: cavity of left maxillary sinus very porotic, possibly due to sinusitis; otherwise evaluation impossible;
- Postcranium: right clavicle shows pea-size hole in tuberosity of the costoclavicular ligament; callus formation in middle of shaft of right ulna due to intravital fracture; exostoses found on distal ends of both humeri, around left radial tuberosity, around the intercondylar eminence of left tibia and on both posterior calcaneal tuberosities; patellar surface of left femur proximally elongated; possible enthesopathy found on left radial tuberosity; head and proximal articular surface of the second right metacarpal slightly deformed; articular surfaces of existent metacarpals and digital bones of the hands rated grade 1/grade 2; small cyst-like formations formed around proximal articular surfaces of existing metacarpals; accentuated longitudinal striations (slight signs of periostitis) found on right femur and both tibias;

Vertebrae:

- Cervical vertebrae: remaining articular surfaces show pathological modifications from grade 2 to grade 5; the existent vertebral bodies formed osteophytes;
- Thoracic vertebrae: articular surfaces rated grade 3/grade 4; osteophyte development on thoracic vertebral bodies, increasing in size, the further down they are located;
- Lumbar vertebrae: articular surfaces rated grade 3 to grade 5; Schmorl's nodes and massive osteophyte development (~ 1cm) in lower lumbar vertebral bodies (the first three apparently affected to a lesser degree);

Joints:

	right	left
shoulder joint	2	2
elbow joint	e.i.	2
proximal wrist	4	e.i.
radio-ulnar joint	m.	2
hip joint	3	3
knee joint	3	4.6
proximal ankle	2	2
distal ankle	4	4

Burial 127

Sex: female?

Age: 17 – 18 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0
leh	I	I	I	II	I	II	I			I	I	I	II	II	I	II	
calculus	0	0	I	0	I	I	0			0	0	0	0	I	0	0	
abrasion	2	2	3	-	-	-	-			-	-	-	-	3	2	2	
status	IT	IT	IT	IT	IT	IT	IT	PL	PL	IT	IT	IT	IT	IT	IT	IT	IT
status	IT	IT	IT	IT	IT	PL	IT	IT	IT	IT	PL	IT	IT	36	37	IT	
abrasion	2	2	3	-	-		-	-	-	-		-	-	3	2	2	
calculus	0	I	0	0	0		I	I	I	0		I	I	I	I	0	
leh	I	I	I	II	I		II	II	II	II		II	II	I	0	I	
caries	0	0	0	0	0		0	0	0	0		0	0	0	0	0	
paradont.	X	X	X	X	X		X	X	X	X		X	X	X	X	X	



Pl. 3

- most teeth partly covered in sinter; the upper right C shows unusual traces of wear lingually;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p	- p

- fewer bones available for examination than can be seen on grave drawing;

Pathologies:

- Neurocranium: internal lamina completely covered in sinter and surface of external lamina eroded, therefore evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: acute signs of periostitis of unknown size found on the only remaining surface of right humerus (laterally on the upper third of shaft); evaluation impossible for all other bones;

Vertebrae: missing;

Joints: evaluation impossible;

Burial 128

Sex: female?

Age: 8 – 12 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.	X	X	X						X	X	X
caries	0	0	0						0	0	II
leh	0	X	0						X	X	0
calculus	I	0	0						0	0	0
abrasion	4	4	-						-	4	4
status	IT	IT	IT	PD	PD	PD	PD	IT	IT	IT	
status	IT	IT	IT	PD	PD	PD	PD	PL	IT	IT	
abrasion	4	4	-						4	4	
calculus	0	0	I						I	0	
leh	0	0	0						0	0	
caries	0	0	0						0	0	
paradont.	X	X	X						X	X	

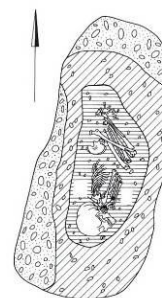
Permanent tooth status:

paradont.		X	X	X	X	X			X	X	X	X	X	X	X	
caries		X	0	X	X	X			0	0	X	X	X	0	X	
leh		I	I	I	I	I			X	X	II	II	I	I	I	
calculus		X	0	X	X	X			0	0	X	X	X	0	X	
abrasion		X	2	-	-	-			-	-	-	-	-	2	X	
status	X	IT	IT	15	IT	13	PL	PL	IT	IT	IT	IT	IT	IT	IT	X
status	X	IT	IT	IT	IT	IT	IT	PL	PL	IT	IT	IT	IT	IT	IT	X
abrasion		X	2	-	-	-	-			-	-	-	-	2	X	
calculus		X	I	X	X	X	0			0	X	X	X	0	X	
leh		0	0	I	II	II	X			X	II	II	II	I	0	
caries		X	0	X	X	X	0			0	X	X	X	0	X	
paradont.		X	X	X	X	X	X			X	X	X	X	X	X	

- mesial caries of upper left M² affected enamel;
- no permanent teeth erupted, except incisors and first molars; existing incisors covered in sinter, therefore evaluation of LEH impossible;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p. p.	p. p.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	p. p.	p. p.	p. p.
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.



Pl. 2

Pathologies:

- Neurocranium: cribra orbitalia found in right orbital roof (determination difficult due to eroded bone surface); no pathological modifications found in existing sinuses (venous sinuses of dura mater and air sinuses);
- Viscerocranium: evaluation impossible;
- Postcranium: no pathological modifications found on existing upper limb bones; periostitis distinguishable on remaining surfaces of right tibia and right fibula (only fragments of mid-shaft available);

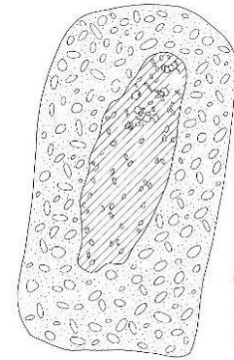
Vertebrae: evaluation impossible due to erosion, but existing fragments all show signs of former marginal lipping of unknown extent;

Sex: ?
Age: 30 – 50 yrs
Wealth: lower class
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

PI. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: exostoses formed on right patella and both posterior and inferior calcaneal tuberosities; rateable articular surfaces of metatarsals and digital bones of the feet show grade 2/grade 3 marginal lipping; manubrium sterni completely deformed;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: caudal articular surfaces of the only existing lumbar vertebrae rated grade 5;

Joints: missing;

Burial 131

Sex: ?

Age: Infans

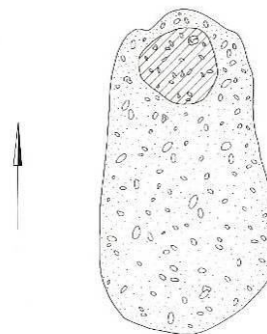
Wealth: ?

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 132

Sex: female?

Age: 40 – 60 yrs

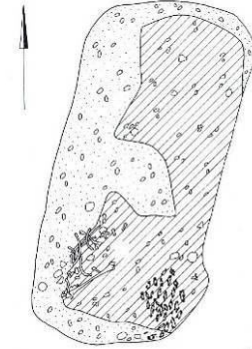
Wealth: upper class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: rateable articular surfaces of existing carpals show grade 2 marginal lipping; most ribs too eroded for evaluation but the inside of one rib fragment shows an acute apposition of unknown extent, probably caused by pleuritis;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 133

Sex: ?

Age: Infans

Wealth: ?

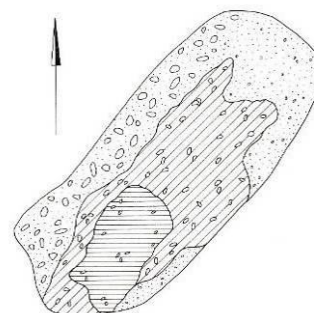
Preservation: grade 5

Tooth status:

[illegible]

Existing skeletal remains:

		Frontale
	r.	Parietale
	l.	
		Temporale
		Occipitale
		Maxilla
		Mandibula
	r.	Clavicula
	r.	Scapula
	l.	
	r.	Humerus
	r.	
	l.	Radius
	r.	Ulna
	l.	
		Ossa manus
	r.	
	l.	Os coxae
	r.	
	l.	Femur
	r.	
	l.	Tibia
	r.	
	l.	Fibula
	r.	
	l.	Ossa pedis
	r.	
	l.	Sternum
		Costae
		Verbrae
		Sacrum



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 134

Sex: ?

Age: 13 – 14 yrs

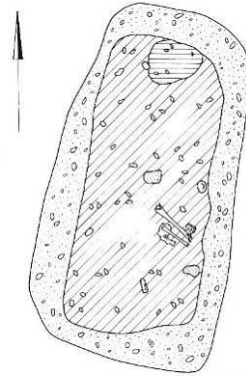
Wealth: ?

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 135

Sex: female

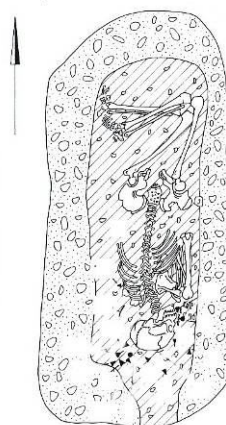
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 1

Tooth status:

paradont.	I	I	I	I	I	I	I	X					X	X	X	X	X
caries	0	0	0	0	0	0	0	0					0	0	0	0	0
leh	X	X	X	0	0	0	0	0					X	0	0	X	X
calculus	I	I	I	I	I	0	0	I					0	0	I	0	I
abrasion	2	3	4	-	-	-	-	-					-	-	4	3	2
status	18	17	16	15	14	13	12	IT	PL	PL	PL	IT	IT	IT	IT	27	28
status	48	47	46	45	44	43	42	PL	31	32	33	34	35	36	37	38	
abrasion	3	3	3	-	-	-	-		-	-	-	-	-	3	3	3	
calculus	I	I	I	I	I	I	0		0	0	I	0	0	I	0	I	
leh	0	I	I	0	0	0	0		0	0	0	0	0	I	I	0	
caries	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	
paradont.	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	



Pl. 2

- some upper teeth partly covered in sinter, therefore evaluation of LEH impossible;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Pathologies:

- Neurocranium: no visible pathological modifications on internal and external lamina; left maxillary sinus laterally slightly inflamed (medial fragment is missing); cribra orbitalia found right orbital roof and possibly also in left, but most of left orbital roof missing;
- Viscerocranium: evaluation impossible;
- Postcranium: proximal articular surfaces of right humerus and right radius rated grade 2, whereas distal articular surface of left ulna shows grade 4 changes (possibly osteochondrosis dissecans); distal end of right ulna fragment (upper third of the shaft) possibly perimortally broken; small impression found on articular surface of left hamate bone, but no modification found on corresponding articular surface of capitate bone; most bone surfaces too eroded for further evaluation;

Vertebrae:

- Cervical vertebrae: missing;

- Thoracic vertebrae: evaluation impossible for existing articular surfaces (possibly they contain cyst-like modifications); the existing vertebral bodies developed massive osteophytes;
- Lumbar vertebrae: the only rateable caudal articular surface shows grade 5/grade 6 degenerative changes; vertebral bodies missing;

Joints: missing, except for postcranial ones mentioned above;

Burial 136

Sex: male

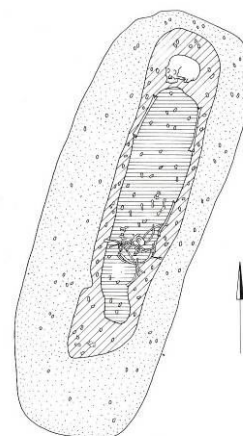
Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
caries	I	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
leh	0	0	0	X	0	X	0	0	0		0	0	0	0	X	0	0
calculus	I	0	0	0	I	0	0	0	0		I	0	0	0	0	0	0
abrasion	2	3	4	-	-	-	-	-	-		-	-	-	-	4	3	1
status	IT	IT	IT	IT	IT	IT	IT	IT	IT		PL	IT	IT	IT	IT	IT	IT
status	IT	PL	PL	PL	PL	PL	PL	PL	PL		PL	PL	PL	PL	PL	PL	X
abrasion	3																
calculus	I																
leh	0																
caries	V																
paradont.	X																



- upper right M³ contains enamel imperfecta which is affected by caries; caries on lower right M₃ extended to pulpa; some of the upper teeth partly covered in sinter, therefore evaluation of LEH impossible;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: evaluation impossible for external and internal lamina, but intensified venous impressions where transversal sinus merges into sagittal sinus within internal occipital region and deepening of posterior cranial fossas towards internal occipital tuberosity;
- Viscerocranium: evaluation impossible;
- Postcranium: articular surfaces of existing metacarpals and digital bones of the hands rated grade 3; evaluated rib fragments (ribs number 8 to 12) contain a milky plaque-like apposition on the remaining outside bone surfaces;

Vertebrae:

- Cervical vertebrae: cranial right articular surface of C1, as well as dens axis show grade 3 degenerative changes;

- Thoracic vertebrae: rateable cranial articular surfaces rated grade 3; the only existing left caudal articular surface (probably from Th12) shows grade 4 degenerative changes; existing vertebral bodies contain Schmorl's nodes on their caudal side;
- Lumbar vertebrae: evaluated articular surfaces show degenerative changes of grade 3/grade 4, including a cyst-like porosity; the vertebral bodies are missing; small residues of the same milky plaque-like apposition as on existing rib fragments found on remaining bone surfaces;

Joints: missing;

Burial 137

Sex: male?

Age: ~ 2 yrs

Wealth: ?

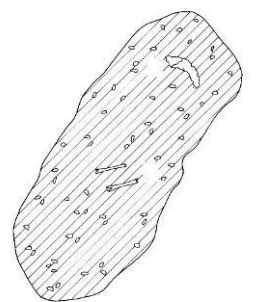
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 2

- only small, unidentifiable skeletal remains; evaluation impossible;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 138

Sex: male

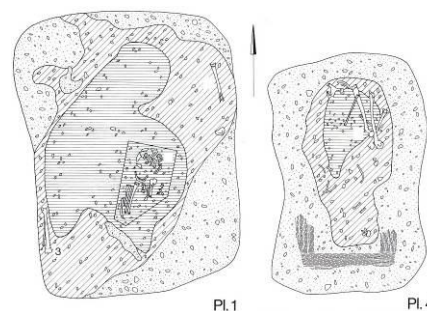
Age: 40 – 50 yrs

Wealth: upper class

Preservation: grade 2

Tooth status:

Tooth status.																	
paradont.			X														
caries			0														
leh			0														
calculus			I														
abrasion			5														
status	X	PL	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	IT	PL	PL	PL	X
abrasion											-		-				
calculus											0		0				
leh											I		I				
caries											0		0				
paradont.											X		X				



- occlusal surface of upper right M¹ diagonally abraded (no distal enamel remaining);

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: missing;
- Postcranium: markedly accentuated longitudinal striations found on remaining surfaces of left ulna and left radius; substantial porosity found around all existing articular surfaces (possibly due to gout); proximal articular surfaces of existing digital bones of the hands rated grade 2, articular surfaces of existing tarsals and digital bones of the feet show grade 3 degenerative changes (except for the first left digital bone (I) which shows grade 4 degenerative changes, including formation of cyst-like impressions); exostoses distinguishable on left tibial tuberosity and on both patellas, as well as on distal end of left fibula;

Vertebrae:

- Cervical vertebrae: rateable articular surfaces show grade 3 degenerative changes;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: evaluation impossible;

Joints: evaluation impossible except for both distal ankles which are rated grade 3;

Burial 139

Sex: ?

Age: Infans

Wealth: ?

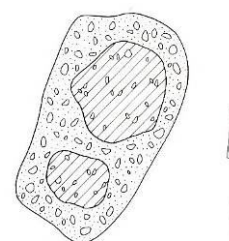
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

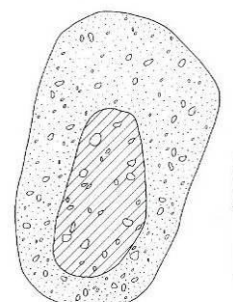
Vertebrae: missing;

Joints: missing;

Sex: ?
Age: Infans
Wealth: ?
Preservation: grade 5

[illegible]

		Frontale
r.	l.	Parietale
r.	l.	Temporale
		Occipitale
		Maxilla
		Mandibula
r.	l.	Clavicula
r.	l.	Scapula
r.	l.	Humerus
r.	l.	Radius
r.	l.	Ulna
r.	l.	Ossa manus
r.	l.	Os coxae
r.	l.	Femur
r.	l.	Tibia
r.	l.	Fibula
r.	l.	Ossa pedis
		Sternum
		Costae
		Vernbrae
		Sacrum



Pl. 2

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

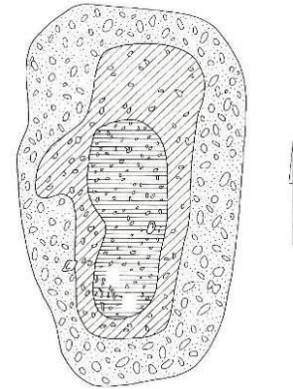
Joints: missing;

Sex: ?
Age: 22 – 80 yrs
Wealth: lower class
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

- no skeletal remains available for examination

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 142

Sex: male

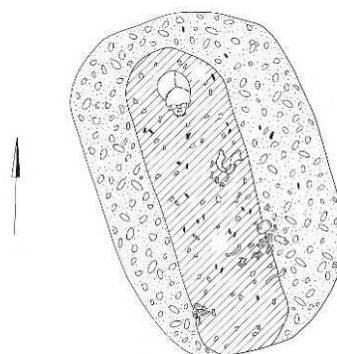
Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

parodont.		X	X	I	X	X	X	X	X		X	I	I	X	X	
caries		0	0	0	0	0	0	0	0		0	0	0	0	0	
leh		0	0	0	0	X	X	X	X		0	0	0	0	0	
calculus		I	I	0	0	0	0	0	0		0	0	I	I	I	
abrasion		2	4	-	-	-	-	-	-		-	-	-	4	2	
status	X	IT	16	15	14	13	12	11	21	PL	23	24	25	26	27	X
status	X	47	46	45	44	43	42	41	IT	32	33	34	35	36	37	X
abrasion		3	3	-	-	-	-	-	-		-	-	-	4	3	
calculus		I	I	I	I	I	0	I	I	0	I	0	I	I	I	
leh		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
caries		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
parodont.		X	X	I	X	X	X	X	X	X	X	X	I	I	X	



Pl. 3

- occlusal surfaces of both upper I¹ unusually abraded (almost no enamel remaining);

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.			r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.			
+ p	p	p	p	p	+	p	-	-	-	-	p	p	-	-	-	-	p	p	-	-

Pathologies:

- Neurocranium: evaluation impossible for external lamina and no visible pathological modifications found on internal lamina; right sigmoid sinus has the width of a finger, whereas left sigmoid sinus has the width of a common pencil;
- Viscerocranium: evaluation impossible;
- Postcranium: exostoses distinguishable on right posterior calcaneal tuberosity;

Vertebrae: evaluation impossible, except for caudal articular surfaces of one thoracic vertebra which are rated grade 3; no remaining vertebral bodies;

Joints: missing;

Burial 143

Sex: male

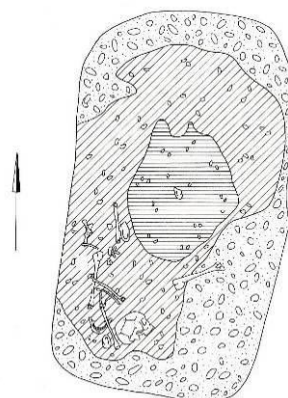
Age: 24 – 30 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.	X	X	X	I	X	X	X	X		X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	I	III		0	0	0	0	0	0	0	0
leh	II	II	II	II	II	II	X	I		X	I	II	X	0	I	II	
calculus	I	I	I	I	I	I	0	0		0	I	I	I	II	I	0	
abrasion	3	3	4	-	-	-	-	-		-	-	-	-	4	3	3	
status	18	17	16	15	14	IT	IT	IT	PL	IT	IT	IT	IT	IT	IT	IT	IT
status	IT	47	46	45	IT	43	IT	PL	IT	IT	IT	PL	PL	IT	IT	PL	
abrasion	3	3	3	-	-	-	-		-	-	-			3	3		
calculus	I	I	I	I	I	0	0		0	0	0			0	0		
leh	X	I	X	II	I	I	X		0	X	I			X	I		
caries	0	0	0	0	0	0	0		0	0	0			0	0		
paradont.	X	X	X	X	X	X	X		X	X	X			X	X		



Pl. 2

- caries on upper right I² caused pea-size apical abscess and caries on upper right I¹ extended to pulpa; alveole of missing upper left I¹ indicates peppercorn-size apical abscess, but part of alveolar ridge missing; some teeth covered in calculus or too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: slightly intensified porosity found within posterior third of sagittal sinus; no signs of cribra orbitalia within orbital roof;
- Viscerocranium: evaluation impossible;
- Postcranium: possible enthesopathy on right radial tuberosity; distal articular surfaces of both tibias rated grade 2, articular surfaces of existing tarsals and digital bones of the feet show grade 2/grade 3 degenerative changes;

Vertebrae: evaluation impossible;

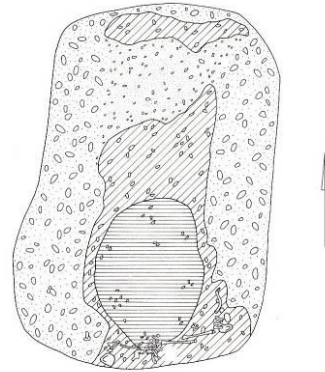
Joints: evaluation impossible except for both distal ankles which are rated grade 3;

Burial 144

Sex: male
Age: 24 – 30 yrs
Wealth: lower class
Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	X
abrasion	3	3	4	-	-	-	-	-	-	-	-	-	-	4	3		
calculus	I	I	0	0	I	I	I	I	0	0	0	0	I	I	0		
leh	I	X	X	0	0	I	0	0	0	0	I	0	X	I	X		
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
paradont.	X	X	I	I	I	X	X	X	X	X	X	X	I	X	X		



Pl. 2

- some teeth too eroded for evaluation of LEH;
three extra lower molars from a second individual
also found in same burial;

Existing skeletal remains:

	p	Frontale
	p	Parietale
	p	Temporale
	p	Occipitale
	p	Maxilla
	p	Mandibula
	r	Clavicula
	p	Scapula
	r	Humerus
	p	Radius
	r	Ulna
	p	Ossa manus
	p	Os coxae
	p	Femur
	p	Tibia
	r	Fibula
	r	Ossa pedis
	p	Sternum
	-	Costae
	p	Vertebrae
	-	Sacrum

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: distal articular surface of left ulna suffers from grade 4 degenerative changes, including formation of cyst-like impressions, whereas distal articular surfaces of left and right radii, as well as of existing metacarpals and digital bones of the hands are rated grade 2; possible signs of a perimortal fracture on right tibial fragment (within distal third of shaft); most bone surfaces too eroded for evaluation;

Vertebrae: evaluation impossible, except for the only existing cranial articular surface of one lumbar vertebra which is rated grade 3; no remaining vertebral bodies;

Joints: evaluation impossible except for both proximal wrists;

Burial 145

Sex: male?

Age: 27 – 40 yrs

Wealth: lower class

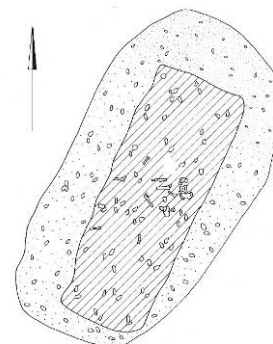
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	p	p	p	p
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: rateable articular surfaces of existing tarsals show grade 3 degenerative changes and the only existing proximal articular surface of the second metatarsal on the right rated grade 2;

Vertebrae: the only existing lumbar vertebrae body fragment contains osteophytes;

Joints: missing;

Burial 146

Sex: female?

Age: ~ 5 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.	X	X	X	X		X	X	X	X	X
caries	0	0	0	0		0	0	0	0	0
leh	0	X	0	0		0	0	0	0	0
calculus	I	I	I	0		0	I	I	I	I
abrasion	2	3	-	-		-	-	-	2	2
status	IT	IT	IT	IT	PL	IT	IT	IT	IT	IT
status	IT	IT	PL	PL	PL	IT	IT	PL	IT	IT
abrasion	3	3				-	-		2	3
calculus	I	0				0	I		I	I
leh	0	0				0	0		0	0
caries	0	0				0	0		0	0
paradont.	X	X				X	X		X	X

Permanent tooth status:

paradont.			X			X	X	X	X	X	X	X		X	X	
caries			X			X	X	X	X	X	X	X		X	X	
leh			0			II	II	II	II	II	II	I		0	X	
calculus			X			X	X	X	X	X	X	X		X	X	
abrasion			X			-	-	-	-	-	-	-		X	X	
status	X	PL	IT	PL	PL	IT	IT	IT	IT	IT	IT	IT	PL	IT	IT	X
status	X	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	PL	PL	IT	PL
abrasion			X	-	-	-	-	-	-	-	-	-		X		
calculus			X	X	X	X	X	X	X	X	X	X		X		
leh			I	X	X	II	I	I	I	I	II			I		
caries			X	X	X	X	X	X	X	X	X	X		X		
paradont.			X	X	X	X	X	X	X	X	X	X		X		

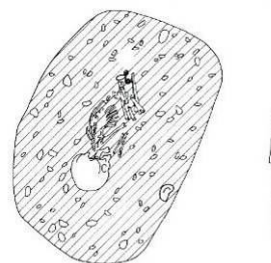
- surface of upper right dm¹ too eroded for evaluation of LEH;

- no permanent teeth erupted; lower right premolars and upper left M² too small for evaluation;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	p	p	-
p	p	p	p	p	p	p	-	-	-	p	-	-	-	p	p	p	-	-	-	-

- fewer bones available for examination than can be seen on drawing;



Pl.1

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: slight signs of periostitis found on remaining surfaces of radial and tibial fragments;

Vertebrae: missing;

Joints: evaluation impossible;

Burial 147

Sex: ?

Age: 10 – 12 yrs

Wealth: ?

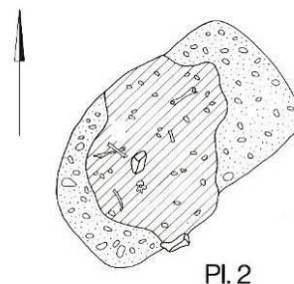
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	p	-	-	-	-	p	-	-	p	p	-



Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: pea-size hole anterior to posterior calcaneal articular surface of left talus, probably due to presence of an arthrolith;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 148

Sex: ?

Age: adult

Wealth: upper class

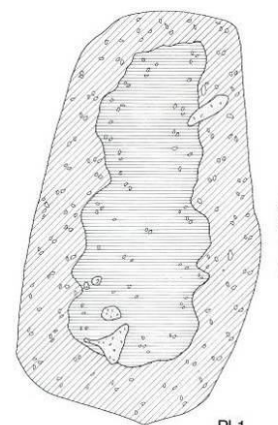
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l	l



Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 149

Sex: male

Age: 30 – 40 yrs

Wealth: lower class

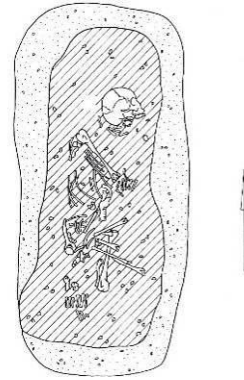
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

	+	r.	l.	Fontale
	+	r.	l.	Parietale
	p	p	p	Temporale
	+	p	l.	Ocipitale
	+	p	Maxilla	Mandibula
	p	p	Clavicula	Scapula
	p	p	Humerus	Radius
	+	p	Ulna	Ossa manus
	p	p	Os coxae	Femur
	p	l.	Tibia	Fibula
	+	l.	Ossa pedis	Sternum
	p	p	Costae	Ventrebrae
	p	p	Sacrum	



Pl. 3

- no skeletal remains available for examination;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

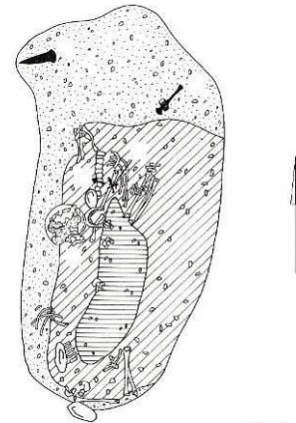
Joints: missing;

Burial 150

Sex: male
Age: 40 – 50 yrs
Wealth: upper class
Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	45	44	43	42	PL	PL	32	33	34	35	PL	PL	PL	PL
abrasion	4	5	5	-	-	-	-			-	-	-	-				
calculus	I	II	0	I	I	II	II			I	I	I	I				
leh	X	X	X	0	0	0	0			0	0	0	0				
caries	0	0	0	0	0	0	0			0	0	0	0				
paradont.	III	II	X	X	X	X	II			X	II	II	X				



Pl. 4

- lower right molars diagonally abraded (no labial enamel remaining) and evaluation of LEH impossible; bulging extra bone tissue formed labially and lingually from tooth 46 and tooth 47, as well as lingually from tooth 36 and tooth 37; apical abscess found in alveole of former tooth 36;

Existing skeletal remains:

Frontale	+	r
Parietale	+	p
Temporale	+	t
Occipitale	+	o
Maxilla	+	m
Mandibula	+	d
Clavicula	+	c
Scapula	+	s
Humerus	+	h
Radius	+	r
Ulna	+	u
Ossa manus	+	m
Os coxae	+	c
Femur	+	f
Tibia	+	t
Fibula	+	f
Ossa pedis	+	p
Sternum	+	s
Costae	+	c
Vertebrae	+	v
Sacrum	+	s

Pathologies:

- Neurocranium: no visible pathological modifications found on internal lamina and surface of external lamina too eroded for evaluation;
- Viscerocranium: evaluation impossible;
- Postcranium: the sternal articular surface of left clavicle shows grade 4/grade 5 degenerative changes, including formation of cyst-like impressions; acute patch of periostitis found dorsally in the middle of left femur shaft; markedly accentuated longitudinal striations found on remaining surfaces of left radius;

Vertebrae:

- Cervical vertebrae: rateable articular surfaces show massive degenerative changes ranging from grade 3 to grade 6 and one of the two existing vertebral bodies is completely deformed and shows signs of osteoporosis;

- Thoracic vertebrae: missing;
- Lumbar vertebrae: the only rateable articular surface (cranial) from the only existing lumbar vertebral fragment shows grade 4 degenerative changes; vertebral body has formed massive osteophytes and a caudal impression;

Joints: evaluation impossible;

Burial 151

Sex: female?

Age: 15 – 18 yrs

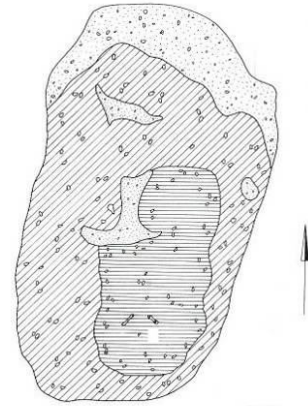
Wealth: lower class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 152

Sex: female

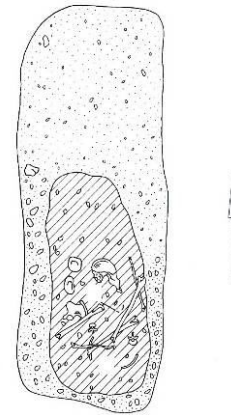
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	IT	IT	IT	IT	IT	IT	PL	IT	PL	IT	IT	IT	IT	IT	PL	PL	
abrasion	2	3	4	-	-	-		-		-	-	-	-	4			
calculus	I	I	0	0	I	0		0		0	0	0	0	0			
leh	0	X	0	X	0	0		0		0	0	X	I	X			
caries	0	0	0	0	0	0		0		0	0	0	0	0			
paradont.	X	X	X	X	X	X		X		X	X	X	X	X			



Pl. 3

- some teeth too eroded for evaluation of LEH;

Existing skeletal remains:

	r.	p	Frontale
	r.	p	Parietale
	r.	p	Temporale
	r.	p	Occipitale
	r.	p	Maxilla
	r.	p	Mandibula
	r.	p	Clavicula
	r.	p	Scapula
	r.	p	Humerus
	r.	p	Radius
	r.	p	Ulna
	r.	p	Ossa manus
	r.	p	Os coxae
	r.	p	Femur
	r.	p	Tibia
	r.	p	Fibula
	r.	p	Ossa pedis
	r.	p	Sternum
	r.	p	Costae
	r.	p	Verbrae
	r.	p	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: bone surfaces too eroded for evaluation;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 153

Sex: female?

Age: 22 – 40 yrs

Wealth: lower class

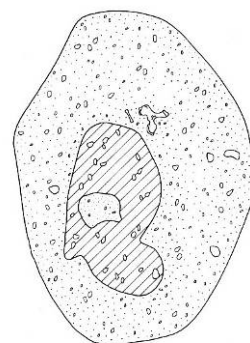
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	p	-	-	p	p	-	-	-	-	-	-	-	-	-	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 154

Sex: female

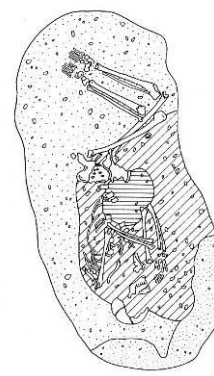
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.		X	X	X		X	X		X		X	X	X	X	X		
caries		IV	0	0		0	0		0		0	0	0	0	0		
leh		0	0	0		0	0		X		0	0	0	0	0		
calculus		I	I	0		I	0		0		0	I	I	0			
abrasion		4	4	-		-	-		-		-	-	-	-	4		
status	PL	IT	IT	IT	PL	IT	IT	PL	IT	PL	IT	IT	IT	IT	PL	PL	
status	48	47	IT	PL	IT	IT	PL	PL	PL	IT	IT	PL	IT	IT	IT	IT	
abrasion	2	3	4		-	-				-	-		-	3	4	3	
calculus	I	I	I		I	0				I	0		I	I	I	I	
leh	0	0	0		0	0				0	X		0	0	0	0	
caries	IV	IV	0		0	0				0	0		0	V	0	0	
paradont.	I	I	X		X	X				X	X		X	X	X	X	



Pl. 2

- distal caries only affects enamel on upper and lower right second molars, whereas mesial caries on tooth 48 and distal caries on lower left M₁ extends to pulpa; upper left I¹ and lower left canine covered in sinter, therefore evaluation of LEH impossible;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: most bone fragments covered in sinter, therefore evaluation impossible;
- Viscerocranium: bone fragments covered in sinter, therefore evaluation impossible;
- Postcranium: possible signs of periostitis found on remaining surface of right humerus; distinct slight signs of periostitis on both femurs, right tibia and both fibulas; exostoses found around both olecranons; most bone surfaces covered in sinter or too eroded for any further evaluation;

Vertebrae: evaluation impossible for most fragments, but Schmorl's nodes found on the rateable thoracic vertebral body fragments and osteophytes have formed on the only existing lumbar vertebral body which also shows a large caudal impression;

Joints: evaluation impossible;

Burial 155

Sex: ?

Age: Infans

Wealth: ?

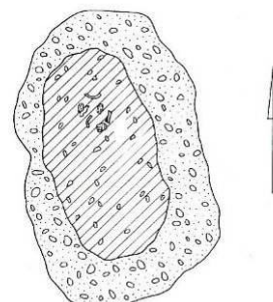
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	-	-	p	p	-	-	-	-	-	p	-



Pl.1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

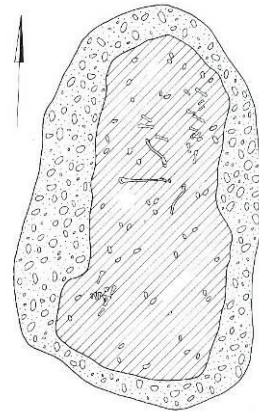
Burial 156

Sex: male

Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:[illegible]

Pl. 3

- surfaces of most teeth covered in sinter or too eroded for evaluation of LEH; all existing incisors, canines and premolars developed hypercementosis;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: the only rateable tarsal articular surface (left cuboid bone) rated grade 2, otherwise bone surfaces too eroded for further evaluation;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 157

Sex: male?

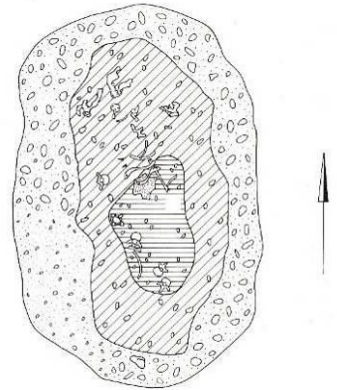
Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.		X	X		X	X										
caries		0	0		0	0										
leh		I	X		I	I										
calculus		0	I		I	I										
abrasion		3	4		-	-										
status	PL	IT	IT	PL	IT	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	IT	PL	PL	PL	PL	PL	IT	PL	IT	IT	IT	IT	PL	PL	IT	PL
abrasion	2						-		-	-	-	-			2	
calculus	I						0		I	I	I	II			I	
leh	0						I		I	I	I	0			0	
caries	0						0		0	0	0	0			0	
paradont.	X						X		X	X	X	X			X	



Pl. 2

- surface of upper right M^1 covered in calculus, therefore evaluation of LEH impossible;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: evaluation impossible for internal and external lamina, but right orbital roof shows signs of cribra orbitalia (the left orbital roof is missing);
- Viscerocranium: evaluation impossible;
- Postcranium: no visible pathological modifications found on clavicles, but most bone surfaces too eroded for further evaluation;

Vertebrae: evaluation impossible;

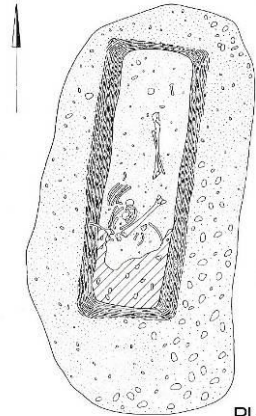
Joints: missing;

Sex: female?
Age: 30 – 50 yrs
Wealth: lower class
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: glenoid cavity of right scapula shows grade 2 degenerative changes, including formation of small cyst-like impressions; slight signs of periostitis found on remaining surface of right humerus fragment; exostoses formed just below the head of the humerus; most of the other bone fragments partly/fully covered in sinter, therefore evaluation impossible;

Vertebrae: missing;

Joints: the only rateable articular surface is the right glenoid cavity (see above);

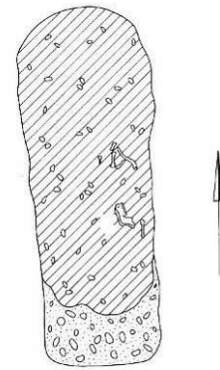
Burial 159

Sex: male

Age: 24 – 30 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:[illegible]

Pl. 3

- surfaces of all teeth covered in sinter or too eroded for evaluation of LEH;

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
p			Mandibula
	r.	l.	Clavicula
p			Scapula
	r.	l.	Humerus
	r.	l.	Radius
	r.	l.	Ulna
	r.	l.	Ossa manus
	r.	l.	Os coxae
	r.	l.	Femur
	r.	l.	Tibia
	r.	l.	Fibula
	r.	l.	Ossa pedis
p			Sternum
	p		Costae
p			Ventebrae
			Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: most of remaining fragments covered by sinter, therefore evaluation impossible;
- Postcranium: slight signs of periostitis possibly found on the only rateable bone surface, the acromial half of the left clavicle;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 160

Sex: female?

Age: 15 – 40 yrs

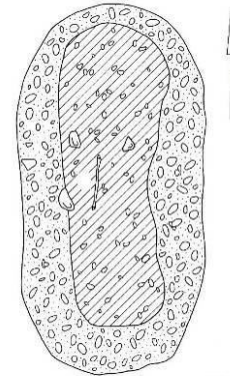
Wealth: lower class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 161

Sex: male

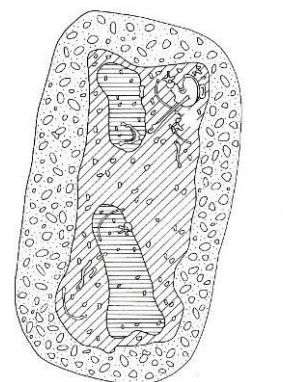
Age: 24 – 30 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

Tooth status:																	
paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	X	47	46	45	44	43	42	41	31	32	33	34	35	36	37	X	
abrasion		2	3	-	-	-	-	-	-	-	-	-	-	3	2		
calculus		I	0	I	0	I	I	I	I	I	I	I	I	I	I		
leh		I	I	I	I	II	I	X	I	I	II	X	I	I	I		
caries		0	0	0	0	0	0	0	0	0	0	0	0	0	0		
paradont.		0	I	0	0	X	X	X	X	X	0	X	X	X	0		



PI. 3

- some teeth too eroded for evaluation of LEH;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no visible pathological modifications found on mandible;
- Postcranium: very distinct tuberosities presumed on both clavicles, but fragments very eroded; signs of periostitis found on remaining surfaces of left ilium, above acetabulum and possibly on remaining bone surface of a right rib fragment but not on remaining bone surface of left ulna; small cyst-like impressions formed around left olecranon; rateable articular surfaces of existing carpals and tarsals show grade 2/grade 3 degenerative changes; one of the middle phalanxes of the right hand contains pea-size lateral osteoma on its proximal end; the first right metatarsal developed accessory articular surface on its lateral proximal end and the second right metatarsal formed medial step on its proximal end;

Vertebrae:

- Cervical vertebrae: rateable articular surfaces show grade 2 degenerative changes and existing vertebral bodies developed osteophytes;
- Thoracic vertebrae: existing articular surfaces rated grade 2/grade 3, except for caudal articular surfaces of Th8 and cranial articular surfaces of Th9 which developed grade 4 modifications;

- Lumbar vertebrae: existing articular surfaces rated grade 3;

Joints: evaluation impossible except for left hip joint, as well as proximal and distal right ankle;

Burial 162

Sex: male

Age: 30 – 40 yrs

Wealth: upper class

Preservation: grade 4

Tooth status:

Tooth status:																	
paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	45	44	43	IT	IT	IT	IT	PL	34	35	36	37	IL	
abrasion	3	3	5	-	-	-	-	-	-	-		-	-	5	4		
calculus	0	0	0	I	I	I	0	II	I	II		II	II	III	I		
leh	0	0	0	0	0	0	0	0	0	0		0	0	0	0		
caries	0	0	0	0	0	0	0	0	0	0		0	0	0	0		
paradont.	X	X	X	X	X	X	X	X	X	X		X	X	X	X		



Pl. 2

- additional lower right M₁ found within same burial, belonging to another individual;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: slight signs of periostitis on remaining bone surfaces of left humerus; rateable articular surfaces of existing digital bones of the hands show grade 2 degenerative changes and medial and posterior articular surfaces of left calcaneus rated grade 3; left metatarsals IV and V show no degenerative changes, whereas distal articular surface of left metatarsal II and the proximal articular surface of left metatarsal III show grade 6 degenerative changes;

Vertebrae:

- Cervical vertebrae: formation of osteophytes on existing vertebral bodies;
- Thoracic vertebrae: missing;
- Lumbar vertebrae: rateable articular surfaces show grade 4 degenerative changes, including formation of small cyst-like impressions; both existing vertebral bodies contain massive osteophytes and a deep caudal Schmorl's node was found on one and a large caudal impression on the other;

Joints: evaluation impossible except for left distal ankle;

Burial 163

Sex: female

Age: 40 – 60 yrs

Wealth: upper class

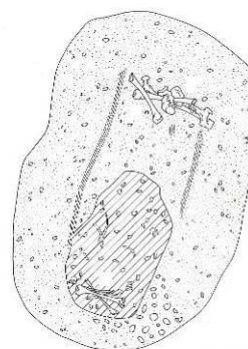
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	p	p	p	p	p	p	p	-	p	p	p	p	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: possible signs of periostitis found on left ulna and both femurs, but bone surfaces too eroded for distinct evidence; distinct signs of periostitis found on remaining bone surfaces of right tibia; right radial tuberosity developed extra medial bone tissue, but too eroded for further information; exostoses formed on left anterior patella and below proximal end (posterior) of right tibia, as well as just above its distal end (lateral); left patella developed one or possibly two peppercorn-size osteomas (hyperarthrosis) on ridge within articular surface; existing articular surfaces of existing digital bones of the hand rated grade 2/grade 3; severe porosity found on right anterior inferior iliac spine and where rectus femoris muscle inserts;

Vertebrae: evaluation impossible;

Joints:

	right	left
shoulder joint	m.	m.
elbow joint	1	e.i.
proximal wrist	m.	m.
radio-ulnar joint	e.i.	e.i.
hip joint	3	2.5
knee joint	3	2
proximal ankle	2.5	3
distal ankle	m.	e.i.

Burial 164

Sex: male

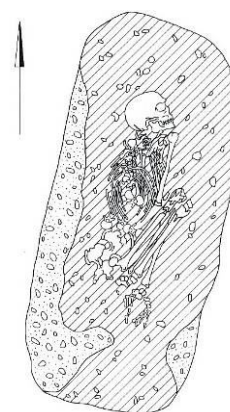
Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 1

Tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
leh	0	0	0	I	I	0	0	0	0	0	0	I	I	0	0	0	0
calculus	0	0	I	0	I	0	0	0	0	0	0	0	0	I	0	0	0
abrasion	2	3	3	-	-	-	-	-	-	-	-	-	-	3	3	2	
status	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	IT	
status	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
abrasion	2	3	3	-	-	-	-	-	-	-	-	-	-	3	3	3	
calculus	0	I	0	0	0	0	0	0	0	0	0	0	0	I	0	0	
leh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
paradont.	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X	



Pl. 2

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

- only cranium available for examination;

Pathologies:

- Neurocranium: external lamina completely eroded, whereas no pathological modifications found on internal lamina, except for formation of a bulge in the middle of the curve of right sigmoid sinus; the body of the sphenoid bone seems slightly inflamed and the basilar part of the occipital bone (clivus) within the middle cranial fossa developed slight hyperostosis (exostoses);
- Viscerocranium: no visible pathological modifications found;
- Postcranium: missing;

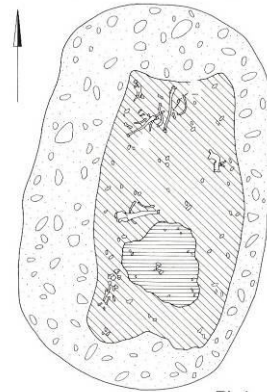
Vertebrae: missing;

Joints: missing;

Sex: male?
Age: 30 – 40 yrs
Wealth: upper class
Preservation: grade 3

Tooth status:

paradont.					X	X		X		X	X						
caries					0	0		0		0	0						
leh					0	0		0		0	0						
calculus					0	0		0		0	0						
abrasion					-	-		-		-	-						
status	X	PL	PL	PL	IT	IT	PL	IT	PL	IT	PL	IT	PL	PL	PL	PL	X
status	X	IT	IT	PL	IT	IT	IT	PL	PL	IT	33	34	35	36	37	37	X
abrasion		3	3		-	-	-			-	-	-	-	4	3		
calculus		0	0		0	0	0			0	0	0	0	0	0		
leh		0	0		0	0	0			0	0	0	0	0	0		
caries		0	0		0	0	0			0	0	0	0	0	0		
paradont.		II	X		X	X	X			X	X	X	0	X	X		



Pl. 4

- both lower canines erupted in a 90° angle (labial sides facing mesially);

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: possible signs of periostitis found on remaining bone surface of left clavicle; definite signs of periostitis distinguishable on remaining surface of left radius; rateable tarsal articular surfaces rated grade 3, except for left posterior talar articular surface which shows grade 4 degenerative changes; the first right metatarsal developed additional lateral articulate surface just above proximal articular surface;

Vertebrae: evaluation impossible;

Joints: evaluation impossible except for both proximal and both distal ankles;

Burial 166

Sex: female?

Age: 22 – 40 yrs

Wealth: lower class

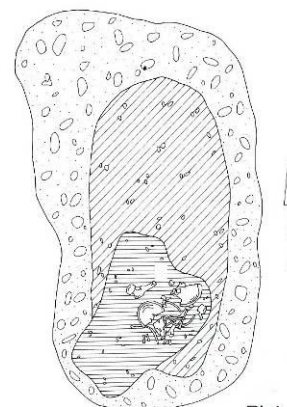
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r	r	r	-	-	r	r	r	r	r	r	r	r	r	r	r	r	r	p	-
-	-	-	-	-	-	-	-	p	-	-	-	p	p	p	p	-	-	-	-	-



Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

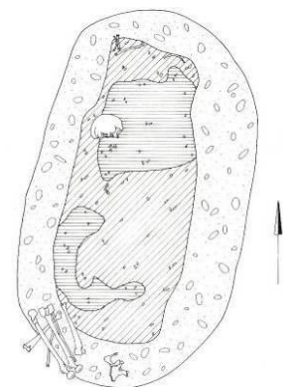
Joints: missing;

Burial 167

Sex: male
Age: 30 – 40 yrs
Wealth: upper class
Preservation: grade 2

Tooth status:[illegible]

Existing skeletal remains:

[illegible]

PI 2

Pathologies:

- Neurocranium: internal and external lamina covered in sinter or too eroded for evaluation; the superior bulb of the right jugular vein is markedly larger than the left one;
- Viscerocranium: missing;
- Postcranium: possible enthesopathy on tuberosity of the right costoclavicular ligament (left tuberosity of the costoclavicular ligament also very differentiated); periostitis found on remaining surfaces of right humerus and left tibia; remaining distal articular surface of right radius shows impression probably due to presence of loose body (joint mouse); right radial tuberosity also very differentiated; exostoses formed on existing digital bones of the hands, right ilium (just above auricular surface) and left pubic bone (superior ramus), as well as on distal end of left fibula (facing the tibia) and right patella; the fourth proximal phalanx of the right hand slightly bent inferiorly on its distal end, probably due to a former, well-healed trauma; one left rib fragment (approx. rib 8 – 12) also shows well-healed fracture, leaving rib slightly deformed;

Vertebrae:

- Cervical vertebrae: missing;
- Thoracic vertebrae: existing articular surfaces developed grade 2 marginal lipping; osteophytes found on existing vertebral bodies;
- Lumbar vertebrae: cranial articular surfaces of the only existing lumbar vertebra rated grade 3 and remains of associated vertebral body indicate caudal impression (half of the body is missing);

Joints:

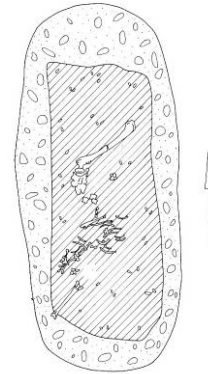
	right	left
shoulder joint	3	m.
elbow joint	2	m.
proximal wrist	4	m.
radio-ulnar joint	e.i.	m.
hip joint	2	3
knee joint	3	e.i.
proximal ankle	e.i.	2
distal ankle	3	2.5

Sex: female
Age: 22 – 30 yrs
Wealth: lower class
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: small cyst-like impressions found around articular surfaces of the only existing carpal, the right capitate bone; signs of periostitis found on remaining surfaces of left femur and left tibia;

Vertebrae:

- Cervical vertebrae: evaluation impossible for articular surfaces but no modification found on the only existing vertebral body;
- Thoracic vertebrae: existing articular surfaces developed grade 2/grade 3 marginal lipping and the only rateable vertebral body shows slight osteophyte development;
- Lumbar vertebrae: missing;

Joints: evaluation impossible;

Burial 169

Sex: female

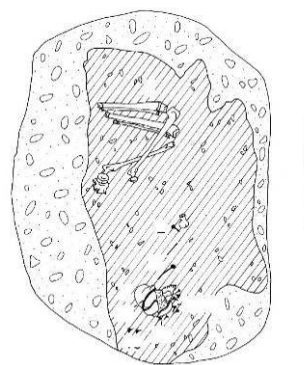
Age: 19 – 21 yrs

Wealth: ?

Preservation: grade 3

Tooth status:

paradont.			X	X	X	X	X		X		X	X	X	X	X	
caries			0	0	0	0	0		0		0	0	0	0	0	
leh			I	I	II	II	0		0		X	II	II	I	I	
calculus			I	0	0	I	0		0		X	I	I	I	I	
abrasion			3	-	-	-	-		-		-	-	-	3	2	
status	X	PL	IT	IT	IT	IT	IT	PL	IT	PL	IT	IT	IT	IT	IT	X
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	IT	PL	PL	PL	X
abrasion											-	-				
calculus											0	0				
leh											0	I				
caries											0	0				
paradont.											X	X				



Pl. 3

- upper left canine split into two (labial half is missing);

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.				r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.			
p. p.	p. p.	p. p.	-	-	-	p.	-	-	p.	-	-	-	p. p.	p. p.	p. p.	p. p.	-	-	-	-

Pathologies:

- Neurocranium: severe cribra orbitalia found within right orbital roof; most bone surfaces too eroded for evaluation;
- Viscerocranium: missing;
- Postcranium: signs of periostitis distinguishable on remaining surface of left femur, all the other bone surfaces too eroded for evaluation;

Vertebrae: missing;

Joints: missing;

Burial 170

Sex: female

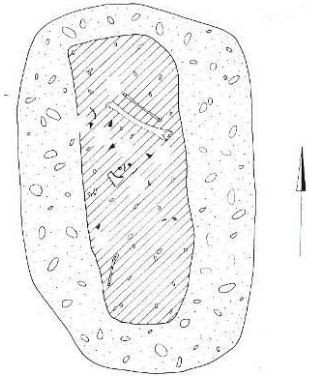
Age: 50 – 80 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.																	X	
caries																	0	
leh																	0	
calculus																	0	
abrasion																	4	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	X	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	X	
abrasion											-							
calculus											0							
leh											0							
caries											0							
paradont.											X							



Pl. 5

- + four completely abraded teeth (only single roots left);

Existing skeletal remains:

Frontale	p	r	l
Parietale	p	r	l
Temporale	p	r	l
Occipitale			
Maxilla			
Mandibula			
Clavicula	r	l	
Scapula	r	l	
Humerus	p	p	
Radius	r	l	
Ulna	r	l	
Ossa manus	p	p	
Os coxae	r	l	
Femur	p	p	
Tibia	p	p	
Fibula	r	l	
Ossa pedis	r	l	
Sternum			
Costae			
Vertebrae			
Sacrum			

Pathologies:

- Neurocranium: evaluation impossible for internal and external lamina, but right orbital roof developed cribra orbitalia (the left side missing);
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

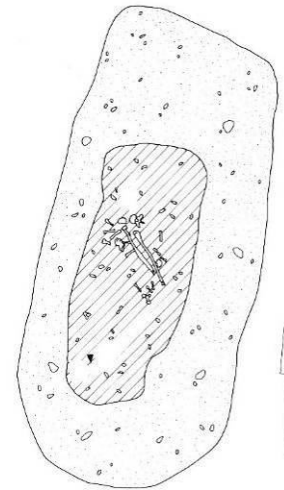
Vertebrae: missing;

Joints: missing;

Sex: female?
Age: 22 - 40 yrs
Wealth: lower class
Preservation: grade 4

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

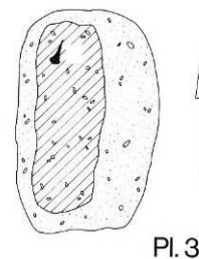
			Frontale
r.	p.	r.	Parietale
r.	p.	r.	Temporale
r.	p.	r.	Occipitale
r.	p.	r.	Maxilla
r.	p.	r.	Mandibula
r.	p.	r.	Clavicula
r.	p.	r.	Scapula
r.	p.	r.	Humerus
r.	p.	r.	Radius
r.	p.	r.	Ulna
r.	p.	r.	Ossa manus
r.	p.	r.	Os coxae
r.	p.	r.	Femur
r.	p.	r.	Tibia
r.	p.	r.	Fibula
r.	p.	r.	Ossa pedis
r.	p.	r.	Sternum
r.	p.	r.	Costae
r.	p.	r.	Ventricbrae
r.	p.	r.	Sacrum



- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: proximal part of left radius with possible ostitis/osteomyelitis in the region around tuberosity; marginal lipping (grade 2) on proximal articular surfaces of existing metatarsals; possible osteochondrosis dissecans on articular surface of third right rib;

Joints: evaluation impossible;

Sex: male?
Age: Infans
Wealth: ?
Preservation: grade 5

[illegible][illegible]

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 173

Sex: ?

Age: 22 – 80 yrs

Wealth: upper class

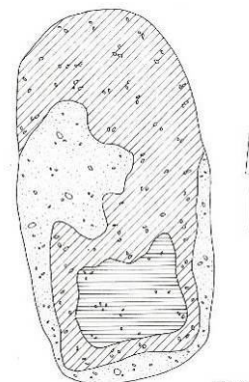
Preservation: grade 5

Tooth status:

[illegible]

Existing skeletal remains:

		Frontale
	r.	Parietale
	l.	
		Temporale
		Occipitale
		Maxilla
		Mandibula
	r.	Clavicula
	r.	Scapula
	l.	
	r.	Humerus
	r.	
	l.	Radius
	r.	Ulna
	l.	
		Ossa manus
	r.	
	l.	Os coxae
	r.	
	l.	Femur
	r.	
	l.	Tibia
	r.	
	l.	Fibula
	r.	
	l.	Ossa pedis
		Sternum
		Costae
		Verbrae
		Sacrum



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

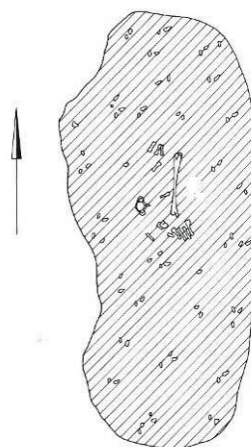
Vertebrae: missing;

Joints: missing;

Sex: ?
Age: 40 – 80 yrs
Wealth: upper class
Preservation: grade 4

[illegible]

	Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Ventebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	p	r.	r.	r.	r.	p	r.	-	-	-
l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	p	l.	l.	l.	l.	p	l.	-	-	-



Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 175

Sex: ?

Age: adult

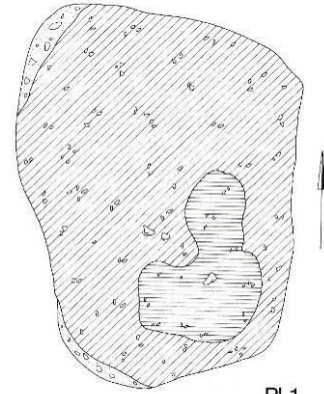
Wealth: upper class

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl.1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 176

Sex: male?

Age: ~ 4 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.	X	X	X		X		X			
caries	0	0	0		0		0			
leh	0	0	0		0		0			
calculus	0	0	0		0		0			
abrasion	3	3	-		-		-			
status	55	54	53	PL	IT	PL	IT	PL	PL	PL
status	85	84	PL	PL	PL	PL	PL	PL	74	75
abrasion	3	3							3	3
calculus	I	I							I	I
leh	0	0							0	0
caries	0	0							0	0
paradont.	0	0							0	X

Permanent tooth status:

paradont.			X						X								
caries			X						X								
leh			I						I								
calculus			X						X								
abrasion			1						-								
status	X	PL	IT	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL	X
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	PL	X
abrasion															X		
calculus															X		
leh															0		
caries															X		
paradont.															X		

- no permanent teeth erupted;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	p	p	p
-	p	p	p	p	p	-	p	p	-	p	-	-	p	p	-	p	-	p	p	-



Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: no visible pathological modifications;
- Postcranium: no visible pathological modifications found except for slight signs of periostitis on remaining bone surfaces of left femur, right tibia and right fibula;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 177

Sex: ?

Age: Infans

Wealth: ?

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.

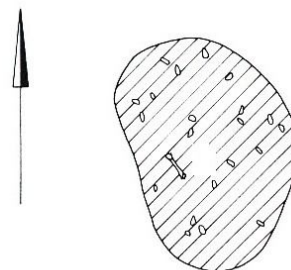
- three small undefinable postcranial bone fragments;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;



Burial 178

Sex: ?

Age: adult

Wealth: lower class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

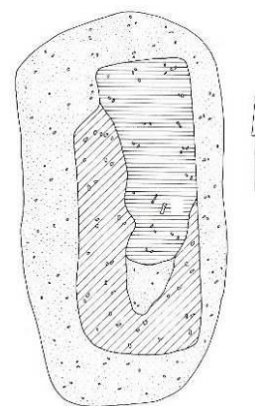
- only a few undefinable bone fragments;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;



PI.2

Burial 179

Sex: ?

Age: 13 – 18 yrs

Wealth: ?

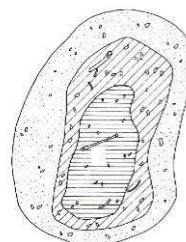
Preservation: grade 4

Tooth status:

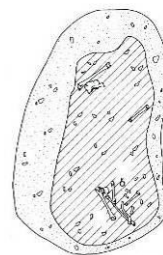
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



Pl. 4



Pl. 5

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: no visible pathological modifications;

Vertebrae: small bone fragments; evaluation impossible;

Joints: missing;

Burial 180

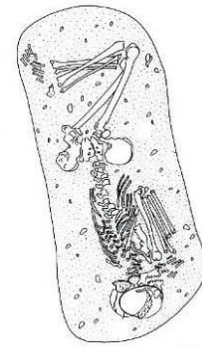
Sex: female

Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 1

Tooth status:

[illegible]

Pl. 4

- some teeth too eroded for evaluation of LEH;

Existing skeletal remains:

	+	r.	l.	Frontale
	+	r.	l.	Parietale
	p	p	p	Temporale
	p	p	p	Occipitale
	p	p	p	Maxilla
	+	p	p	Mandibula
	p	p	p	Clavicula
	r.	r.	r.	Scapula
	p	p	p	Humerus
	+	p	p	Radius
	p	p	p	Ulna
	p	p	p	Ossa manus
	p	p	p	Os coxae
	p	p	p	Femur
	p	p	p	Tibia
	r.	r.	r.	Fibula
	p	p	p	Ossa pedis
	r.	r.	r.	Sternum
	-	-	-	Costae
	p	p	p	Vertebrae
	p	p	p	Sacrum

Pathologies:

- Neurocranium: external and internal lamina either covered in sinter or too eroded for evaluation; the right sigmoid sinus curve markedly wider and deeper than the left one; cribra orbitalia found within right orbital roof (possibly also on left, but bone fragment very eroded); the superior bulb of right jugular vein is double the size of the one on the left;
- Viscerocranium: no visible pathological modifications found;
- Postcranium: right glenoid cavity shows grade 2 degenerative changes; possible exostoses found on left acromion and acromial ends of both clavicles (anterior and posterior); evaluation impossible for all other bone fragments;

Vertebrae:

- Cervical vertebrae: rateable articular surfaces developed grade 2 degenerative changes; vertebral bodies contain osteophytes; the right transverse foramen of C2 markedly larger than the one on the left;
- Thoracic vertebrae: grade 2 degenerative changes of distinguishable on existing articular surfaces and vertebral bodies formed small osteophytes;

- Lumbar vertebrae: rateable articular surfaces developed grade 3 degenerative changes and Schmorl's nodes found on all vertebral bodies;

Joints: evaluation impossible except for left and right shoulder joint;

Burial 181

Sex: male?

Age: 8 - 10 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.	X	X					X		0	0
caries	0	0					0		0	0
leh	0	0					0		0	0
calculus	0	0					0		0	I
abrasion	4	4					-		4	4
status	IT	IT	PL	PL	PL/PD	PL/PD	IT	PL	24	25
status	45	44	PL	PL	PD	PD	PL	IT	34	35
abrasion	4	4					-		4	4
calculus	0	0					0	0	I	
leh	0	0					0	0	0	
caries	0	0					0	0	0	
paradont.	X	X					X	X	X	

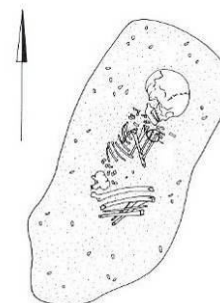
Permanent tooth status:

paradont.			X	X		X	X	X	X	X					0	X	
caries			0	X		X	X	X	X	X					0	X	
leh			I	II		II	I	II	II	I					II	I	
calculus			0	X		X	X	X	X	X					I	X	
abrasion			2	X		-	-	-	-	-					2	X	
status	X	PL	IT	IT	PL	IT	IT	IT	IT	IT	23	24	25	26	IT	X	
status	X	47	46	45	44	PL	PL	PL	PL	PL	32	33	34	35	IT	PL	X
abrasion			2												2		
calculus			0												0		
leh			I												I		
caries			0												0		
paradont.			0												X		

- permanent teeth: 23, 24, 25, 27, 32, 33, 34, 35, 44, 45 and 47 not erupted, therefore evaluation impossible;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	p	p	p
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



Pl. 3

Pathologies:

- Neurocranium: severe parietal porosity on ectocranial surface (left and right); severe porotic changes also found on ectocranial surfaces of frontal and both temporal bones; milky-white plaque-like appositions on endocranial frontal bone; slightly intensified digitate impressions;
- Viscerocranium: small inflammatory process lingually, just above upper left dm₂;
- Postcranium: slight signs of periostitis on left humerus, left ulna and left radius;

Vertebrae:

- Cervical vertebrae: cranial and caudal articular surfaces of C2 show grade 2 (almost grade 3) marginal lipping, indefinable fragments of the other two existing cervical vertebrae also contain articular surfaces grade 2 marginal lipping;
- Thoracic vertebrae: evaluation of fragment impossible;

- Lumbar vertebrae: evaluation of fragment impossible;

Joints: evaluation impossible;

Burial 182

Sex: ?

Age: adult

Wealth: upper class

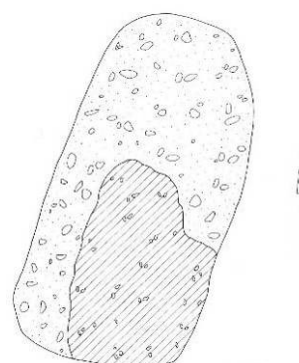
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	r.	r.	-	-	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 183

Sex: male

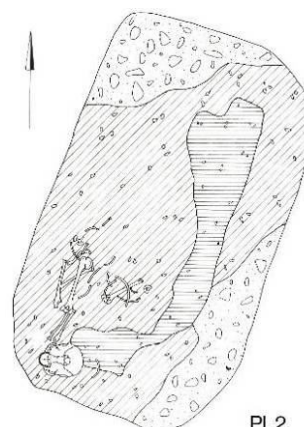
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.	X									X		X	X	X	X	X	
caries	0									0		0	0	0	0	0	
leh	0									0		X	0	0	0	0	
calculus	I									0		I	I	I	I	I	
abrasion	1									-		-	-	-	4	3	
status	IT	PL	PL	PL	PL	PL	PL	PL	IT	PL	IT	IT	IT	IT	IT	IT	X
status	IT	47	46	45	44	IT	42	41	31	32	33	34	35	36	37	PL	
abrasion	2	4	4	-	-	-	-	-	-	-	-	-	-	-	4	4	
calculus	0	I	I	I	0	I	I	0	0	0	I	0	I	0	0		
leh	0	X	X	0	0	X	X	X	0	X	X	X	X	X	X	X	
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
paradont.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	



- some teeth too eroded for evaluation of LEH; microdont upper right M³; slight hypercementosis found on upper left M¹;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p. +	p. +	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p	p. p

- individual has very robust bones;

Pathologies:

- Neurocranium:** external lamina too eroded for evaluation; formation of granular hyperostosis (also very pointed exostoses) within frontal internal lamina and frontal sinus; signs of cribra orbitalia found within left orbita, but most of orbital roof missing; the superior bulb of right jugular vein is double the size of the one on the left;
- Viscerocranium:** evaluation impossible;
- Postcranium:** right clavicle twice as thick as left clavicle, but both clavicles with very distinct tuberosities (the tuberosity of the coracoclavicular ligament on the left appears to have been subjected to more stress than the one on the right); articular surfaces of right scaphoid bone and medial articular surface of left talus rated grade 2; one metatarsal fragment formed medial step adjacent to proximal articular surface;

Vertebrae: evaluation impossible, except for two thoracic vertebral bodies which contain Schmorl's nodes and formed osteophytes;

Burial 185

Sex: female

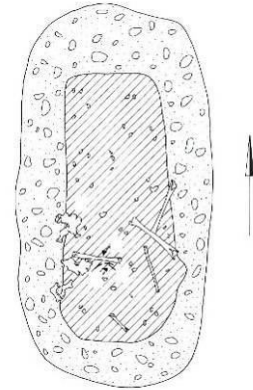
Age: 45 – 55 yrs

Wealth: upper class

Preservation: grade 3

Tooth status:

paradont.									X								
caries									0								
leh									X								
calculus									I								
abrasion									-								
status	X	PL	PL	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL	X
status	IT	IL	46	45	44	IT	PL	PL	PL	PL	IT	IT	IT	PL	IL	PL	
abrasion	2		4	-	-	-					-		-				
calculus	0		0	II	0	0					0	0	I				
leh	0		X	0	0	I					I	X	X				
caries	0		III	0	0	0					0	0	0				
paradont.	X		X	X	X	X					X	X	X				



Pl. 3

- upper left I¹ and lower left P₁ completely abraded; lower left P₂ too eroded for evaluation of LEH; mesial caries on lower right M₁ only on enamel;

Existing skeletal remains:

		Frontale
r.	l.	Parietale
r.	l.	Temporale
		Occipitale
		Maxilla
p	p	Mandibula
r.	l.	Clavicula
p	p	Scapula
p	p	Humerus
r.	l.	Radius
p	p	Ulna
p	p	Ossa manus
p	p	Os coxae
p	p	Femur
p	p	Tibia
p	p	Fibula
r.	l.	Ossa pedis
p	p	Sternum
		Costae
		Vertebrae
		Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: right medial patellar articular surface very bumpy; most bone surfaces too eroded for evaluation;

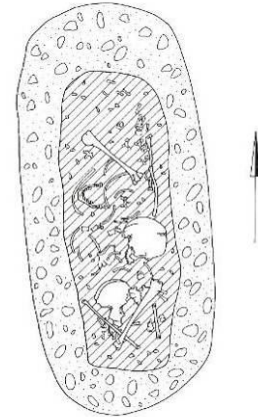
Vertebrae: missing;

Joints: evaluation impossible;

Burial 186

Sex: male
Age: 24 – 30 yrs
Wealth: lower class
Preservation: grade 3

Tooth status:

[illegible]

Pl. 2

Existing skeletal remains:

p	Frontale
p	r.
p	l.
p	Parietale
p	t.
p	Temporale
p	Occipitale
p	Maxilla
+	Mandibula
p	Clavicula
-	Scapula
-	Humerus
+	Radius
+	Ulna
p	Ossa manus
p	Os coxae
p	Femur
-	Tibia
p	Fibula
p	Ossa pedis
p	Sternum
p	Costae
p	Ventricbrae
p	Verticrum

- cranium not available for examination;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: right clavicle shorter and more massive than left clavicle and shows possible signs of an enthesopathy on its tuberosity of the costoclavicular ligament; exostoses formed on anterior side of right clavicle and proximal ends of rateable metatarsals; no signs of periostitis found on remaining long bone surfaces;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: two of the existing articular surfaces rated grade 2; existing vertebral bodies do not contain any pathological modifications;
- Lumbar vertebrae: rateable articular surfaces show grade 4 degenerative changes, including formation of small cyst-like impressions; the only existing vertebral body contains a caudal impression, probably caused by the corresponding disc;

Joints: evaluation impossible;

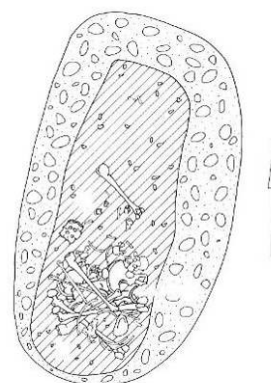
Burial 187

Sex: female

Age: 22 – 30 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:[illegible]

Pl. 3

- some teeth too eroded for evaluation of LEH;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no visible pathological modifications;
- Postcranium: distal articular surface of right radius shows no signs of pathological modification; rateable articular surfaces of existing metacarpals and distal articular surface of left fibula show grade 2 degenerative changes, including pin-size porosity; the only rateable articular surface (proximal) of the digital phalanges on the first proximal phalanx of the right hand (thumb) without any severe pathological modifications (grade 1); acetabulum cranially slightly extended on both sides; markedly accentuated longitudinal striations found on remaining surfaces of both femurs and both tibias;

Vertebrae:

- Cervical vertebrae: cranial articular surfaces of C1 (atlas) show grade 3 degenerative changes; evaluation impossible for the rest;
- Thoracic vertebrae: grade 1 degenerative changes distinguishable on the only existing articular surface (cranial); formation of osteophytes on vertebral bodies;

- Lumbar vertebrae: caudal articular surfaces of existing lumbar vertebrae rated grade 2, including formation of small cyst-like impressions; vertebral body of L5 contains caudal impression and all existing vertebral bodies developed osteophytes;

Joints: evaluation impossible except for right proximal wrist and left hip joint which are both rated grade 1 and left proximal ankle which is rated grade 2;

Burial 188

Sex: female

Age: 10 – 12 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.			X						X	X	X
caries			0						0	0	0
leh			0						0	0	0
calculus			0						0	0	0
abrasion			-						-	5	4
status	PL	PL	IT	PD	PD	PD	PD	PD	63	64	65
status	PL	PL	PD	PD	PD	PD	PD	PD	74	75	
abrasion									4	4	
calculus									0	0	
leh									0	0	
caries									0	0	
paradont.									X	X	

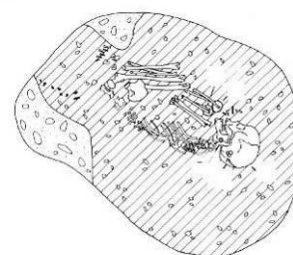
Permanent tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X						0	0	X
caries	X	0	0	X	X	X	0	0	0	0						0	0	X
leh	II	I	I	I	I	I	I	I	I	I						II	II	II
calculus	X	0	0	X	X	X	0	0	0	0						0	0	X
abrasion	X	2	3	-	-	-	-	-	-	-						3	2	X
status	IT	17	16	IT	IT	IT	IT	IT	IT	IT	21	22	23	24	25	26	27	IT
status	X	47	46	45	44	43	42	PL	31	32	33	34	35	36	37	X		
abrasion		2	2	-	-	-	-		-	-	-					3	2	
calculus		0	0	0	0	0	0		0	0	0					0	0	
leh		II	I	I	I	II	I		I	II	II					X	I	
caries		0	0	0	0	0	0		0	0	0					0	0	
paradont.		0	0	X	X	X	X		X	X	X					0	0	

- no premolars or upper canines erupted;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



Pl. 3

Pathologies:

- Neurocranium: external lamina too eroded for evaluation and internal lamina covered in sinter as most other cranial fragments; cribra orbitalia found within right orbital roof;
- Viscerocranium: evaluation impossible;
- Postcranium: slight signs of periostitis on remaining bone surfaces of left humerus, whereas no visible pathological modifications found on ulnae and radii; evaluation impossible for all other bone fragments;

Vertebrae: evaluation impossible, except for cranial articular surfaces of C1 (atlas) which show grade 2 marginal lipping;

Joints: evaluation impossible;

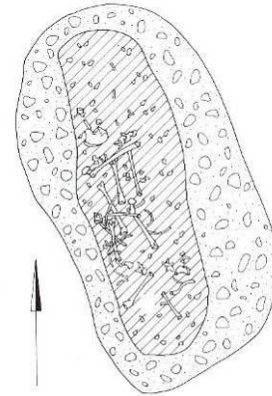
Burial 189

Sex: ?

Age: ~ 12 yrs

Wealth: ?

Preservation: grade 3

Tooth status:[illegible]

Pl. 3

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
			Mandibula
p	p		Clavicula
r.	l.	r.	Scapula
r.	l.	r.	Humerus
p	p		Radius
r.	l.	r.	Ulna
-	-		Ossa manus
p	p		Os coxae
r.	l.	r.	Femur
p	+		Tibia
r.	l.	r.	Fibula
p	p		Ossa pedis
p	p		Sternum
p	p		Costae
p	p		Ventricbrae
p	p		Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: missing;
- Lumbar vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 190

Sex: female?

Age: ~ 2 yrs

Wealth: ?

Preservation: grade 3

Deciduous tooth status:

paradont.	X	X	X	X				X	X	X	
caries	0	0	0	0				0	0	0	
leh	0	0	0	0				0	0	0	
calculus	0	0	0	0				0	0	0	
abrasion	1	1	-	-				-	-	1	
status	IT	IT	IT	IT	PL	PL	IT	IT	IT	PL	
status	IT	IT	PL	PL	PL	PL	IT	IT	IT	IT	
abrasion	1	2						-	2	1	
calculus	0	0						0	0	0	
leh	0	0						0	0	0	
caries	0	0						0	0	0	
paradont.	X	X						X	X	X	

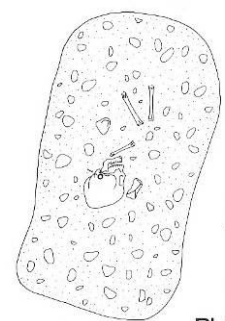
Permanent tooth status:

paradont.			X			X		X	X						X		
caries			X			X		X	X						X		
leh			I			I		I	I						I		
calculus			X			X		X	X						X		
abrasion			X			-		-	-						X		
status	X	X	IT	PL	PL	IT	PL	IT	IT	PL	PL	PL	PL	PL	IT	X	X
status	X	X	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X	X
abrasion			X														
calculus			X														
leh			I														
caries			X														
paradont.			X														

- no permanent teeth erupted;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.			r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.			
-	p	p	p	-	-	p	-	-	p	-	-	-	-	-	-	-	-	-	-	-



Pl. 3

Pathologies:

- Neurocranium: no visible pathological modifications;
- Viscerocranium: no visible pathological modifications, except for a small porotic apposition posterior to the left mandibular fossa;
- Postcranium: no visible pathological modifications;

Vertebrae: missing;

Joints: missing;

Burial 191

Sex: female

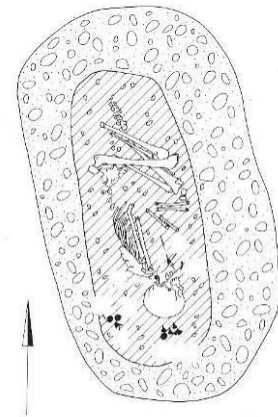
Age: 60 – 80 yrs

Wealth: upper class

Preservation: grade 1

Tooth status:

paradont.	II									X	III	II			
caries	0									0	III	0			
leh	0									X	0	X			
calculus	I									I	I	I			
abrasion	5									-	-	-			
status	18	IL	IL	IL	IL	IL	PL	PL	IL	23	24	25	IL	IL	IL
status	X	X	X	X	X	PL	PL	X	X	PL	33	IL	IL	36	37
abrasion											-			5	4
calculus											X			0	0
leh											X			X	0
caries											0			0	IV
paradont.											X			III	III



Pl. 4

- most teeth completely abraded; hypercementosis and distal caries on upper left P¹ (Plate I c); hypercementosis and buccal caries on lower left M₂; tooth 38 developed underneath tooth 37 (it is lying almost horizontally) and never erupted;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: external lamina developed hyperostosis in the bregma-area; internal lamina also contains hyperostotic appositions in left frontal area and superior to left hypoglossal canal which is probably related to old age; intensified impression of the left medial meningeal artery which can also be related to old age; right superior bulb of the jugular vein much larger than the one on the left;
- Viscerocranium: hyperostosis found on right sublingual fovea;
- Postcranium: exostoses found on lateral margin of left scapula, inferior to glenoid cavity, as well as on existing metacarpals, metatarsals, digital bones of the feet, right anterior inferior iliac spine (right anterior superior iliac spine missing) and on two existing rib fragments; accentuated longitudinal striations (slight signs of periostitis) found on left radius, both femurs, both tibias and right fibula; rateable articular surfaces of existing carpals and metacarpals show grade 3 degenerative changes; formation of cyst-like impressions around articular surfaces of right pisiform bone and right capitate bone; possibly inflamed area superior to medial

condyle of left femur; bones (especially vertebrae) very light which means individual probably suffered from osteoporosis;

Vertebrae:

- Cervical vertebrae: remaining articular surfaces show grade 3 pathological modifications;
- Thoracic vertebrae: articular surfaces of first 10 thoracic vertebrae rated grade 2, whereas the articular surfaces of last 2 thoracic vertebrae rated grade 3/grade 4, including a porotic surface;
- Lumbar vertebrae: existing articular surfaces rated grade 2/grade 3, including a porotic surface; massive osteophyte development (size approx. 1cm) on vertebral bodies; one of the vertebral body fragments probably contains impression on caudal plate;

Joints:

	right	left
shoulder joint	m.	4
elbow joint	m.	2.5
proximal wrist	m.	m.
radio-ulnar joint	m.	2
hip joint	3.5	3
knee joint	2.5	e.i.
proximal ankle	m.	2
distal ankle	m.	2.25

Burial 192

Sex: male?

Age: 6 – 7 yrs

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

paradont.	X		X						X		X
caries	0		0						0		0
leh	0		0						0		0
calculus	0		0						0		0
abrasion	3		-						-		3
status	IT	PL	IT	X	PD	PD	PD	IT	PL	IT	
status	IT	IT	PL	PD	PD	PD	PD	PL	IT	IT	
abrasion	3	4							3	3	
calculus	0	0							0	0	
leh	0	0							0	0	
caries	0	0							0	0	
paradont.	X	X							X	X	

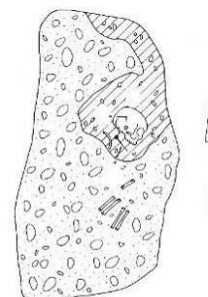
Permanent tooth status:

paradont.		X	X					X	X	X		X	X	X			
caries		X	0					0	0	0		X	X	0			
leh		0	II					0	0	0		II	I	II			
calculus		X	0					0	0	0		X	X	0			
abrasion		1	2					-	-	-		-	-	2			
status	X	IT	IT	PL	PL	PL	PL	IT	IT	IT	PL	IT	IT	IT	PL	X	
status	X	IT	IT	PL	IT	PL	IT	IT	IT	IT	PL	PL	PL	IT	IT	X	
abrasion		X	2		-		-	-	-	-				2	X		
calculus		X	0		X		0	0	0	0				0	X		
leh		X	I		II		0	0	0	0				I	X		
caries		X	0		X		0	0	0	0				0	X		
paradont.		X	X		X		X	X	X	X				X	X		

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	p	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	p	p	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- fewer bones available for examination than can be seen on drawing;



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no visible pathological modifications;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 193

Sex: male?

Age: 6 – 7 yrs

Wealth: ?

Preservation: grade 2

Deciduous tooth status:

paradont.	X		X	X	X	X	X	X	X	0
caries	0		0	0	0	0	0	0	0	0
leh	0		0	0	0	0	0	0	0	0
calculus	0		0	0	0	0	0	0	0	0
abrasion	3		-	-	-	-	-	-	3	3
status	IT	PL	IT	IT	IT	IT	IT	IT	IT	65
status	IT	IT	IT	PL	IT	PL	IT	IT	IT	74
abrasion	3	3	-		-		-	-	3	3
calculus	0	0	0		0		0	0	I	I
leh	0	0	0		0		0	0	0	0
caries	0	0	0		0		0	0	0	0
paradont.	X	X	X		X		X	X	X	X

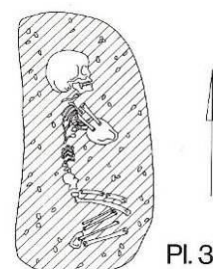
Permanent tooth status:

paradont.		X	X			X	X	X	X						X	X	
caries		X	0			X	X	X	X						X	X	
leh		II	I			III	III	III	III						0	X	
calculus		X	0			X	X	X	X						X	X	
abrasion		X	2			-	-	-	-						X	X	
status	X	IT	IT	PL	PL	IT	IT	IT	21	22	23	24	25	26	IT	X	
status	X	IT	IT	PL	PL	IT	42	41	31	32	PL	34	35	36	IT	X	
abrasion		X	2			-		-	-						2	X	
calculus		X	I			X		X	X						I	X	
leh		I	I			III		I	I						I	II	
caries		X	0			X		X	X						0	X	
paradont.		X	X			X		X	X						0	X	

- no permanent teeth erupted, except first molars; LEH only found on younger parts of the respective teeth;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



Pathologies:

- Neurocranium: internal lamina covered in sinter and external lamina eroded almost completely; porotic bone tissue found next to the right margin of foramen magnum (left side missing); signs of cribra orbitalia distinguishable within right orbital roof (left side missing);
- Viscerocranium: evaluation impossible;
- Postcranium: slight signs of periostitis found on remaining surfaces of fragments of both humeri and left ulna, as well as on both femurs and both tibias;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 194

Sex: ?

Age: 13 – 14 yrs

Wealth: ?

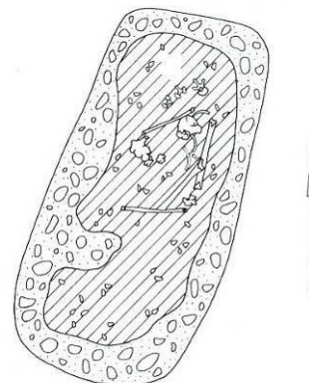
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	p	p	-	-	-	-	-	p	p	p	p	-	-	p	p	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible for clavicles, femurs, right tibia and left fibula; possible subperiosteal haematoma (periostitis?) on left tibia (bone surface appears heavily eroded);

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 195

Sex: ?

Age: adult

Wealth: upper class

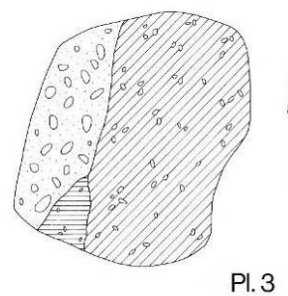
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	r.	r.	-	-	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 196

Sex: female?

Age: ~ 5 yrs (Infans I)

Wealth: lower class

Preservation: grade 3

Deciduous tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0	0	0	0
leh	0	0	0	0	0	0	0	0	0	0
calculus	0	0	0	0	0	0	0	0	0	0
abrasion	2	4	-	-	-	-	-	-	4	1
status	55	54	IT	IT	IT	IT	IT	IT	IT	IT
status	IT	IT	PL	IT	PL	PL	IT	PL	IT	IT
abrasion	2	3		-			-		3	2
calculus	0	0		0			0		0	0
leh	0	0		0			0		0	0
caries	0	0		0			0		0	0
paradont.	X	X		X			X		X	X

Permanent tooth status:

paradont.			X	X	X				X								
caries			X	X	X				X								
leh			0	X	X				I								
calculus			X	X	X				X								
abrasion			1	-	-				-								
status	X	PL	IT	15	IT	PL	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL	X
status	X	PL	46	PL	IT	PL	PL	PL	PL	32	PL	PL	PL	PL	PL	PL	X
abrasion			0		-					-							
calculus			X		X					X							
leh			I		I					X							
caries			X		X					X							
paradont.			X		X					X							

Existing skeletal remains:

Frontale	r.	l.	r.	l.	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
p	p	p	p	p	p	p	p	p	-	-	-	-	-	-	p	p	p	-	-	p	p	-



Pl. 2

Pathologies:

- Neurocranium: most fragments covered in sinter, evaluation impossible; no signs of cribra orbitalia found within left orbita (right side missing);
- Viscerocranium: most fragments covered in sinter, evaluation impossible;
- Postcranium: evaluation impossible for most fragments; no visible pathological modifications on right clavicle;

Vertebrae: small bone fragments; evaluation impossible;

Joints: missing;

Burial 197

Sex: female

Age: 20 – 40 yrs

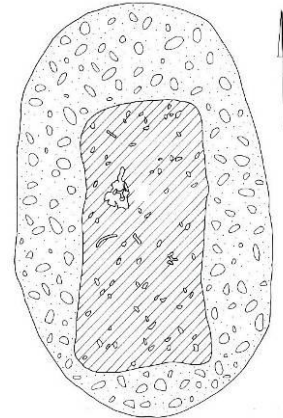
Wealth: lower class

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: no visible pathological modifications on clavicles; porotic hyperostosis in its early stages on left ilium (facies glutea);

Vertebrae:

- Cervical vertebrae: missing;
- Thoracic vertebrae: cranial articular surfaces of the only existing vertebral fragment rated grade 2 and caudal articular surfaces show grade 3 degenerative changes;
- Lumbar vertebrae: the only rateable articular surface (left cranial) shows grade 4 degenerative;

Joints: missing, except for left hip joint, where acetabulum developed grade 3 degenerative changes;

Burial 198

Sex: male

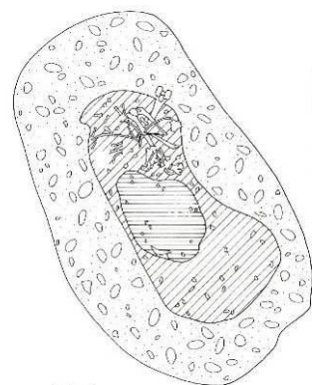
Age: 40 – 50 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:[illegible]

Existing skeletal remains:

[illegible]

Pl. 4

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: surfaces on existing bones very eroded; manubrium sterni and first element of midsternum assimilated; rateable articular surfaces of existing metacarpals and digital bones of the hands show grade 2/grade 3 marginal lipping; formation of small exostoses found on some phalanges; possible signs of periostitis found on remaining shaft fragment of left tibia;

Vertebrae:

- Cervical vertebrae: missing;
- Thoracic vertebrae: missing;
- Lumbar vertebrae: existing articular surfaces rated grade 4/grade 5, including severe marginal lipping; massive osteophyte development (almost 1cm) on vertebral body fragments;

Joints:

	right	left
shoulder joint	e.i.	3.5
elbow joint	2	2.5
proximal wrist	2	2.5
radio-ulnar joint	2	2
hip joint	e.i.	2.5
knee joint	m.	e.i.
proximal ankle	m.	e.i.
distal ankle	m.	m.

Burial 199

Sex: ?

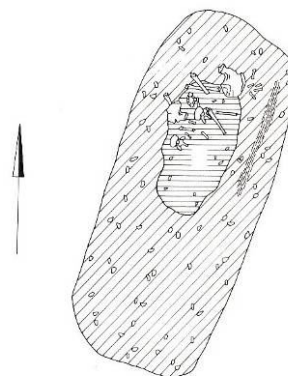
Age: 10 – 12 yrs

Wealth: ?

Preservation: grade 4

Tooth status:

paradont.				X					X							
caries				0					0							
leh				I					I							
calculus				0					0							
abrasion				-					-							
status	PL	PL	PL	PL	IT	PL	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
abrasion																
calculus																
leh																
caries																
paradont.																



Pl. 2

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
-	-	-	-	-	-	-	-	-	p	p	-	p	p	-	p	p	p	p	p	-

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing (except for teeth);
- Postcranium: signs of periostitis found on remaining bone surfaces of both fibulas;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 200

Sex: male

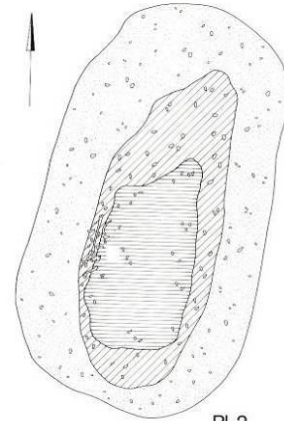
Age: 30 – 40 yrs

Wealth: upper class

Preservation: grade 4

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
abrasion	4	4	5	-	-	-	-	-	-	-	-	-	-	5	4	4	
calculus	I	I	II	II	I	I	I	I	I	I	I	I	I	II	I	0	
leh	I	0	0	I	0	0	0	0	0	0	0	I	I	0	0	0	
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
paradont.	X	X	II	II	II	III	X	X	X	II	II	II	II	II	II	II	



Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
	r.	l.	Mentale
	r.	l.	Maxilla
p	p	p	Mandibula
p	p	p	Clavicula
r.	r.	r.	Scapula
r.	r.	r.	Humerus
r.	r.	r.	Radius
r.	r.	r.	Ulna
p	p	p	Ossa manus
r.	r.	r.	Oss coxae
r.	r.	r.	Femur
r.	r.	r.	Tibia
r.	r.	r.	Fibula
r.	r.	r.	Ossa pedis
r.	r.	r.	Sternum
p	p	p	Costae
p	p	p	Vertebrae
r.	r.	r.	Sacrum

- individual has a torus mandibularis internus;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: no visible pathological modifications, except for a small osteoma (exostosis) lingually from lower right M₂;
- Postcranium: formation of a smooth, voluminous callus in the middle of the left ulnar shaft due to fracture, otherwise evaluation impossible;

Vertebrae:

- Cervical vertebrae: left cranial articular surfaces of C1 show grade 3 marginal lipping, whereas grade 2 marginal lipping observable on left caudal articular surface; dens axis and right cranial articular surface of C2 developed grade 2 marginal lipping; cervical vertebral bodies missing;
- Thoracic vertebrae: no evaluation possible for most fragments; grade 2 marginal lipping can be distinguishable on articular surface of one unidentifiable thoracic vertebra;
- Lumbar vertebrae: missing;

Joints: missing;

Burial 201

Sex: female?

Age: ~ 5 yrs

Wealth: lower class

Preservation: grade 2

Deciduous tooth status:

paradont.		X	X		X	X		X	X	X
caries		0	0		0	0		0	III	0
leh		0	0		0	0		0	0	0
calculus		0	0		0	0		0	0	0
abrasion		4	-		-	-		-	4	4
status	PL	IT	IT	PL	IT	IT	PL	IT	IT	IT
status	85	84	83	82	PL	PL	IT	IT	IT	IT
abrasion	4	4	-	-			-	-	4	4
calculus	0	I	0	0			0	0	0	0
leh	0	0	0	0			0	0	0	0
caries	0	0	0	0			0	0	0	0
paradont.	X	X	X	X			X	X	X	X

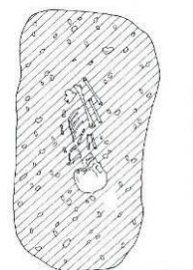
Permanent tooth status:

paradont.			X	X	X	X	X	X	X	X	X		X	X	
caries			X	X	X	X	X	X	X	X	X		X	X	
leh			II	II	I	II	I	I	I	II	I		II	X	
calculus			X	X	X	X	X	X	X	X	X		X	X	
abrasion			X	-	-	-	-	-	-	-	-		X	X	
status	X	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT	PL	IT	IT	X
status	X	IT	IT	45	44	43	42	IT	IT	IT	IT	IT	IT	PL	X
abrasion		X	X					-	-	-	-	-	X		
calculus		X	X					X	X	X	X	X	X		
leh		II	II					I	I	II	II	II	I	II	
caries		X	X					X	X	X	X	X	X		
paradont.		X	X					X	X	X	X	X	X		

- distal caries on the upper left dm^1 ;
- no permanent teeth erupted;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.			r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.				
p	p	p	p	p	p	-	-	-	-	-	-	-	-	-	-	-	p	p	p	-



- fewer bones available for examination than can be seen on drawing;

Pathologies:

- Neurocranium: fragments too small and eroded for evaluation;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 202

Sex: female?

Age: 16 – 40 yrs

Wealth: lower class

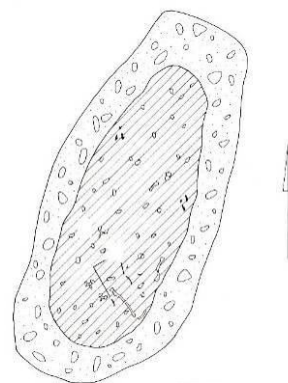
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	p	p	-	-	-	p	p	-	-	-	-	p	p	p	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 203

Sex: male?

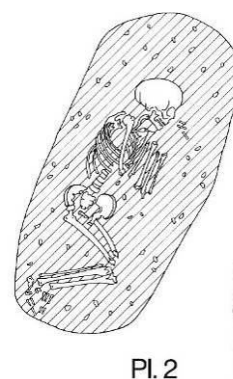
Age: 15 – 18 yrs

Wealth: ?

Preservation: grade 1

Tooth status:

paradont.		X	X	X	X	X	X	X	X	X	X	X	X	X	X	
caries		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
leh		II	II	I	I	II	II	II	II	II	II	II	III	II		
calculus		0	I	0	0	0	I	0	I	I	I	I	0	0	0	
abrasion		2	3	-	-	-	-	-	-	-	-	-	-	3	3	
status	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	PL
status	PL	IT	IT	45	44	43	IT	IT	IT	IT	33	34	35	36	37	PL
abrasion		2	3	-	-	-	-	-	-	-	-	-	-	3	2	
calculus		0	I	0	I	I	I	II	I	II	II	0	0	I	0	
leh		II	III	II	II	III	II	II	II	X	II	II	II	II	II	
caries		0	0	0	0	0	0	0	0	0	0	0	V	0	0	
paradont.		X	X	X	X	X	X	X	X	X	X	X	X	0	0	



- lower left I₂ covered in sinter and calculus, therefore evaluation of LEH impossible; caries on lower left P₂ caused peppercorn-size apical process (abscess) and possible inflammation underneath the labial alveolar margin (around the labial root tip);

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: external lamina too eroded for evaluation, as well as some parts of internal lamina; sinuses of the dura mater and frontal sinus show no visible pathological modifications; possible slight signs of cribra orbitalia found within right orbital roof;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible; the only remaining bone surfaces can be found on both radii and they contain no signs of periostitis;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 204

Sex: ?

Age: 20 – 40 yrs

Wealth: lower class

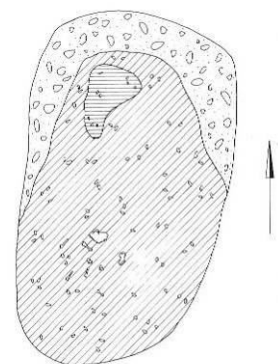
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	p	-	-	-	-	-	-	-	p	p	-	-	-	-	-	p	-	-	-



Pl. 2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: evaluation impossible;

Burial 205

Sex: female?

Age: 8 – 12 yrs

Wealth: lower class

Preservation: grade 3

Deciduous tooth status:

paradont.									X	X	X
caries									0	III	0
leh									0	0	0
calculus									I	0	0
abrasion									-	4	4
status	PL	PL	PD	PD	PD	PD	PD	IT	IT	IT	
status	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	
abrasion											
calculus											
leh											
caries											
paradont.											

Permanent tooth status:

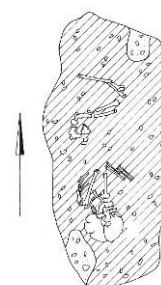
paradont.		X	X	X		X	X	X	X	X	X	X	X		
caries		X	0	X		0	0	0	0	0	X	X	X	0	
leh		II	II	II		II	III	III	III	III	II	II	II	II	
calculus		X	0	X		0	0	0	0	0	X	X	X	0	
abrasion		X	3	-		-	-	-	-	-	-	-	-	2	
status	PL	IT	IT	IT	PL	IT	IT	IT	IT	IT	IT	IT	IT	PL	PL
status	PL	IT	IT	IT	IT	IT	IT	PL	IT	IT	IT	IT	IT	37	PL
abrasion		X	3	-	-	-	-		-	-	-	-	-	2	
calculus		X	0	0	0	0	0		0	0	0	0	0	0	
leh		II	II	II	X	III	II		I	II	III	II	II	II	
caries		X	0	0	0	0	0		0	0	0	0	0	0	
paradont.		X	X	X	X	X	X		X	X	X	X	X	X	

- mesial caries on the upper left dm¹;

- upper premolars and upper left canine, as well as all second molars not erupted; lower right P₁ too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale															
Parietale															
Temporale															
Occipitale															
Maxilla															
Mandibula															
Clavicula															
Scapula															
Humerus															
Radius															
Ulna															
Ossa manus															
Os coxae															
Femur															
Tibia															
Fibula															
Ossa pedis															
Sternum															
Costae															
Vertebrae															
Sacrum															



Pl. 2

Pathologies:

- Neurocranium: internal and external lamina covered in sinter or too eroded for evaluation; possibly slight signs of cribra orbitalia found within left orbital roof;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 206

Sex: ?

Age: ~ 5 yrs

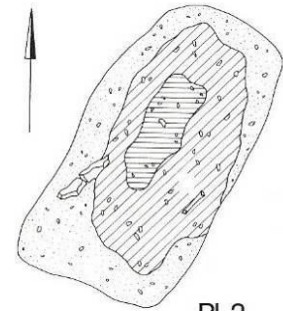
Wealth: ?

Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

- one undefinable bone fragment;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 207

Sex: female

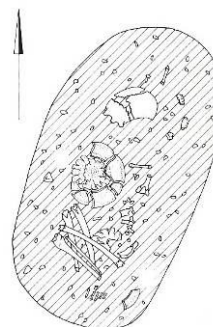
Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.			X	X							X			X	X	
caries			0	0							0			0	0	
leh			X	X							I			X	X	
calculus			0	0							0			0	0	
abrasion			4	-							-			4	3	
status	X	PL	IT	IT	PL	PL	PL	PL	PL	PL	IT	PL	PL	IT	IT	X
status	IT	PL	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
abrasion	2		4													
calculus	I		0													
leh	0		X													
caries	0		0													
paradont.	X		X													



Pl. 2

- most existing teeth too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.

Pathologies:

- Neurocranium: cranial bones (fragments) relatively thick; evaluation impossible for external and internal lamina, except for internal frontal region which contains a very porotic sagittal sinus; slight cribra orbitalia found within left orbital roof;
- Viscerocranium: missing (except for teeth);
- Postcranium: evaluation impossible except for the medial talar articular surface of the right calcaneus which shows grade 2 degenerative changes, including a porotic surface;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 208

Sex: ?

Age: Infans

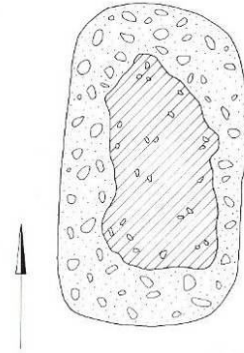
Wealth: ?

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 209

Sex: male?

Age: 30 – 40 yrs

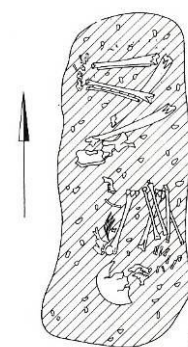
Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.	X	X	X	I	I	X	X	X	X	X	X	X							
caries	0	0	0	0	0	0	0	0	0	0	0	VI							
leh	0	0	0	0	0	0	0	0	0	0	0	X							
calculus	I	I	II	I	I	II	I	I	I	I	II	X							
abrasion	2	3	4	-	-	-	-	-	-	-	-	-							
status	IT	IT	IT	15	14	IT	IT	IT	IT	IT	IT	IT	PL	PL	PL	PL			
status	IL	47	46	45	44	43	IT	IT	IT	IT	IT	IT	PL	PL	PL	IT			
abrasion		3	4	-	-	-	-	-	-	-	-	-					3		
calculus		I	I	0	I	I	I	I	I	I	I	I	0				I		
leh		0	0	0	0	0	0	0	0	0	0	0	0				0		
caries		0	III	0	0	0	0	0	0	0	0	0	0				III		
paradont.		X	X	X	X	X	X	X	X	X	X	X					X		

- mesial caries on lower right M₁ caused apical process and formation of granuloma within disto-labial tooth socket (corresponding root also affected); occlusal caries on hypoconid/-conulid of lower left M₃; upper left P¹ completely abraded and granuloma formed within the alveolus;



Pl. 2

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	p	p	p	p
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

- extra mandible (2nd individual) found within same burial;

Pathologies:

- Neurocranium: cranial bones (fragments) relatively thick; evaluation impossible for external and internal lamina; signs of inflammation found within left frontal sinus;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation of most bone surfaces impossible; dislocation of right hip and formation of false joint between original acetabulum and greater sciatic notch (Plate VI e), right femoral head also shows corresponding eburnation;

Vertebrae: evaluation impossible, except for one lumbar vertebral body which formed massive osteophytes;

Joints: evaluation impossible;

Burial 210

Sex: male

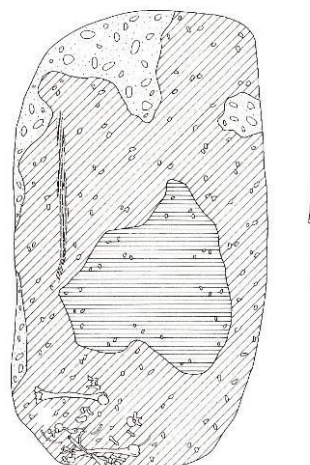
Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

Tooth status:																	
paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
abrasion	3	3	3	-	-	-	-	-	-	-	-	-	-	3	3	3	
calculus	0	II	0	0	0	I	0	I	II	0	0	0	0	0	0	0	
leh	X	X	X	I	I	I	0	0	0	0	I	I	I	I	I	I	
caries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
paradont.	X	X	X	X	X	X	0	0	0	0	X	0	0	X	X	X	



PL 2

- lower right molars too eroded for evaluation of LEH;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible for mandible;
- Postcranium: exostoses formed on acromial end of right clavicle and proximal digital bone of the right foot; possible enthesopathy on right radial tuberosity (very eroded); marginal lipping distinguishable on edges of articular surfaces of all existing carpals, metacarpals, metatarsals and digital bones of the hand; right metatarsal I developed accessory articular surface facing right metatarsal II; the original articular surface for metatarsal III on metatarsal II turned necrotic and extra bone tissue formed on plantar side of bone;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: osteophytes formed on rateable vertebral bodies and they all contain small Schmorl's nodes (Plate IV a) on their caudal side;
- Lumbar vertebrae: one of the two existing vertebral bodies contains Schmorl's nodes and the other an impression of the cranial plate;

Joints: evaluation impossible;

Burial 211

Sex: female?

Age: 15 – 40 yrs

Wealth: lower class

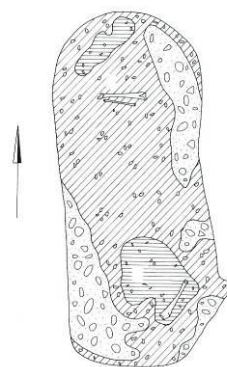
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
-	-	-	-	-	-	-	-	p	-	-	-	-	-	p	-	-	-	p	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

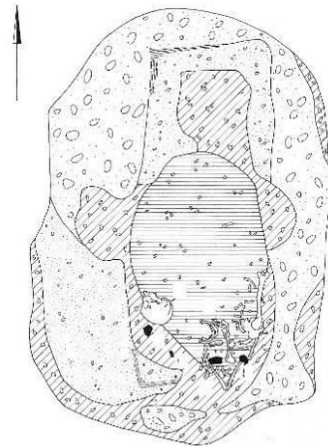
Joints: missing;

Burial 212

Sex: male
Age: 40 – 60 yrs
Wealth: upper class
Preservation: grade 3

Tooth status:

paradont.	I		X	X	X	X	X	X		X						
caries	0		X	X	X	VI	X	X		X						
leh	I		X	X	X	X	X	X		X						
calculus	I		X	X	X	X	X	X		X						
abrasion	4		-	-	-	-	-	-		-						
status	18	IL	IL	15	14	13	12	11	21	PL	23	PL	PL	IL	PL	PL
status	IL	47	46	45	44	43	42	41	31	32	33	34	35	PL	37	38
abrasion		4	4	-	-	-	-	-	-	-	-	-	-		4	3
calculus		0	I	0	0	0	0	0	0	0	0	0	I		II	I
leh		0	0	I	I	0	X	X	X	X	I	I	I		I	I
caries		0	0	0	0	0	0	0	0	0	0	0	0		0	0
paradont.		X	II	II	II	X	II	II	II	II	X	II	II		II	III



Pl. 3

- except for the upper right M³ all existing upper teeth completely abraded (uncommon for this population) and lower incisors very abraded, therefore certain evaluations impossible; alveoli of both upper I²s contain pea-size apical processes, probably caused by caries;

Existing skeletal remains:

	+	Frontale
	+	Parietale
	+	Temporale
	+	Occipitale
	+	Maxilla
	+	Mandibula
	D	Clavicula
	D	Scapula
	D	Humerus
	D	Radius
	D	Ulna
	D	Ossa manus
	D	Os coxae
	F	Femur
	F	Tibia
	F	Fibula
	F	Ossa pedis
	S	Sternum
	C	Costae
	V	Vertebrae
	S	Sacrum

Pathologies:

- Neurocranium: external and internal lamina too eroded for evaluation; exostoses found on body of the sphenoid bone (cervical side); hole (approx. 1cm diameter) in the middle of frontal bone probably related to postmortal damage; no signs of cribra orbitalia;
- Viscerocranium: no visible pathological modifications found;
- Postcranium: massive marginal lipping distinguishable on all existing clavicular tuberosities; left clavicle more massive than the one on the right; exostoses found on acromial end of left clavicle (caudally), on lateral margins of left and right scapula, inferior to glenoidal cavities, as well as inferior to olecranon of left ulna, on proximal ends of both radii and on existing metacarpals, metatarsals and digital bones of both hands; no signs of periostitis found on remaining bone surfaces; rateable articular surfaces of the existing carpals, metacarpals and metatarsals show grade 2/grade 3 degenerative changes and cyst-like impressions developed around their articular surfaces; one of the lower left rib

fragments shows well-healed intravital fracture; manubrium sterni, cranial half of the body of the sternum (the rest missing) and some heads of ribs completely deformed and first left rib and manubrium sterni knitted (Plate III a);

Vertebrae:

- Cervical vertebrae: articular surfaces of C3, C4 and C5 (cranially) show grade 5 pathological modifications, including formation of cyst-like impressions; articular surfaces of C5 (caudally) and C6 developed grade 3/grade 4 degenerative modifications; massive osteophytes developed on all existing vertebral bodies and the vertebral bodies of C5 and C6 contain cyst-like impressions (cranially and caudally);
- Thoracic vertebrae: articular surfaces of existing thoracic vertebrae can not be rated due to erosion, but appear less modified than articular surfaces of cervical vertebrae; vertebral bodies formed massive osteophytes;
- Lumbar vertebrae: rateable articular surfaces rated grade 5, including appositions on surface; massive osteophyte development (approx. 1cm) on vertebral bodies; L2 and L3 formed a huge ventral cone spore (Plate III b).

Joints:

	right	left
shoulder joint	4	3
elbow joint	2	e.i.
proximal wrist	4	4
radio-ulnar joint	2	2
hip joint	m.	m.
knee joint	m.	m.
proximal ankle	m.	m.
distal ankle	m.	m.

Burial 214

Sex: male?

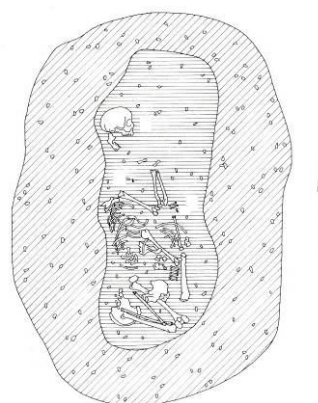
Age: 24 – 30 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.									X	X	X	X	X	X	X	X	X
caries									0	0	0	0	0	0	0	0	0
leh									II	I	II	I	II	I	II	II	II
calculus									0	I	0	I	I	I	I	0	0
abrasion									-	-	-	-	-	-	3	2	2
status	X	PL	PL	PL	PL	PL	PL	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT
status	X	PL	PL	IT	IT	43	PL	IT	IT	IT	IT	PL	IT	IT	IT	IT	IT
abrasion				-	-	-		-	-	-	-		-	3	2	1	1
calculus				0	0	0		I	I	I	0		0	0	0	0	0
leh				I	II	I		I	I	0	I		II	I	I	II	II
caries				0	0	0		0	0	0	0		0	0	0	0	0
paradont.				X	X	X		X	X	X	X		X	X	X	X	X



PL.1

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: missing;
- Postcranium: left radial tuberosity slightly inflamed and small holes on superior edge (possible enthesopathy); right radial tuberosity and lesser trochanter of left femur also inflamed (acute periostitis); possible periostitis found on left femoral and left tibial fragment; distinct signs of periostitis distinguishable on all remaining bone surfaces of both fibulas; articular surface of left medial cuneiform bone shows grade 2 marginal lipping; formation of cyst-like impressions around proximal articular surfaces of existing metatarsals; tuberosity of right fifth metatarsal bone missing which is probably related to epigenesis;

Vertebrae: evaluation impossible;

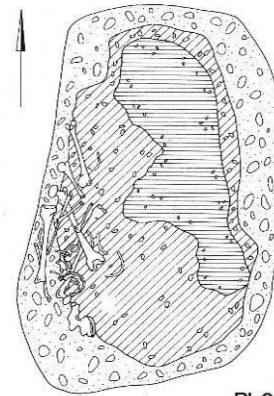
Joints: evaluation impossible;

Burial 215

Sex: male
Age: 27 – 33 yrs
Wealth: lower class
Preservation: grade 2

Tooth status:

paradont.																
caries																
leh																
calculus																
abrasion																
status	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL
status	48	47	46	45	44	43	IT	IT	PL	IT	IT	IT	35	36	37	38
abrasion	2	3	4	-	-	-	-	-		-	-	-	-	4	3	2
calculus	II	II	II	I	I	0	I	I		II	II	I	I	II	I	I
leh	I	X	I	I	I	I	I	I		X	I	0	I	I	I	I
caries	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0
paradont.	X	X	X	X	X	X	X	X		X	X	X	X	II	II	II



Pl. 2

- some teeth too eroded for evaluation of LEH; alveolar cavity of lower right M₃ inflamed (probably due to periodontal disease);

Existing skeletal remains:

			Frontale
	r.	l.	Parietale
	r.	l.	Temporale
	r.	l.	Occipitale
			Maxilla
	+		Mandibula
	p	p	Clavicula
	p	p	Scapula
	p	p	Humerus
	p	p	Radius
	p	p	Ulna
	r.	l.	Ossa manus
	r.	l.	Os coxae
	p	p	Femur
	r.	l.	Tibia
	p	p	Fibula
	p	p	Ossa pedis
	p	p	Sternum
	-		Costae
	p	p	Vertebrae
	p	p	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: mandible contains hematoma (approx. 1cm diameter) just below right oblique line and remains of a hematoma on lingula above mandibular foramen; (Plate V a)
- Postcranium: acromial end of right clavicle slightly inflamed around tuberosity of the costoclavicular ligament; small exostoses developed on existing digital bones of the hands, distal ends of both femurs (dorsally) and right tibia (laterally); periostitis distinguishable on fragments of left femur, right tibia (medially only) and right fibula; medial and lateral articular surfaces of left patella show grade 2 degenerative changes;

Vertebrae:

- Cervical vertebrae: the only existing articular surface (lower right) on C1 contains grade 2 degenerative changes, including slight porosity on face;
- Thoracic vertebrae: osteophytes formed on rateable vertebral bodies;

- Lumbar vertebrae: evaluation impossible;

Joints: evaluation impossible except for right distal wrist which is rated grade 3 and right radio-ulnar joint which is rated grade 2;

Burial 216

Sex: male

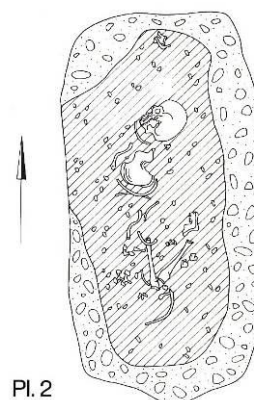
Age: 27 – 33 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:

paradont.	X	X	X	X	X						X	X	X	X	X	X
caries	0	0	0	0	0						0	0	0	0	0	0
leh	I	I	I	I	I						II	I	I	I	I	0
calculus	0	0	I	0	0						0	0	0	0	I	0
abrasion	2	3	4	-	-						-	-	-	4	3	2
status	IT	IT	IT	IT	IT	PL	PL	PL	PL	PL	IT	IT	IT	IT	IT	IT
status	48	47	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT	37	38
abrasion	2	3		-	-	-	-	-	-	-	-	-	-	3	3	2
calculus	0	0		0	I	0	I	I	I	0	0	0	0	I	I	0
leh	X	X		I	I	I	II	II	II	II	I	I	0	0	0	0
caries	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
paradont.	X	X		X	X	X	X	X	X	X	X	X	X	X	I	I



Pl. 2

- lower right molars too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.

Pathologies:

- Neurocranium: evaluation impossible for external and internal lamina, except for internal frontal region which contains a small remaining patch of hyperostosis adjacent to sagittal sinus (remaining cranial bones broken into small fragments); no signs of cribra orbitalia found within right orbital roof; the right inferior bulb of the jugular vein is double the size of the one on the left;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible for long bones, except for left fibula which contains cyst-like impressions (holes) around distal articular surface; small cyst-like impressions also found around proximal articular surfaces of existing metatarsals and existing digital bones of the feet; the proximal articular surface of the proximal digital bone (I) of the right foot contains two cyst-like impressions possibly related to joint mouse; tuberosity of the right fifth metatarsal bone missing which is probably of epigenetic origin;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 217

Sex: male?

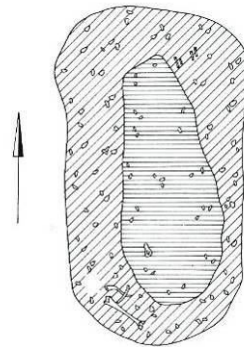
Age: 24 – 40 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

paradont.																
caries																
leh																
calculus																
abrasion																
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	45	IT	PL	PL	PL	PL	IT	IT	IT	IT	IT	IT	IT
abrasion	4	3	4	-	-					-	-	-	-	4	3	3
calculus	I	II	II	I	0					I	I	II	I	II	I	II
leh	X	X	X	I	I					I	I	I	I	X	X	X
caries	V	X	V	V	0					0	0	0	0	0	V	0
paradont.	X	X	X	X	X					X	X	X	X	X	X	X



Pl. 2

- some teeth too eroded for certain evaluations; distal caries on lower left M₂ destroyed more than half the crown; on the lower right side caries affected P₂ distally and M₁ and M₃ mesially;

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
p	p		Mandibula
p	p	r.	Clavicula
p	p	r.	Scapula
		r.	Humerus
r.	r.		Radius
p	p	r.	Ulna
p	p	r.	Ossa manus
		r.	Os coxae
r.	r.		Femur
r.	r.		Tibia
		r.	Fibula
		r.	Ossa pedis
p	p		Sternum
			Costae
p	p		Vertebrae
			Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible, except for existing digital bones of the hands which formed small plantar exostoses next to their proximal articular surfaces;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 218

Sex: ?

Age: Infans

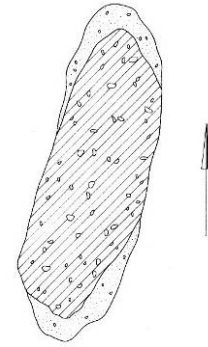
Wealth: ?

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 219

Sex: male?

Age: ~ 5 yrs

Wealth: ?

Preservation: grade 2

Deciduous tooth status:

paradont.	X	X	X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0	0	0	0
leh	0	0	0	0	0	0	0	0	0	0
calculus	1	0	0	0	0	0	0	0	0	0
abrasion	3	4	-	-	-	-	-	-	4	3
status	IT	IT	IT	IT	IT	IT	IT	IT	IT	IT
status	IT	PL	IT	PL	PD	PD	IT	IT	IT	IT
abrasion	3		-				-	-	4	3
calculus	1		0				1	0	1	1
leh	0		0				0	0	0	0
caries	0		0				0	0	0	0
paradont.	X		X				X	X	X	X

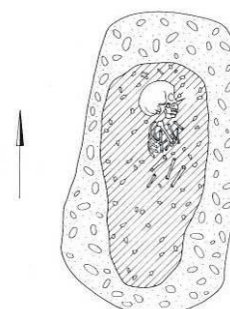
Permanent tooth status:

paradont.			X			X	X	X	X	X		X		X		
caries			0			X	X	X	X	X		X		0		
leh			I			II	I	I	I	I		II		I		
calculus			0			X	X	X	X	X		X		0		
abrasion			2			-	-	-	-	-		-		2		
status	X	PL	IT	PL	PL	IT	IT	IT	IT	IT	PL	IT	PL	IT	PL	X
status	X	PL	IT	PL	PL	IT	IT	IT	IT	IT	PL	PL	PL	IT	PL	X
abrasion			2			-	-	-	-	-				2		
calculus			0			X	X	0	0	X				0		
leh			I			II	I	I	I	I				I		
caries			0			X	X	0	0	X				0		
paradont.			X			X	X	X	X	X				X		

- only upper molars and lower I₁ erupted; lower I₁s merged (Plate I d);

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.			r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.			
p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.	p. p.



Pl. 2

Pathologies:

- Neurocranium: bone fragments extremely eroded, therefore evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 220

Sex: ?

Age: 15 – 18 yrs

Wealth: ?

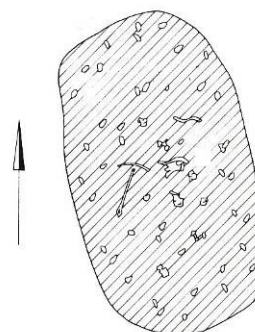
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
-	-	-	-	-	-	p	p	-	p	p	-	-	-	p	-	-	p	p	-	p



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

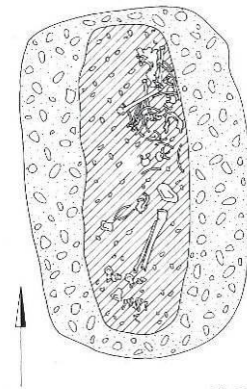
Joints: missing;

Burial 221

Sex: male
Age: 35 – 45 yrs
Wealth: lower class
Preservation: grade 3

Tooth status:

parodont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	48	47	46	45	IT	PL	IT	PL	PL	32	33	34	35	36	37	38	
abrasion	4	4	4	-	-		-			-	-	-	-	4	4	4	
calculus	I	I	II	II	I		II			I	II	I	II	II	I	I	
leh	0	0	0	0	0		0			X	III	0	0	X	0	0	
caries	0	0	III	0	0		0			0	0	0	0	0	0	0	
parodont.	II	II	X	X	X		X			X	X	II	II	X	II	II	



Pl. 2

- distal caries on lower left M_1 ;

Existing skeletal remains:

		Frontale
r.	r.	Parietale
l.	l.	Temporale
		Occipitale
		Maxilla
p	p	Mandibula
r.	r.	Clavicula
p	p	Scapula
		Humerus
p	p	Radius
		Ulna
p	p	Ossa manus
		Os coxae
p	p	Femur
r.	r.	Tibia
l.	l.	Fibula
		Ossa pedis
p	p	Sternum
		Costae
p	p	Vertebrae
		Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible for mandible;
- Postcranium: tuberosities of the costoclavicular ligaments show signs of inflammation on both clavicles; slight signs of periostitis found on remaining bone surface of left humerus, right ulna and left tibia; articular surfaces of existing metacarpals and digital bones of the hand rated grade 1; cyst-like impressions (holes) developed around existing articular surfaces of left humerus, left carpals, metacarpals and digital bones of the hands/feet, as well as tarsals; exostoses formed on both patellae;

Vertebrae:

- Cervical vertebrae: caudal articular surfaces of C1 and cranial articular surfaces of C2 show grade 2 pathological modifications; right caudal articular surface of C2 (evaluation impossible for left) and right cranial articular surface of C3 developed grade 6 degenerative modifications, whereas left cranial articular surface of C3 rated grade 2; caudal articular surfaces of C3 show grade 6 pathological modifications on the left and grade 5 on the right; C3 contains a healed compression fracture on the right half of the body which probably led to these

massive signs of overstraining on the next lower articular surface on the left, in order to relieve the right side massive osteophytes developed on vertebral bodies of C2 and C3;

- Thoracic vertebrae: articular surfaces of the only rateable thoracic vertebra are rated grade 2; existing vertebral bodies formed massive osteophytes;
- Lumbar vertebrae: evaluation impossible;

Joints:

	right	left
shoulder joint	m.	2
elbow joint	e.i.	e.i.
proximal wrist	m.	4
radio-ulnar joint	e.i.	2
hip joint	m.	2
knee joint	m.	m.
proximal ankle	m.	m.
distal ankle	e.i.	e.i.

Burial 222

Sex: ?

Age: adult

Wealth: upper class

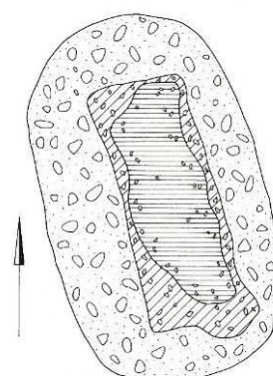
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	r.	r.	-	-	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 223

Sex: female?

Age: 20 – 80 yrs

Wealth: upper class

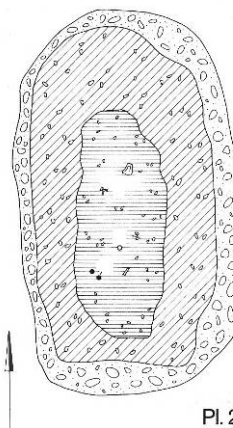
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r	r	r	-	-	p	-	-	-	-	p	p	-	-	-	-	-	-	p	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 224

Sex: female?

Age: 8 – 9 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.	X	X			X	X		X	X	X
caries	0	0			0	0		0	0	0
leh	X	X			0	0		0	0	0
calculus	0	0			0	I		0	0	I
abrasion	4	4			-	-		-	4	4
status	IT	IT	PL	PL	IT	IT	PL	IT	64	65
status	85	84	IT	PD	PD	PD	PD	IT	74	75
abrasion	3	3	-					-	3	3
calculus	I	0	0					0	I	0
leh	0	0	X					0	0	0
caries	0	0	0					0	0	0
paradont.	X	X	X					X	X	X

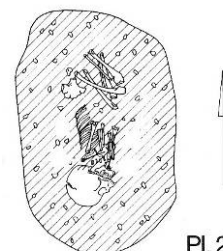
Permanent tooth status:

paradont.		X	X		X	X	X	X	X	X	X				X	X	
caries		X	0		X	X	X	X	X	X	X				0	X	
leh		X	X		I	I	X	I	I	0	I				I	II	
calculus		X	0		X	X	X	X	X	X	X				0	X	
abrasion		X	X		-	-	-	-	-	-	-				2	X	
status	X	IT	IT	PL	IT	IT	IT	IT	IT	IT	IT	24	25	26	IT	X	
status	X	47	46	45	44	IT	IT	IT	IT	IT	IT	34	35	36	37	X	
abrasion			2			-	-	-	-	-	-				2		
calculus			I			X	X	I	I	I	X				0		
leh			I			II	X	I	I	I	II				I		
caries			0			X	0	0	0	0	X				0		
paradont.			0			X	X	X	X	X	X				0		

- some teeth too eroded for evaluation of LEH;
- only lower incisors and first molars erupted; some teeth too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p



Pathologies:

- Neurocranium: internal and external lamina covered in sinter or too eroded for evaluation; distinct signs of cribra orbitalia found within left orbital roof (right side is missing);
- Viscerocranium: evaluation impossible;
- Postcranium: slight signs of periostitis found on remaining bone surface of left ulna (evaluation of bone surface impossible for all other long bones);

Vertebrae:

- Cervical vertebrae: existing articular surfaces of C1, C2 and C3 rated grade 1/grade 2;
- Thoracic vertebrae: evaluation impossible;
- Lumbar vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 225

Sex: ?

Age: 3 – 5 yrs

Wealth: ?

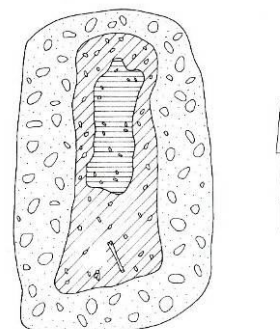
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r	r	r	-	-	r	r	r	r	r	r	r	r	r	r	r	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	p	p	-	-	-	-	-	p	p	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 226

Sex: ?

Age: Infans

Wealth: ?

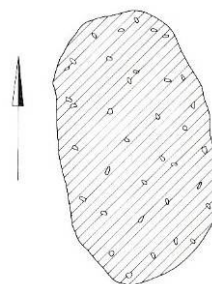
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 227

Sex: ?

Age: Infans

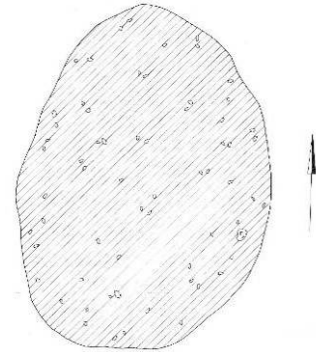
Wealth: ?

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 228

Sex: ?

Age: Infans

Wealth: ?

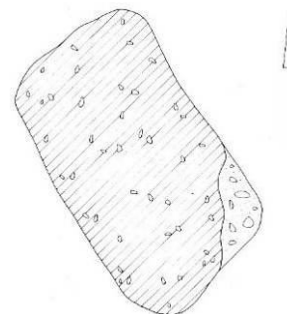
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.



Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 229

Sex: female?

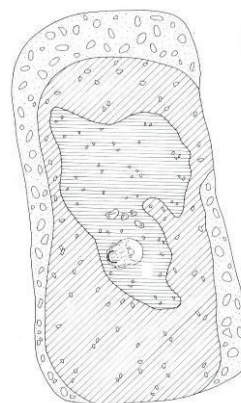
Age: 35 – 45 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

paradont.			X														
caries			0														
leh			X														
calculus			0														
abrasion			4														
status	X	PL	IT	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	IT	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	PL	X
abrasion	2									-							
calculus	I									II							
leh	0									X							
caries	0									0							
paradont.	X									X							



Pl. 2

- existing incisor almost completely abraded and upper molar too eroded for evaluation of LEH;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: cyst-shaped lesion (approx. 1cm diameter) on left parietal bone (Plate VI a, b and c); left sigmoid sinus contains small tile-shaped appositions in its curve (sigmoid sinus not complete, posterior part of curve and transversal sinuses missing); possible signs of cribra orbitalia found within both orbital roofs;
- Viscerocranium: missing;
- Postcranium: left clavicle formed anterior ridge with small exostoses and inferior acromial end appears very porotic; sternal articular surface of left clavicle shows grade 3 degenerative changes, including a porotic surface; proximal articular surfaces of existing proximal digital bones of the hands rated grade 3 and small holes formed around articular surfaces; bone surface of right fibula contains slight signs of periostitis and medial exostoses developed on distal end; proximal articular surface of proximal digital bone (I) of the left foot contains cyst-like impression which is possibly related to a joint mouse; all bones of very diminished mass, probably due to osteoporosis;

Vertebrae:

- Cervical vertebrae: existing articular surfaces of C1 show grade 3 degenerative changes and left cranial articular surface of C2 rated grade 4 with parts of the face looking „polished“ and formation of additional bone tissue around the joint;
- Thoracic vertebrae: missing;
- Lumbar vertebrae: missing;

Joints: evaluation impossible;

Burial 230

Sex: female

Age: 22 – 40 yrs

Wealth: lower class

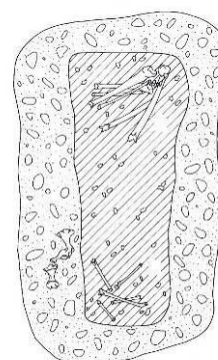
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
-	-	-	-	-	-	-	-	p	p	p	p	-	p	p	p	p	p	-	-	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible except for distal ends of left and right fibula, which both developed lateral exostoses;

Vertebrae: missing;

Joints: missing;

Burial 231

Sex: female?

Age: 20 – 80 yrs

Wealth: upper class

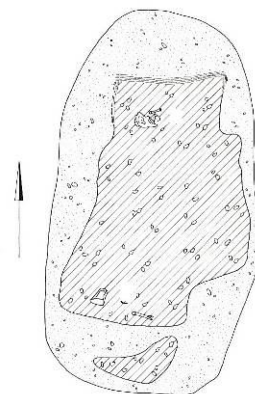
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r	r	r	-	-	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	-	-	p	p	-	-	-	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 232

Sex: ?

Age: 22 – 60 yrs

Wealth: lower class

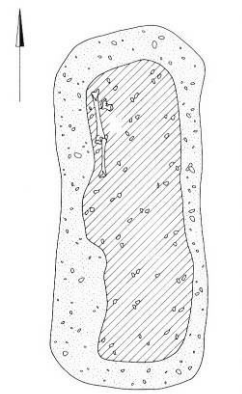
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

	r.	Fontale
	p	Parietale
	r.	Temporale
	p	Occipitale
	r.	Maxilla
	p	Mandibula
	r.	Clavicula
	p	Scapula
	r.	Humerus
	p	Radius
	r.	Ulna
	r.	Ossa manus
	p	Os coxae
	r.	Femur
	r.	Tibia
	p	Fibula
	r.	Ossa pedis
	p	Sternum
	r.	Costae
	p	Ventribrae
	r.	Sacrum



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

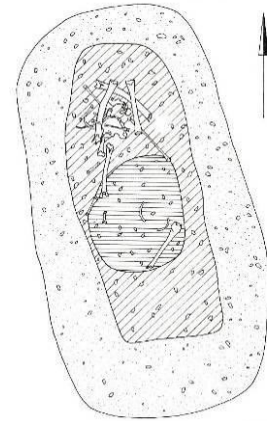
Burial 233

Sex: male?

Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 3

Tooth status:[illegible]

Pl. 2

- most teeth too eroded for evaluation of LEH; both lower M₃S suffer from enamel imperfecta;

Existing skeletal remains:

		Frontale
	r. l.	Parietale
	r. l.	Temporale
	r. l.	Occipitale
		Maxilla
	p	Mandibula
	p	Clavicula
	r. l.	Scapula
	r. l.	Humerus
	p	
	p	Radius
	p	Ulna
	p	
	p	Ossa manus
	p	
	r. l.	Os coxae
	r. l.	
	p	Femur
	p	
	r. l.	Tibia
	p	
	p	Fibula
	p	
	r. l.	Ossa pedis
	p	
	p	Sternum
	p	Costae
	p	
		Vertebrae
		Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: missing;

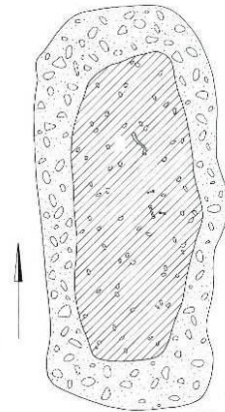
Joints: missing;

Sex: male?
Age: 22 – 60 yrs
Wealth: lower class
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 235

Sex: ?

Age: Infans

Wealth: ?

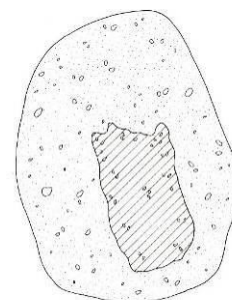
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	r.	r.	-	-	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 236

Sex: ?

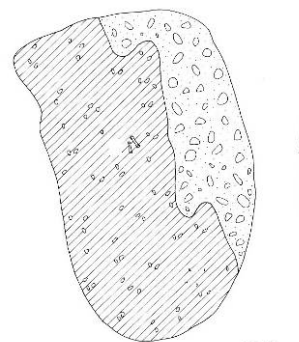
Age: Infans

Wealth: ?

Preservation: grade 5

Tooth status:[illegible]

Existing skeletal remains:

[illegible]

Pl. 1

- no skeletal remains available for examination;

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 237

Sex: ?

Age: Infans

Wealth: ?

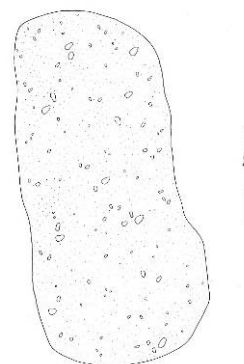
Preservation: grade 5

Tooth status:

[illegible]

Existing skeletal remains:

		Frontale
r.	l.	Parietale
r.	l.	Temporale
		Occipitale
		Maxilla
		Mandibula
r.	l.	Clavicula
r.	l.	Scapula
r.	l.	Humerus
r.	l.	Radius
r.	l.	Ulna
r.	l.	Ossa manus
r.	l.	Os coxae
r.	l.	Femur
r.	l.	Tibia
r.	l.	Fibula
r.	l.	Ossa pedis
		Sternum
		Costae
		Vernbrae
		Sacrum



Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Sex: male?
Age: 30 – 50 yrs
Wealth: lower class
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

p	r		Fontale
p	r		Parietale
p	r		Temporale
p	r		Occipitale
.	.		Maxilla
.	.		Mandibula
r	r		Clavicula
p	r		Scapula
.	.		Humerus
r	r		Radius
r	r		Ulna
r	r		Ossa manus
r	r		Os coxae
.	.		Femur
r	r		Tibia
.	.		Fibula
r	r		Ossa pedis
p	r		Sternum
.	.		Costae
.	.		Ventebrae
.	.		Sacrum



Pl. 2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: left clavicle with perimortal fracture (mid-shaft broken into two halves);

Vertebrae: missing;

Joints: missing;

Burial 239

Sex: ?

Age: 22 – 40 yrs

Wealth: upper class

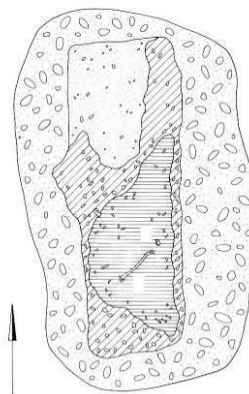
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r	r	r	-	-	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	p	-	p	p	-	-	-	-	-	-	-	-



Pl. 5

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 240

Sex: ?

Age: adult

Wealth: upper class

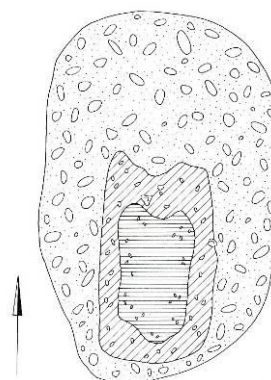
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.	l.



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 241

Sex: male?

Age: 22 – 40 yrs

Wealth: upper class

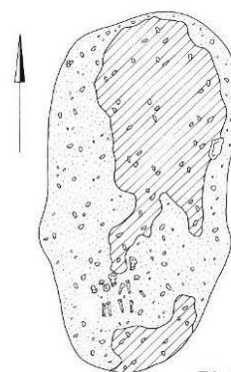
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r. l.	r. l.	-	-	-	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	p p	-	-	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 242

Sex: male?

Age: 19 – 23 yrs

Wealth: lower class

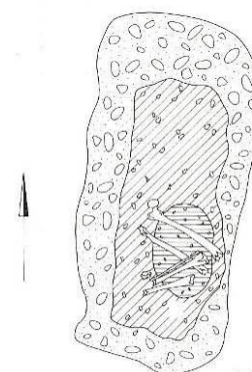
Preservation: grade 3

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	-	-	-	p	p	p	p	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: right femur: distal shaft with perimortal trauma on dorsal side (approx. 0.7cm deep circular impression with a diameter of 1.5cm) (Plate III c); both fibulas peri- and post-mortally broken into several fragments;

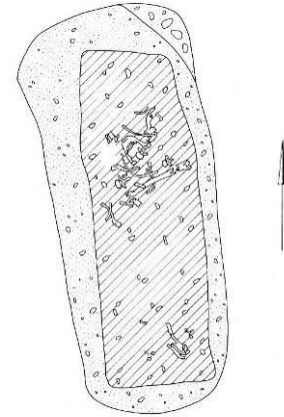
Vertebrae: missing;

Joints: missing;

Burial 243

Sex: male
Age: 24 – 30 yrs
Wealth: lower class
Preservation: grade 3

Tooth status:

[illegible]

Pl. 2

- lower canines and lower left P₂ too eroded for evaluation of LEH; parts of enamel of lower I₁s post-mortally chipped off and crown of lower left I₂ post-mortally broken off completely;

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
	r.	l.	Occipitale
	r.	l.	Maxilla
p	p	p	Mandibula
	r.	l.	Clavicula
p	p	p	Scapula
	r.	l.	Humerus
p	p	p	Radius
	r.	l.	Ulna
	r.	l.	Ossa manus
p	p	p	Os coxae
	r.	l.	Femur
	r.	l.	Tibia
	r.	l.	Fibula
	r.	l.	Ossa pedis
	r.	l.	Sternum
p	p	p	Costae
	r.	l.	Vertebrae
	r.	l.	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible for mandible;
- Postcranium: small holes formed around proximal articular surfaces of all existing metacarpals and digital bones of the hand; the proximal articular surfaces of the existing metacarpals show grade 2 degenerative modifications;

Vertebrae:

- Cervical vertebrae: evaluation impossible;
- Thoracic vertebrae: relatively small osteophytes formed on the only rateable vertebral body;
- Lumbar vertebrae: missing;

Joints: evaluation impossible;

Burial 244

Sex: male

Age: 35 – 45 yrs

Wealth: lower class

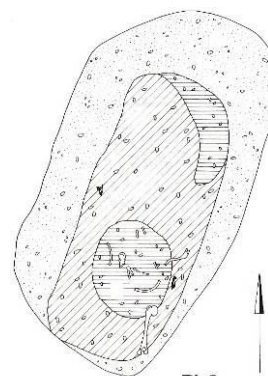
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	p	-	-	-	p	-	-	-	-	-	p	p	-	p	-



Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: proximal articular surface of proximal digital bone (I) of the right foot contains a relatively large cyst-like impression which is possibly related to a joint mouse, additional bone tissue developed laterally from joint;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 245

Sex: ?

Age: Infans

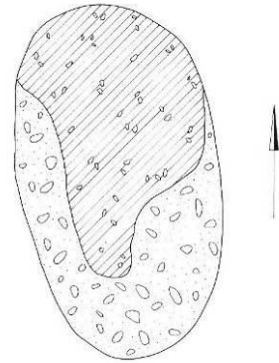
Wealth: ?

Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 246

Sex: male?

Age: 6 – 7 yrs

Wealth: ?

Preservation: grade 1

Deciduous tooth status:

paradont.	X	X	X	X					X	X	X
caries	0	0	0	0					0	0	0
leh	0	0	0	0					0	0	0
calculus	0	0	0	0					0	0	0
abrasion	3	3	-	-					-	3	3
status	55	IT	IT	IT	PL	PL	PL	IT	IT	IT	IT
status	85	84	PL	IT	IT	IT	IT	73	74	75	
abrasion	3	3		-	-	-	-	-	3	3	
calculus	0	0		0	0	0	0	0	0	0	
leh	0	0		0	0	0	0	0	0	0	
caries	0	0		0	0	0	0	0	0	0	
paradont.	0	X		X	X	X	X	X	X	X	

Permanent tooth status:

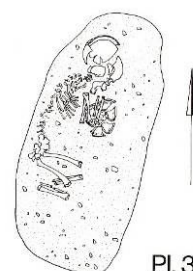
paradont.		X	X						X							X		
caries		X	X						X							X		
leh		II	II						II							II		
calculus		X	X						X							X		
abrasion		X	X						-							X		
status	X	IT	IT	15	14	13	12	11	IT	21	22	23	24	IT	PL	X		
status	X	IT	IT	45	44	IT	IT	IT	IT	IT	33	34	35	IT	PL	X		
abrasion		X	X			-	-	-	-	-						X		
calculus		X	X			X	X	X	X	X						X		
leh		X	II			II	II	II	II	II						II		
caries		X	X			X	X	X	X	X						X		
paradont.		X	X			X	X	X	X	X						X		

- no permanent teeth erupted;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

- one additional upper left molar not belonging to this individual;



Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 247

Sex: female?

Age: 5 – 7 yrs

Wealth: ?

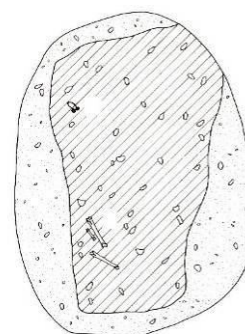
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	r.	r.	-	-	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	p	p	-	-	-	-	-



Pl. 3

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 248

Sex: male?

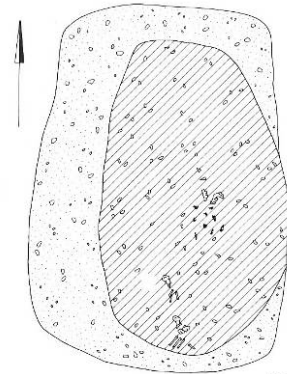
Age: 22 – 30 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	IT	PL	IT	IT	PL	PL	IT	PL	PL	IT	IT	IT	IT	IT	PL	PL	
abrasion	2		3	-			-			-	-	-	-	4			
calculus	0		0	0			0			0	0	0	0	0			
leh	X		X	X			X			X	X	X	X	X			
caries	0		0	0			0			0	0	0	0	0			
paradont.	X		X	X			X			X	X	X	X	X			



Pl. 2

- all existing teeth too abraded for evaluation of LEH;

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
p			Mandibula
	r.	l.	Clavicula
	r.	l.	Scapula
	r.	l.	Humerus
	r.	l.	Radius
	r.	l.	Ulna
	r.	l.	Ossa manus
p			Os coxae
	r.	l.	Femur
	r.	l.	Tibia
	r.	l.	Fibula
	r.	l.	Ossa pedis
p			Sternum
			Costae
p			Vertebrae
			Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: missing;

Burial 249

Sex: ?

Age: 15 – 18 yrs

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

paradont.						X				
caries						0				
leh						X				
calculus						0				
abrasion						-				
status	IT	IT	IT	IT	IT	IT	PD	PD	PD	PD
status	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
abrasion										
calculus										
leh										
caries										
paradont.										

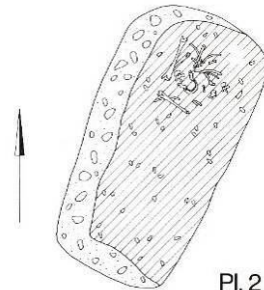
- tooth surface too eroded for evaluation of LEH;

Permanent tooth status:

paradont.																	
caries																	
leh																	
calculus																	
abrasion																	
status	X	PL	PL	PL	PL	PL	PL	PL	X	PL	PL	PL	PL	PL	PL	PL	X
status	PL	IT	IT	IT	IT	IT	IT	PL	IT	IT	IT	IT	IT	IT	IT	IT	IT
abrasion		2	3	-	-	-	-		-	-	-	-	-	3	2	X	
calculus		0	0	0	0	0	I		I	I	I	0	0	I	0	X	
leh		X	X	X	0	I	X		X	0	X	X	X	X	X	I	
caries		0	0	0	0	0	0		0	0	0	0	0	0	0	X	
paradont.		X	X	X	X	X	X		X	X	X	X	X	X	X	X	

- lower left M₃ not erupted; most other existing teeth too eroded for evaluation of LEH;

Existing skeletal remains:

[illegible]

Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible;
- Postcranium: no degenerative changes found on existing digital bones of the hands; evaluation impossible for remaining bone material;

Vertebrae: articular surfaces of the only existing cervical vertebra rated grade 2;

Joints: missing;

Burial 250

Sex: ?

Age: Infans

Wealth: ?

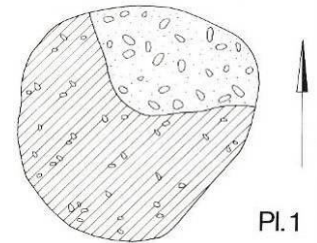
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

					Frontale
r.	r.	r.	r.	r.	Parietale
r.	r.	r.	r.	r.	Temporale
					Occipitale
					Maxilla
					Mandibula
r.	r.	r.	r.	r.	Clavicula
r.	r.	r.	r.	r.	Scapula
r.	r.	r.	r.	r.	Humerus
r.	r.	r.	r.	r.	Radius
r.	r.	r.	r.	r.	Ulna
r.	r.	r.	r.	r.	Ossa manus
r.	r.	r.	r.	r.	Os coxae
r.	r.	r.	r.	r.	Femur
r.	r.	r.	r.	r.	Tibia
r.	r.	r.	r.	r.	Fibula
r.	r.	r.	r.	r.	Ossa pedis
					Sternum
					Costae
					Ventebrae
					Sacrum



Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 251

Sex: ?

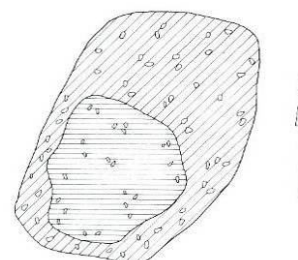
Age: Infans

Wealth: ?

Preservation: grade 5

Tooth status:[illegible]

Existing skeletal remains:

[illegible]

Pl. 1

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 252

Sex: male?

Age: 4 – 5 yrs

Wealth: ?

Preservation: grade 4

Deciduous tooth status:

paradont.	X	X	X	X	X	X		X	X	X
caries	0	0	0	0	0	0		0	0	0
leh	X	0	X	X	X	X		X	0	0
calculus	0	0	0	0	0	0		0	1	0
abrasion	3	3	-	-	-	-		-	3	2
status	IT	IT	IT	IT	IT	IT	PL	IT	IT	IT
status	IT	IT	PL	PL	PL	PL	PL	PL	PL	IT
abrasion	3	2								2
calculus	0	0								0
leh	0	0								0
caries	0	0								0
paradont.	X	X								X

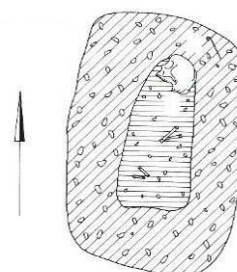
Permanent tooth status:

paradont.			X	X			X		X								
caries			X	X			X		X								
leh			I	X			I		X								
calculus			X	X			X		X								
abrasion			X	-			-		-								
status	X	PL	IT	IT	PL	PL	IT	PL	IT	PL	PL	PL	PL	PL	PL	PL	X
status	X	PL	PL	PL	PL	PL	IT	PL	PL	PL	PL	PL	PL	PL	IT	PL	X
abrasion							-								X		
calculus							X								X		
leh							X								I		
caries							X								X		
paradont.							X								X		

- some of the upper teeth too eroded for evaluation of LEH;
- no permanent teeth erupted and some of them too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	p	p	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: evaluation impossible;
- Viscerocranium: evaluation impossible;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 253

Sex: female

Age: 40 – 60 yrs

Wealth: upper class

Preservation: grade 4

Tooth status:

paradont.																
caries																
leh																
calculus																
abrasion																
status	X	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	PL	X
status	IT	IT	IT	IT	IT	IT	IT	PL	IT	IT	IT	IT	PL	IT	PL	IT
abrasion	3	4	4	-	-	-	-		-	-	-	-		4		3
calculus	0	0	0	0	I	0	0		0	0	0	0		0		0
leh	X	X	X	X	X	X	X		0	X	X	X		X		X
caries	0	0	0	0	0	0	0		0	0	0	0		V		0
paradont.	X	X	X	X	X	X	X		X	X	X	X		X		X



Pl. 3

- most teeth too eroded for evaluation of LEH; mesial caries on lower left M₁ almost completely destroyed crown;

Existing skeletal remains:

[illegible]

Pathologies:

- Neurocranium: missing;
- Viscerocranium: evaluation impossible for mandible;
- Postcranium: bone material covered in sinter or too eroded for evaluation;

Vertebrae: missing;

Joints: missing;

Burial 254

Sex: female?

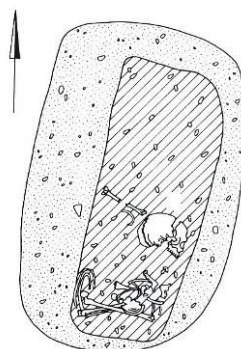
Age: 15 – 18 yrs

Wealth: ?

Preservation: grade 3

Tooth status:

paradont.										X		X	X	X					
caries										0		0	0	0					
leh										X		0	X	X					
calculus										0		0	0	0					
abrasion										-		-	-	-					
status	X	PL	PL	PL	PL	PL	PL	PL	PL	IT	PL	IT	IT	IT	PL	PL	PL	X	
status	X	IT	IT	IT	IT	IT	IT	PL	PL	IT	PL	PL	IT	IT	PL	PL	PL	X	
abrasion		2	3	-	-	-	-												
calculus		0	0	0	0	0	0								0				
leh		0	0	0	0	0	0								0				
caries		0	0	0	0	0	0								0				
paradont.		X	X	X	X	X	X				X				X				



Pl. 2

- upper left incisor and upper left premolars covered in sinter, therefore evaluation of LEH impossible;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: evaluation impossible for external lamina but internal lamina shows no signs of any pathological modification; slight signs of porotic hyperostosis anterior to left mandibular fossa; possible signs of inflammation found within right sphenoid sinus fragment; left orbital roof contains distinct signs of cribra orbitalia;
- Viscerocranium: evaluation impossible;
- Postcranium: remains of porotic hyperostosis found on left iliac bone superior to acetabulum and on left ischial bone inferior to acetabulum; evaluation impossible for remaining postcranial bone material;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

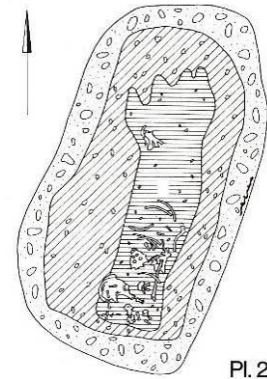
Burial 255

Sex: male

Age: 30 – 40 yrs

Wealth: lower class

Preservation: grade 4

Tooth status:[illegible]

Pl. 2

Existing skeletal remains:

	r.	l.	Frontale
	r.	l.	Parietale
	r.	l.	Temporale
			Occipitale
			Maxilla
	p.		Mandibula
	r.	l.	Clavicula
	p.	p.	Scapula
	r.	l.	Humerus
	r.	l.	Radius
	r.	l.	Ulna
	p.	p.	Ossa manus
	r.	l.	Os coxae
	p.	p.	Femur
	r.	l.	Tibia
	r.	l.	Fibula
	r.	l.	Ossa pedis
	p.	p.	Sternum
	p.	p.	Costae
	p.	p.	Vertebrae
	p.	p.	Sacrum

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: small holes formed around proximal articular surfaces of existing digital bones of the hands and feet, as well as existing tarsals and metatarsals; the medial articular surface of the right talus shows grade 2 degenerative changes; exostoses found on both patella fragments;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

Burial 256

Sex: ?

Age: Infans

Wealth: ?

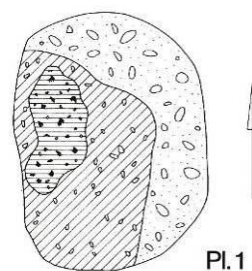
Preservation: grade 5

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
-	r.	r.	r.	-	-	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.	r.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: missing;

Vertebrae: missing;

Joints: missing;

Burial 257

Sex: female?

Age: 22 – 80 yrs

Wealth: upper class

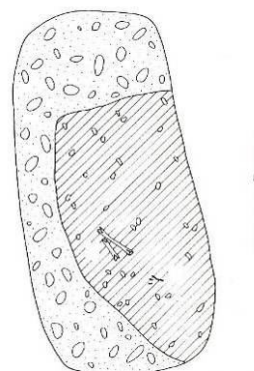
Preservation: grade 4

Tooth status:

status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
status	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
-	-	-	-	-	-	-	-	-	-	-	-	p	p	-	-	-	-	-	-	-



Pl. 2

Pathologies:

- Neurocranium: missing;
- Viscerocranium: missing;
- Postcranium: evaluation impossible;

Vertebrae: missing;

Joints: missing;

Burial 258

Sex: male

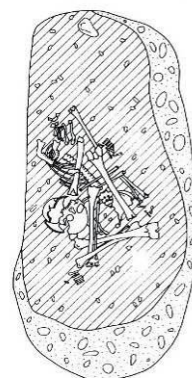
Age: 24 – 30 yrs

Wealth: lower class

Preservation: grade 2

Tooth status:

paradont.	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
caries	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0
leh	X	I	X	X	X	II	X			X	II	X	I	0	0	X	
calculus	0	I	I	0	I	I	I			0	0	0	0	0	0	0	0
abrasion	2	2	3	-	-	-	-			-	-	-	-	3	2	2	
status	IT	IT	IT	IT	IT	IT	IT	PL	PL	IT	IT	IT	IT	IT	IT	IT	IT
status	48	47	46	45	PL	IT	IT	IT	PL	PL	IT	IT	IT	IT	IT	IT	IT
abrasion	2	3	3	-		-	-	-			-	-	-	4	4	4	
calculus	0	0	I	I		0	I	I			I	I	I	I	0	I	
leh	I	X	X	I		X	I	I			II	I	I	0	X	I	
caries	0	0	0	0		0	0	0			0	0	0	0	0	0	0
paradont.	X	X	X	X		X	X	X			X	X	X	X	X	X	X



Pl. 2

- almost half of the teeth too eroded for evaluation of LEH;

Existing skeletal remains:

Frontale	Parietale	Temporale	Occipitale	Maxilla	Mandibula	Clavicula	Scapula	Humerus	Radius	Ulna	Ossa manus	Os coxae	Femur	Tibia	Fibula	Ossa pedis	Sternum	Costae	Vertebrae	Sacrum
r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.	r. l.
p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Pathologies:

- Neurocranium: remains of porotic hyperostosis found on external lamina of well-preserved parietal fragment (most fragments too eroded for evaluation) and inferior to both orbits on the maxillary bone; some edges of the parietal fragments also show signs of perimortal trauma;
- Viscerocranium: evaluation impossible;
- Postcranium: evaluation impossible;

Vertebrae: evaluation impossible;

Joints: evaluation impossible;

In order to characterize differences in frequencies of diseases within the population of Gemeinlebarn F, the 224 existing individuals were divided into the following groups:

- Sex:
 - Male aged >19 yrs
 - Female aged >19 yrs

- Age:
 - Sub-adult aged ≤18.9 yrs)
 - Adult (aged >19 yrs)
 - o adult (aged 19 – 39.9 yrs)
 - o mature/senile (aged >40 yrs)

- Social rank:
 - “Upper class” (individuals aged >19 yrs with higher social rank)
 - “Lower class” (individuals aged >19 yrs with lower social rank)

If an appropriate number of cases were present, the sex groups (males older than 19 yrs, and females older than 19 yrs) were again split into upper and lower class groups to determine social differences explicitly for males and females.

5.1 Teeth

The remaining dentition of 151 individuals, including 45 children with deciduous teeth, was examined. If more than one tooth was found to be affected by any kind of pathology, the highest grade of modification was used for statistical analysis of frequencies within the population (caries, linear enamel hypoplasia, periodontal diseases and dental calculus).

5.1.1 Tooth status

The permanent dentition of the Gemeinlebarn F sample comprises 1,094 teeth (273 from upper/821 from lower jaws), each located in its tooth socket and 1,027 isolated teeth (513 from upper/514 from lower jaws). 70 cases of intravital tooth loss (26 in upper/44 in lower jaws) were found and 102 teeth (51 in upper/51 in lower jaws) had not reached the chewing surface. 6,187 teeth had either not developed (mainly M3s) or were post mortally lost.

The sample also contains 393 deciduous teeth, of which 80 are still located in their original tooth socket and 313 isolated deciduous teeth were found.

5.1.2 Molar abrasion

The obvious differences in signs of wear between the sub-adult and the adult group are not discussed. The average abrasion for permanent and deciduous dentition was calculated instead. For each of these samples, the heaviest signs of abrasion were found on the first molar, followed by the second and then the third molar.

Permanent dentition

The grade of abrasion on 498 permanent molars (152 upper jaw and 346 lower jaw molars) was determined to assess the average tooth wear for males and females.

	M3		M2		M1		M1		M2		M3	
	N	mean	N	mean	N	mean	N	mean	N	mean	N	mean
male	18	2,1	21	3,0	21	4,0	21	4,0	18	2,9	15	2,1
female	7	2,9	6	3,3	8	4,0	9	3,9	4	2,8	4	2,3
male	38	2,8	44	3,1	42	3,7	40	3,7	41	3,1	29	2,9
female	18	2,2	20	2,7	20	3,4	22	3,5	18	2,9	14	2,4

Table 1: average molar abrasion in permanent dentition of males and females in Gemeinlebarn F

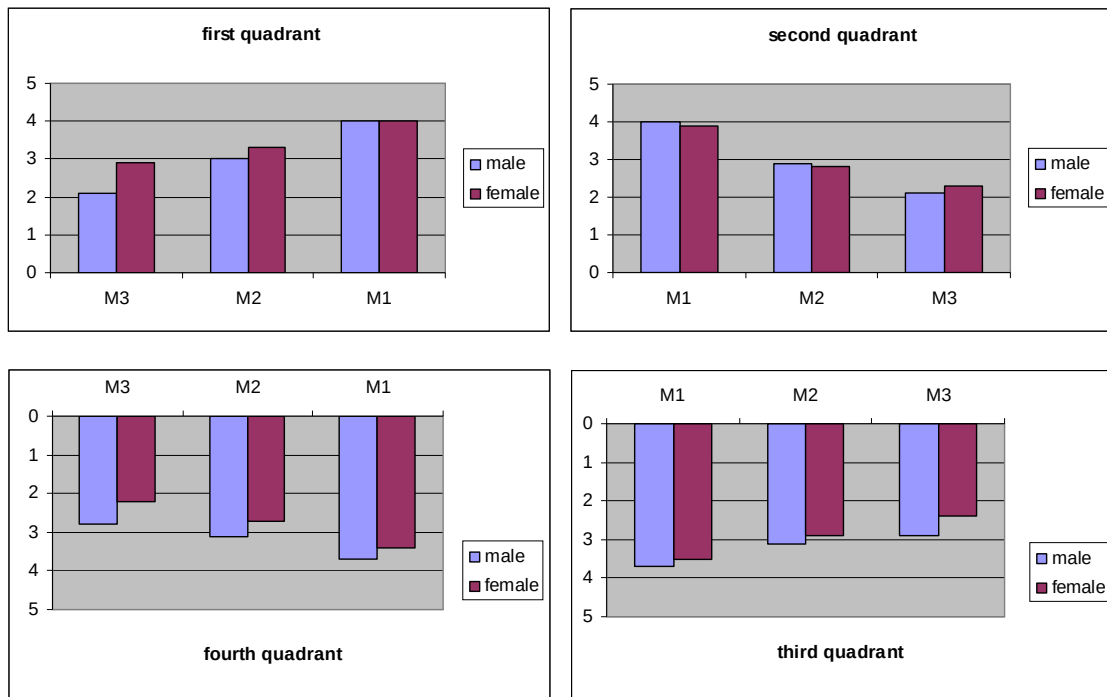


Figure 4: average molar abrasion in permanent dentition of males and females in Gemeinlebarn F

Table 1 and Figure 4 show the abrasion means for male (N=348) and female (N=150) molars. Within the male population tooth wear varies from 3.7 to 4 on the first (N=124), from 2.9 to 3.1 on the second (N=124) and from 2.1 to 2.9 on the third molar (N=100). The average female molar abrasion ranges from 3.4 to 4 on the first (N=59), from 2.7 to 3.3 on the second (N=48) and from 2.2 to 2.9 on the third molar (N=43).

504 molars (152 upper jaw and 352 lower jaw molars) were examined to compare molar abrasion of upper and lower class individuals.

	M3		M2		M1		M1		M2		M3	
	N	mean	N	mean	N	mean	N	mean	N	mean	N	mean
upper class	9	2,7	9	3,6	8	4,4	9	4,3	8	3,4	5	2,2
lower class	16	2,1	18	2,4	21	3,9	21	3,8	14	2,6	14	2,1
upper class	16	2,9	20	3,3	17	3,9	20	4,0	20	3,3	13	2,9
lower class	4	2,5	45	2,9	46	3,5	43	3,4	40	3,0	31	2,7

Table 2: average molar abrasion in permanent dentition of upper and lower class individuals in Gemeinlebarn F

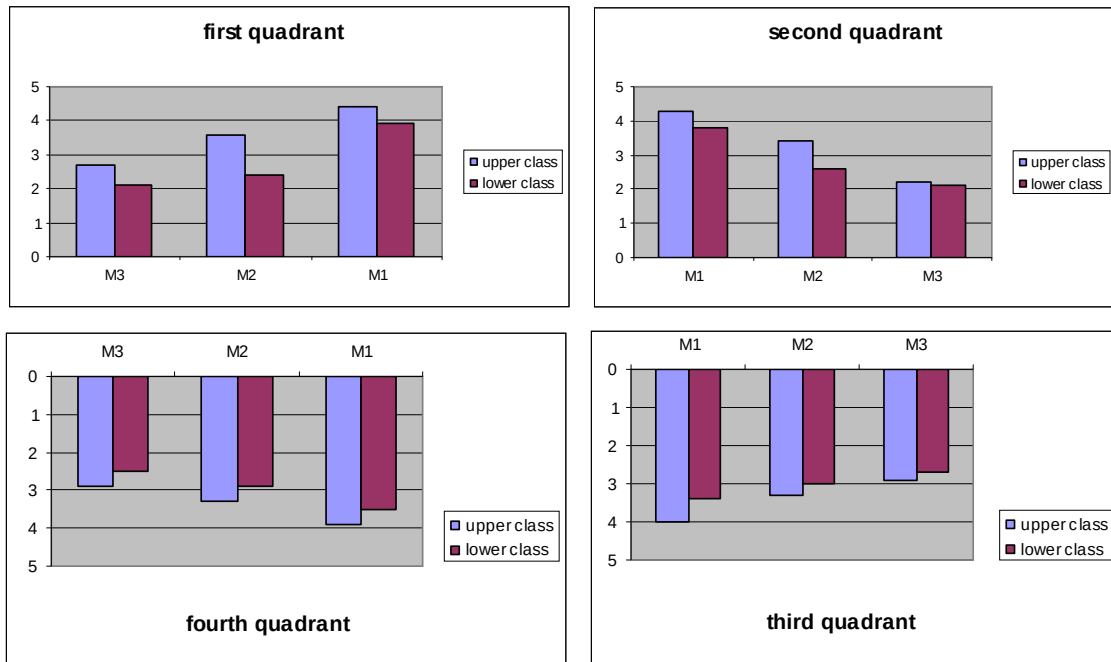


Figure 5: average molar abrasion in permanent dentition of upper and lower class individuals in Gemeinlebarn F

Table 2 and Figure 5 displays the average abrasion on upper (N=154) and lower class (N=350) molars. The upper class molar abrasion means, varying from 3.9 to 4.4 on the first (N=54), from 3.3 to 3.6 on the second (N=57) and 2.2 to 2.9 on the third molar (N=43), are higher than the average lower class molar abrasion ranging from 3.4 to 3.9 on the first (N=131), from 2.4 to 3 on the second (N=117) and 2.1 to 2.7 on the third molar (N=102).

Deciduous dentition

237 deciduous molars (105 upper and 132 lower jaw molars) were investigated in order to determine the molar abrasion means (Table 3, Figure 6).

	dm2		dm1		dm1		dm2	
	N	mean	N	mean	N	mean	N	mean
upper jaw	27	2,85	26	3,23	25	3,28	27	2,96
lower jaw	33	3,00	31	3,13	32	3,13	36	3,03

Table 3: average molar abrasion in deciduous molars of Gemeinlebarn F individuals

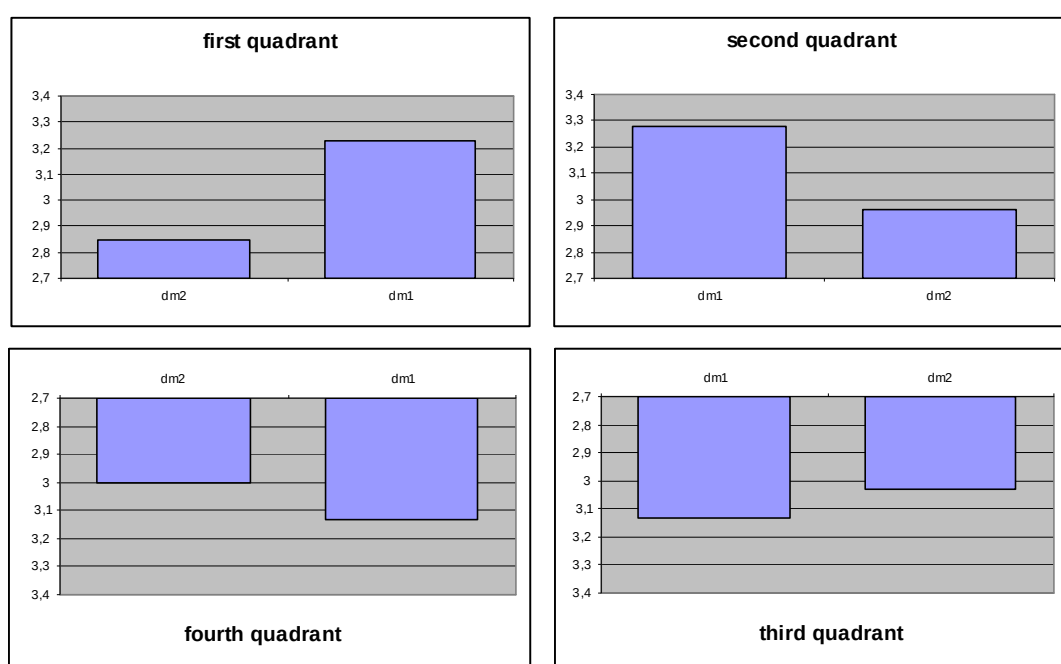


Figure 6: average molar abrasion in deciduous molars of Gemeinlebarn F individuals

The average abrasion ranges from 3.13 to 3.28 on the first molars and from 2.85 to 3.03 on the second molars.

5.1.3 Caries

Caries frequencies

The apical processes mentioned here result from previous caries infection of the respective tooth.

Caries Frequencies

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no signs of caries	118	80,3	80,3	80,3
pinhead-size caries	2	1,4	1,4	81,6
sesame seed-size caries	2	1,4	1,4	83,0
peppercorn-size caries	9	6,1	6,1	89,1
rice grain-size caries	4	2,7	2,7	91,8
half of crown destroyed (molars)	7	4,8	4,8	96,6
apical process	5	3,4	3,4	100,0
Total	147	100,0	100,0	

Table 4: caries frequencies for overall population of Gemeinlebarn F

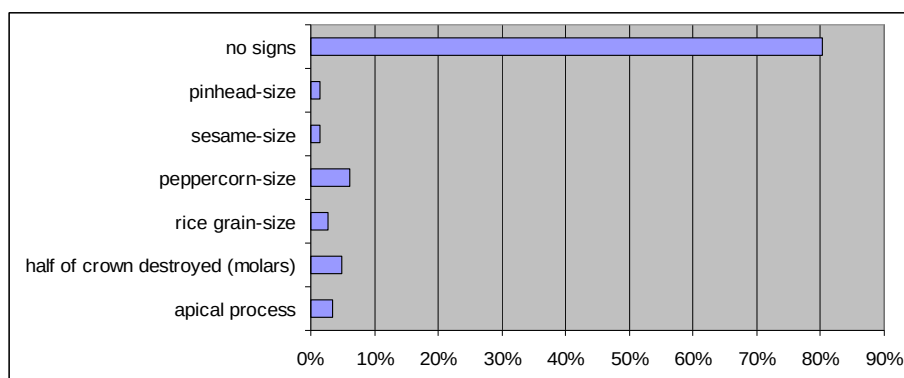


Figure 7: caries frequencies for overall population of Gemeinlebarn F

It was possible to investigate 147 individuals with deciduous and/ or permanent dentition regarding caries (Table 4, Figure 7). 118 (80.3%) of the rateable inhabitants are free from caries and 29 (**19.7%**) are affected. 2 individuals contain at least one tooth with pinhead-size caries, 2 with sesame seed-size caries, 9 with peppercorn-size caries, 4 with rice grain-size caries, 7 with one or more molars containing half destroyed crowns and 5 showing signs of one or

more apical processes (abscesses).

If intravital tooth loss is also taken into account, 36 out of 154 individuals are affected and the caries frequency increases from 19.7% to **23.4%**.

The frequencies of caries among the different social groups are compared in Tables 5, 6 and 7.

Age * Caries Crosstabulation

Count		Caries							Total
		no signs	pinhead-size	sesame seed-size	pepperco rn-size	rice grain-size	crown half destroyed	apical process	
Age	sub-adult	51	1	1	3	0	0	1	57
	adult	67	1	1	6	4	7	4	90
Total		118	2	2	9	4	7	5	147

Table 5: caries frequencies (N) for rated sub-adults and adults (>19 yrs)

Sex * Caries Crosstabulation

Count		Caries							Total
		no signs	pinhead-size	sesame seed-size	pepperco rn-size	rice grain-size	crown half destroyed	apical process	
Sex	male	44	1	1	5	1	2	4	58
	female	22	0	0	1	3	5	0	31
	of unknown sex	1	0	0	0	0	0	0	1
Total		67	1	1	6	4	7	4	90

Table 6: caries frequencies (N) for rated males, females and individuals of unknown sex

Wealth * Caries Crosstabulation

Count		Caries							Total
		no signs	pinhead-size	sesame seed-size	pepperco rn-size	rice grain-size	crown half destroyed	apical process	
Wealth	upper class	22	0	0	3	3	2	2	32
	lower class	45	1	1	3	1	5	2	58
Total		67	1	1	6	4	7	4	90

Table 7: caries frequencies (N) for rated upper and lower class individuals

	sub-adults	adults
	%	%
no signs of caries	89,5%	74,4%
signs of caries	10,5%	25,6%

Table 8: caries frequencies (%) for sub-adults and adults aged >19 yrs

	males	females
	%	%
no signs of caries	75,9%	71,0%
signs of caries	24,1%	29,0%

Table 9: caries frequencies (%) for males and females

	upper class	lower class
	%	%
no signs of caries	68,8%	77,6%
signs of caries	31,3%	22,4%

Table 10: caries frequencies (%) for upper and lower class individuals

Modifications were distinguishable for 10.5% of sub-adults (N=57) and 25.6% of adults aged >19 yrs (N=90) (Table 8). In five of the six affected cases in the sub-adult group, caries is only located on deciduous teeth (burials 22, 24, 128, 201 and 205). The caries frequency is therefore 11.1% for deciduous dentition (N=45) and 16.3% for permanent dentition (N=147).

24.1% of the males (N=58) and 29% of the females (N=31) show signs of caries (Table 9). In terms of class differences it can be said that 31.3% of the upper class individuals (N=32) and 22.4% of the lower class individuals (N=58) contain signs of caries (Table 10).

In summary, no significant differences were found when comparing different social groups regarding caries.

Caries intensities

A total of 2,003 deciduous and permanent teeth (147 individuals) were investigated, and a total of 58 carious teeth were detected, which results in a caries intensity of **2.9%** for the overall population of Gemeinlebarn F.

If intravital tooth loss is considered as a result of caries and the 70 cases of intravital tooth loss are also taken into account, the overall caries intensity increases to **6.17%**.

Out of the 1,610 permanent teeth (147 individuals), 956 could be identified as belonging to male and 399 to female, and 465 to upper and 905 to lower class individuals respectively. In total 49 decayed teeth were found (Tables 11, 12, 13 and 14), thus the caries intensity for permanent dentition is 3.0%. When comparing sexes, it can be said that the caries intensity is 3.0% for males (N= 29) and 4.8% for females (N=19). When focusing on classes, the

caries intensity is 4.5% for upper (N=21) and 3.0% for lower class (N=27) individuals.

Burial 13 female, 50 – 80 yrs, upper class	tooth 16	occlusal rice grain-size caries has reached pulpa
	tooth 17	occlusal rice grain-size caries has reached pulpa
	tooth 28	occlusal caries has destroyed half of crown and reached pulpa
	tooth 33	occlusal peppercorn-size caries has reached pulpa
Burial 62 male, 30 – 40 yrs, upper class	tooth 34	distal rice grain-size caries only on enamel
	tooth 35	mesial rice grain-size caries only on enamel
	tooth 47	occlusal sesame-size caries only on enamel and mesial rice grain-size caries has reached pulpa
	tooth 48	occlusal peppercorn-size caries only on enamel and distal rice grain-size caries has reached pulpa
Burial 154 female, 30 – 40 yrs, lower class	tooth 17	distal rice grain-size caries only on enamel
	tooth 36	half of crown destroyed by distal caries
	tooth 47	distal rice grain-size caries only on enamel
	tooth 48	mesial rice grain-size caries has reached pulpa
Burial 217 male, 24 – 40 yrs, lower class	tooth 37	half of crown destroyed by distal caries
	tooth 45	half of crown destroyed by distal caries
	tooth 46	half of crown destroyed by mesial caries
	tooth 48	half of crown destroyed by mesial caries

Table 11: Gemeinlebarn F individuals with four carious permanent teeth

Burial 23 female, 25 – 35 yrs; lower class	tooth 18	enamel imperfecta has lead to occlusal, pinhead-size caries only on enamel
	tooth 38	apical abscess caused by enamel imperfecta, which has lead to extensive decay of tooth
	tooth 48	enamel imperfecta has lead to occlusal, peppercorn-size caries extending into pulpa
Burial 100/1 male, 27 – 33 yrs, upper class	tooth 14	distal peppercorn-size caries has reached pulpa
	tooth 15	mesial pinhead-size caries only on enamel
	tooth 47	mesial sesame-size caries only on enamel
Burial 209 male, 30 – 40 yrs, lower class	tooth 24	crown fully abraded, peppercorn-size caries has reached pulpa, formation of granuloma within alveolus
	tooth 38	occlusal peppercorn-size caries
	tooth 46	mesial peppercorn-size caries has caused an apical process (formation of granuloma within disto-labial tooth socket)

Table 12: Gemeinlebarn F individuals with 3 carious permanent teeth

Burial 16/2 male, 30 – 40 yrs, lower class	tooth 47	occlusal peppercorn-size caries only on enamel
	tooth 48	occlusal peppercorn size caries only on enamel
Burial 61 female, 40 – 50 yrs, upper class	tooth 36	distal rice grain-size caries only on enamel
	tooth 37	mesial rice grain-size caries only on enamel
Burial 94 female, 27 – 33 yrs, lower class	tooth 37	occlusal rice grain-size caries has reached pulpa
	tooth 46	occlusal caries has reached pulpa and destroyed half of crown
Burial 136 male, 27 – 33 yrs, lower class	tooth 18	enamel imperfecta has lead to pinhead-size caries
	tooth 48	caries has reached pulpa and destroyed half of crown
Burial 143 male, 24 – 30 yrs, lower class	tooth 11	occlusal peppercorn-size caries has reached pulpa
	tooth 12	occlusal pinhead-size caries has caused pea-size apical abscess
Burial 191 female, 60 – 80 yrs, upper class	tooth 24	distal peppercorn-size caries only on enamel
	tooth 37	buccal rice grain-size caries only on enamel

Burial 212 male, 40 – 60 yrs; upper class	tooth 12	crown fully abraded, pea-size apical abscess caused by caries
	tooth 22	tooth missing, alveole contains pea-size apical abscess probably caused by caries

Table 13: Gemeinlebarn F individuals with 2 carious permanent teeth

Burial 35 male, 50 – 60 yrs, lower class	tooth 42	mesial pinhead-size caries, crown fully abraded
Burial 66 male, 45 – 55 yrs, lower class	tooth 24	distal peppercorn-size caries has reached pulpa
Burial 93 female, 30 – 40 yrs, lower class	tooth 47	distal rice grain-size caries has reached pulpa
Burial 100/2 male, 30 – 40 yrs, upper class	tooth 33	distal peppercorn-size caries only on enamel
Burial 106 male, 30 – 40 yrs, upper class	tooth 16	caries has fully destroyed crown, causing peppercorn to pea-size apical abscess
Burial 123 male, 40 – 60 yrs, lower class	tooth 35	distal sesame seed-size caries only on enamel
Burial 185 female, 45 – 55 yrs, upper class	tooth 46	mesial peppercorn-size caries only on enamel
Burial 203 male, 15 – 18 yrs, unknown social class	tooth 35	caries has destroyed half of crown, causing peppercorn-size apical abscess
Burial 221 male, 35 – 45 yrs, lower class	tooth 46	distal peppercorn-size caries only on enamel
Burial 253 male, 40 – 60 yrs, upper class	tooth 36	mesial caries has almost completely destroyed crown

Table 14: Gemeinlebarn F individuals with 1 carious permanent tooth

The 393 deciduous teeth (45 individuals) contained 9 carious teeth belonging to 5 individuals (Table 15). Therefore, caries intensity for deciduous dentition is 2.3%.

Burial 22 female, ~7 yrs, unknown social class	tooth 55	peppercorn-size caries has reached pulpa
	tooth 74	peppercorn-size caries has reached pulpa
	tooth 83	sesame seed-size caries only on enamel
	tooth 85	peppercorn-size caries has reached pulpa
Burial 24 unknown sex, 6 – 8 yrs, unknown social class	tooth 54	distal pinhead-size caries only on enamel
	tooth 55	mesial pinhead-size caries only on enamel
Burial 128 female, 8 – 12 yrs, unknown social class	tooth 65	mesial sesame seed-size caries only on enamel
Burial 201 female, ~ 5 yrs, lower class	tooth 64	distal peppercorn-size caries has not reached pulpa
Burial 205 female, 8 – 12 yrs, lower class	tooth 64	mesial peppercorn-size caries has not reached pulpa

Table 15: Gemeinlebarn F individuals with carious deciduous teeth

5.1.4 Enamel hypoplasia

Linear enamel hypoplasia (LEH)

Linear Enamel Hypoplasia					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no signs	44	30,6	30,6	30,6
	slight signs	47	32,6	32,6	63,2
	moderate signs	47	32,6	32,6	95,8
	average signs	6	4,2	4,2	100,0
	Total	144	100,0	100,0	

Table 16: linear enamel hypoplasia frequencies for overall population of Gemeinlebar F

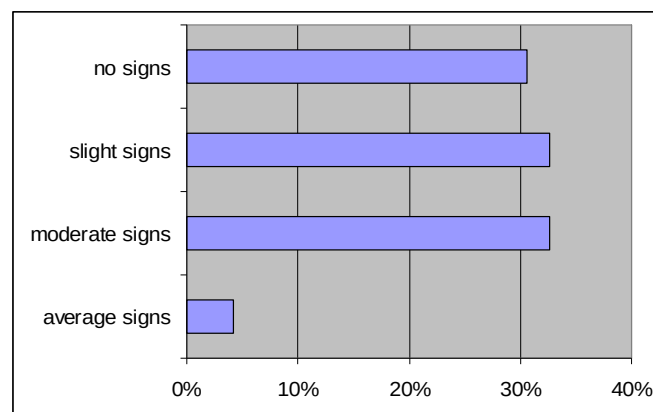


Figure 8: linear enamel hypoplasia frequencies for overall population of Gemeinlebar F

In terms of linear enamel hypoplasia (Plate I a), the existing teeth of 144 individuals were able to be investigated (Table 16, Figure 8). No signs of LEH were detected on deciduous teeth, contrary to permanent dentition. There are no signs of transversal hypoplastic lines in 44 (30.6%) of the evaluated individuals, whereas in 100 (69.4%) individuals signs are visible. 47 inhabitants show slight signs, moderate signs were found in 47 and average signs had formed in 6. None of the examined teeth appears to have either strong or very strong signs of linear enamel hypoplasia.

The frequencies of linear enamel hypoplasia within the different social groups and significant chi-square tests are given in Tables 17, 18, 19 and 20.

Age * Linear Enamel Hypoplasia Crosstabulation

Count		Linear Enamel Hypoplasia				Total
		no signs of leh	slight signs of leh	moderate signs of leh	average signs of leh	
Age	sub-adult	7	17	29	4	57
	adult	37	30	18	2	87
Total		44	47	47	6	144

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21,996 ^a	3	,000
Likelihood Ratio	23,064	3	,000
Linear-by-Linear Association	21,195	1	,000
N of Valid Cases	144		

a. 2 cells (25,0%) have expected count less than 5. The minimum expected count is 2,38.

Table 17: linear enamel hypoplasia frequencies (N) for rated sub-adults (0 – 18.9 yrs) and adults aged >19 yrs and Chi-Square Test

Age * Linear Enamel Hypoplasia Crosstabulation

Count		Linear Enamel Hypoplasia				Total
		no signs	slight signs	moderate signs	average signs	
Age	adult	24	23	19	1	67
	mature/senile	13	7	0	1	21
Total		37	30	19	2	88

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,299 ^a	3	,026
Likelihood Ratio	13,371	3	,004
Linear-by-Linear Association	5,167	1	,023
N of Valid Cases	88		

a. 3 cells (37,5%) have expected count less than 5. The minimum expected count is ,48.

Table 18: linear enamel hypoplasia frequencies (N) for rated adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs) and Chi-Square Test

Sex * Linear Enamel Hypoplasia Crosstabulation

Count		Linear Enamel Hypoplasia				Total
		no signs of leh	slight signs of leh	moderate signs of leh	average signs of leh	
Sex	male	22	19	12	2	55
	female	15	11	5	0	31
	of unknown sex	0	0	1	0	1
Total		37	30	18	2	87

Table 19: linear enamel hypoplasia frequencies (N) for rated males, females and individuals of unknown sex

Wealth * Linear Enamel Hypoplasia Crosstabulation

Count		Linear Enamel Hypoplasia				Total
		no signs	slight signs	moderate signs	average signs	
Wealth	upper class	17	10	3	1	31
	lower class	20	20	15	1	56
Total		37	30	18	2	87

Table 20: linear enamel hypoplasia frequencies (N) for rated upper and lower class individuals

	sub-adults	adults
	%	%
no signs of leh	12,3%	42,5%
signs of leh	87,7%	57,5%

Table 21: linear enamel hypoplasia (LEH) frequencies (%) for sub-adults and adults aged >19 yrs

	adult	mature/senile
	%	%
no signs of leh	35,8%	61,9%
signs of leh	64,2%	38,1%

Table 22: linear enamel hypoplasia (LEH) frequencies (%) for rated adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs)

	males	females
	%	%
no signs of leh	40,0%	48,4%
signs of leh	60,0%	51,6%

Table 23: linear enamel hypoplasia (LEH) frequencies (%) for males and females

	upper class	lower class
	%	%
no signs of leh	54,8%	35,7%
signs of leh	45,2%	64,3%

Table 24: linear enamel hypoplasia frequencies (%) for upper and lower class individuals

A significant difference ($p=0.000$) between the groups was found in the comparison of Table 21: 87.7% of the sub-adult ($N=57$) and 57.5% of the adult group aged >19 yrs ($N=87$) developed modifications.

Even after dividing the adult group aged <19 yrs into an adult ($N=67$) and a mature/senile group ($N=21$), a significant difference ($p=0.026$) occurred (Table 22). The frequency of individuals suffering from linear enamel hypoplasia is highest in the sub-adult group with 87.7%, followed by the adult group with 64.2% and it is lowest in the mature/senile group with 38.1% (Figure 9).

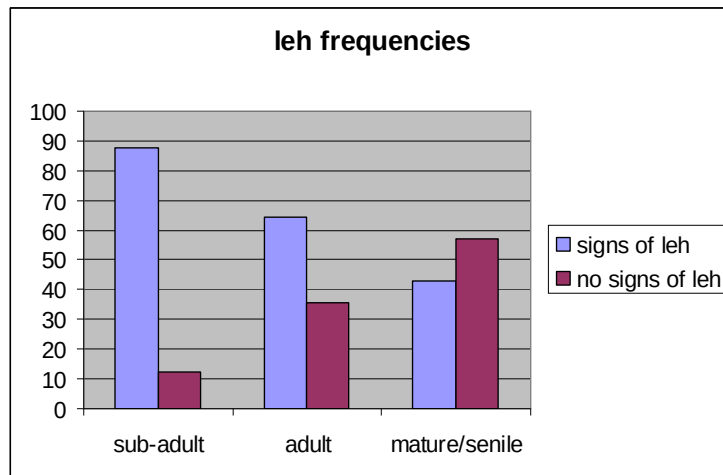


Figure 9: linear enamel hypoplasia frequencies (%) for sub-adult, adult and mature/senile individuals

60% of the male (N=55) and 51.6% of the female (N=31) population show signs of linear enamel hypoplasia (Table 23).

When focusing on social classes (Table 24), at first no significant difference was found, as signs were distinguishable on 45.2% of the upper class (N=31) and 64.3% of the lower class individuals (N=56). In addition male upper class individuals older than 19 yrs (N=19) were compared to male lower class individuals older than 19yrs (N=36) and again no significant difference was found. Then, when focusing on females older than 19 yrs (N=31), a significant result ($p=0.018$) was obtained, as only 25% (N=3) of the upper class females suffered from linear enamel hypoplasia, whereas 68.4% (N=13) of the lower class females were affected (Table 25). However, the respective age mean in the upper class group is 44.29 years and 29.71 years in the lower class group, which explains this statistical difference.

	Wealth			
	upper class		lower class	
	Linear Enamel Hypoplasia		Linear Enamel Hypoplasia	
	Anzahl	%	Anzahl	%
no signs of leh	9	75,0%	6	31,6%
signs of leh	3	25,0%	13	68,4%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,552 ^b	1	,018		
Continuity Correction ^a	3,950	1	,047		
Likelihood Ratio	5,748	1	,017		
Fisher's Exact Test				,029	,023
Linear-by-Linear Association	5,373	1	,020		
N of Valid Cases	31				

a. Computed only for a 2x2 table

b. 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,81.

Table 25: linear enamel hypoplasia frequencies (N) for upper and lower class females older than 19yrs, and respective Chi-Square Test

Spotted enamel hypoplasia

Spotted enamel hypoplasia was found on 9 permanent and 5 deciduous teeth belonging to 7 individuals (10.08%). In burial 22 (female, ~7yrs, unknown social class) tooth 46 was affected, in burial 23 (female, 25 – 35 yrs, lower class) tooth 47 and in burial 24 (female, 6 – 8 yrs) tooth 46. Spotted enamel hypoplasia also occurred on tooth 36 and tooth 46 of the individual in burial 41 (male, ~4 yrs, unknown social class) and on all existing molars (teeth 36, 37, 46, 47) of the person in burial 43 (female, 22 – 24 yrs, lower class). The deciduous teeth 75 and 85 were affected in burial 48 (male, ~5 yrs, unknown social class) and in burial 68 (female, ~7yrs, unknown social class) teeth 31, 32 and 41 showed spotted enamel hypoplasia.

5.1.5 Periodontal disease

The apical processes mentioned here are clearly related to periodontal disease.

Periodontal Disease					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no signs	27	36,5	36,5	36,5
	slight signs	20	27,0	27,0	63,5
	moderate signs	16	21,6	21,6	85,1
	average signs	7	9,5	9,5	94,6
	strong signs	2	2,7	2,7	97,3
	apical process	2	2,7	2,7	100,0
	Total	74	100,0	100,0	

Table 26: periodontal disease frequencies for overall population of Gemeinlebarn F

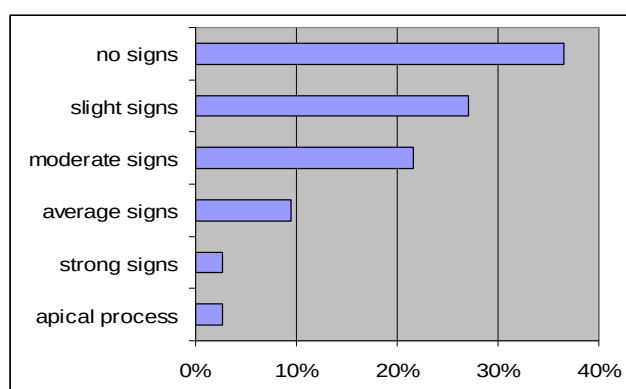


Figure 10: periodontal disease frequencies for overall population of Gemeinlebarn F

The alveolar remains of 74 individuals were examined in terms of periodontal disease (Table 26, Figure 10, Plate I b). No signs of periodontal disease were found around deciduous dentition.

27 individuals (36.5%) do not show any signs of periodontal disease, whereas 47 (**63.5%**) have developed signs to various degrees: slight signs were found in 20, moderate signs in 16, average signs in 7, strong signs in 2 and apical abscesses caused by periodontal disease in 2 individuals.

The comparison of periodontal disease frequencies within social groups and significant chi-square tests are displayed in Tables 27, 28 and 29.

Age * Periodontal Disease Crosstabulation								
Count		Periodontal Disease						Total
		no signs	slight signs	moderate signs	average signs	strong signs	apical process	
Age	adult	10	18	13	3	0	0	44
	mature/ senile	0	1	3	4	2	2	12
Total		10	19	16	7	2	2	56

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25,714 ^a	5	,000
Likelihood Ratio	25,354	5	,000
Linear-by-Linear Association	20,748	1	,000
N of Valid Cases	56		

a. 8 cells (66,7%) have expected count less than 5. The minimum expected count is ,43.

Table 27: periodontal disease frequencies (N) for rated adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs)

Sex * Periodontal Disease Crosstabulation								
Count		Periodontal Disease						Total
		no signs	slight signs	moderate signs	average signs	strong signs	apical process	
Sex	male	4	12	13	6	1	2	38
	female	6	6	3	1	1	0	17
	of unknown sex	0	1	0	0	0	0	1
Total		10	19	16	7	2	2	56

Table 28: periodontal disease frequencies (N) for rated males, females and individuals of unknown sex

Wealth * Periodontal Disease Crosstabulation								
Count		Periodontal Disease						Total
		no signs	slight signs	moderate signs	average signs	strong signs	apical process	
Wealth	upper class	2	4	7	7	1	1	22
	lower class	8	15	9	0	1	1	34
Total		10	19	16	7	2	2	56

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15,352 ^a	5	,009
Likelihood Ratio	18,001	5	,003
Linear-by-Linear Association	5,139	1	,023
N of Valid Cases	56		

a. 7 cells (58,3%) have expected count less than 5. The minimum expected count is ,79.

Table 29: periodontal frequencies (N) for rated upper and lower class individuals

	adult	mature/ senile
	%	%
no signs of periodontal disease	22,7%	
signs of periodontal disease	77,3%	100,0%

Table 30: periodontal disease frequencies (%) for adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs)

	males	females
	%	%
no signs of periodontal disease	10,5%	35,3%
signs of periodontal disease	89,5%	64,7%

Table 31: periodontal disease frequencies (%) for males and females

	upper class	lower class
	%	%
no signs of periodontal disease	9,1%	23,5%
signs of periodontal disease	90,9%	76,5%

Table 32: periodontal frequencies (%) for upper and lower class individuals

A significant difference ($p=0.000$) was found when comparing the adult and mature/senile age groups: 77.3% of the adults aged 19 - 39.9 yrs, ($N=44$) contain periodontal modifications whereas 100% of the mature/senile group aged > 40 yrs ($N=12$) is affected (Table 30).

89.5% of males ($N=38$) and 64.7% of females ($N=17$) suffered from periodontal disease (Table 31), hence there was no significant difference between those groups.

The comparison between the two social classes again shows a significant difference ($p=0.009$), as 90.9% of the upper class individuals ($N=22$) and 76.5% of the lower class individuals ($N=34$) suffered from periodontal disease (Table 32). In this upper class group the mean age is 39.09 years, in contrary to the lower class group where it is only 31.5 years. Subsequently, upper and lower class adults aged 19 – 39.9 yrs were compared in order to avoid statistical errors. The classes ($N=44$) still show a significant difference ($p=0.044$) since 85.7% of the upper class individuals ($N=14$) were affected and merely 73.3% of the lower class individuals ($N=30$) (Table 33). Still, the average age of 31.42 years is higher in the upper class than in the lower class group with 29.7 years.

Wealth * Periodontal Disease Crosstabulation						
Count		Periodontal Disease				Total
		no signs	slight signs	moderate signs	average signs	
Wealth	adult upper class	2	4	5	3	14
	adult lower class	8	14	8	0	30
Total		10	18	13	3	44

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,101 ^a	3	,044
Likelihood Ratio	8,643	3	,034
Linear-by-Linear Association	5,116	1	,024
N of Valid Cases	44		

a. 4 cells (50,0%) have expected count less than 5. The minimum expected count is ,95.

Table 33: periodontal disease frequencies (N) for rated upper and lower class individuals aged 19 – 39.9 yrs

5.1.6 Dental calculus

Calculus					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no signs	33	22,4	22,4	22,4
	slight signs	77	52,4	52,4	74,8
	moderate signs	34	23,1	23,1	98,0
	average signs	2	1,4	1,4	99,3
	strong signs	1	,7	,7	100,0
Total		147	100,0	100,0	

Table 34: dental calculus frequencies for overall population of Gemeinlebar F

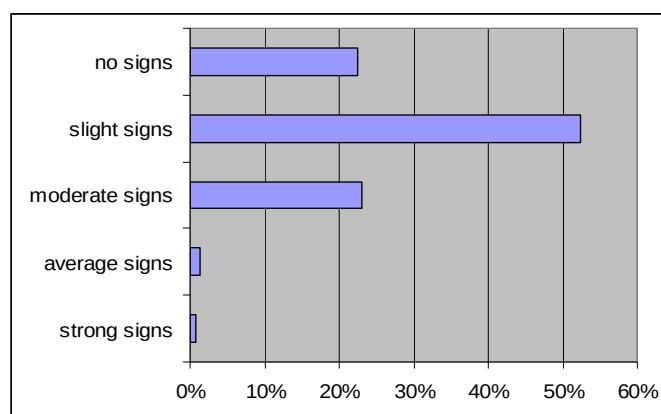


Figure 11: dental calculus frequencies for overall population of Gemeinlebar F

Teeth of 147 individuals were investigated concerning dental calculus (Table 34, Figure 11). 33 (22.4%) showed no signs, whereas 114 (77.6%) are affected. 77 individuals only carry slight signs of calculus, 34 contain moderate signs, 2 average signs and 1 individual shows strong signs. In 23 cases calculus was (also) found on deciduous teeth.

The comparison between the different social groups and significant chi-square tests can be seen in Tables 35, 36 and 37.

Age * Calculus Crosstabulation							
Count		Calculus					Total
		no signs	slight signs	moderate signs	average signs	strong signs	
Age	adult	6	43	20	1	0	70
	mature/senile	3	5	11	1	1	21
Total		9	48	31	2	1	91

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11,706 ^a	4	,020
Likelihood Ratio	11,685	4	,020
Linear-by-Linear Association	4,642	1	,031
N of Valid Cases	91		

a. 5 cells (50,0%) have expected count less than 5. The minimum expected count is ,23.

Table 35: calculus frequencies (N) for rated adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs)

Sex * Calculus Crosstabulation							
Count		Calculus					Total
		no signs	slight signs	moderate signs	average signs	strong signs	
Sex	male	6	26	23	2	1	58
	female	3	21	7	0	0	31
	of unknown sex	0	0	1	0	0	1
Total		9	47	31	2	1	90

Table 36: calculus frequencies (N) for rated males, females and individuals of unknown sex

Wealth * Calculus Crosstabulation

Count		Calculus					Total
		no signs	slight signs	moderate signs	average signs	strong signs	
Wealth	upper class	5	13	12	2	0	32
	lower class	4	34	19	0	1	58
Total		9	47	31	2	1	90

Table 37: calculus frequencies (N) for rated upper and lower class individuals

	adult	mature/senile
	%	%
no signs of calculus	8,7%	14,3%
signs of calculus	91,3%	85,7%

Table 38: calculus frequencies (%) for rated adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs)

	males	females
	%	%
no signs of calculus	10,3%	9,7%
signs of calculus	89,7%	90,3%

Table 39: calculus frequencies (%) for males and females

	upper class	lower class
	%	%
no signs of calculus	15,6%	6,9%
signs of calculus	84,4%	93,1%

Table 40: calculus frequencies (%) for upper and lower class individuals

A significant difference ($p=0.020$) was found between the two age groups: 91.3% of adults aged 19 – 39.9. yrs ($N=70$) and 85.7% of mature/senile individuals aged >40 yrs ($N=21$) had formed calculus (Table 38).

89.7% of males ($N=58$) and 90.3% of females ($N=31$) developed signs of calculus on at least one tooth (Table 39), showing no statistical significance.

The last comparison also reveals no significant difference between the two social groups as 84.4% of the upper class ($N=32$) and 93.1% of the lower class individuals ($N=58$) suffered from calculus (Table 40).

5.1.7 Hypercementosis

Hypercementosis (Plate I c) was discovered in 7 individuals. In burial 25 (female, 50 – 60 yrs, upper class), hypercementosis was found on all existing roots (teeth 32, 42, 43, 44 and 45). In burial 35 (male, 50 – 60 yrs, lower class) all existing molars (teeth 16, 26, 27, 28, 38 and 46) appear affected. In burial 66 (male, 45 – 55 yrs, lower class), hypercementosis occurred on the roots of all existing upper molars (teeth 16, 17, 18 and 26) and in burial 100/2 (male, 30 – 40 yrs, upper class) on tooth 37. Burial 156 (male, 30 – 40 yrs, lower class) contained tooth roots with hypercementosis on teeth 31, 32, 33, 34, 35, 41, 42, 43, 44 and 45. One tooth (tooth 26) was affected in burial 183 (male, 30 – 40 yrs, lower class) and two teeth (teeth 24 and 37) in burial 191 (female, 60 – 80 yrs, upper class).

5.1.8 Other dental abnormalities

Microdont teeth

3 individuals had each developed one microdont tooth. In burial 7 (male, 40 – 50 yrs, upper class) as well as in burial 183 (male, 30 – 40 yrs, lower class) tooth 18 appears microdont. In burial 70 (female, 12 – 14 yrs, lower class), tooth 12 is reduced, while tooth 22 had never developed. The deciduous canine (tooth 63) has taken the place of the permanent canine (tooth 23), while the permanent canine has grown into the place of tooth 22.

Fusion of teeth

The crowns of the lower central incisors (teeth 31 and 41) of the child in burial 219 (male, ~ 5yrs, unknown social class) have merged (Plate I d). The roots of the tooth had not formed yet.

5.2 Nutrition deficiency symptoms

5.2.1 Porotic hyperostosis - cribra cranii

Porotic Hyperostosis					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	signs	10	55,6	55,6	55,6
	no signs	8	44,4	44,4	100,0
	Total	18	100,0	100,0	

Table 41: porotic hyperostosis frequencies (N/%) for the overall population of Gemeinlebarn F

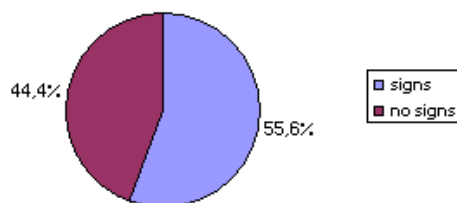


Figure 12: porotic hyperostosis frequencies (N/%) for the overall population of Gemeinlebarn F

18 individuals were examined regarding porotic hyperostosis of the skull vault (Table 41, Figure 12). 10 individuals (**55.6%**) suffered from porotic hyperostosis in terms of cribra cranii, whereas 8 (44.4%) were free of symptoms.

The frequencies (N/%) among different social groups are compared in Tables 42, 43 and 44.

	adult		mature/senile	
	Anzahl	%	Anzahl	%
no signs of porotic hyperostosis	4	44,4%	1	25,0%
signs of porotic hyperostosis	5	55,6%	3	75,0%

Table 42: porotic hyperostosis frequencies (N/%) for rated adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs)

	males		females	
	Anzahl	%	Anzahl	%
no signs of porotic hyperostosis	3	33,3%	2	50,0%
signs of porotic hyperostosis	6	66,7%	2	50,0%
Total	9	100,0%	4	100,0%

Table 43: porotic hyperostosis frequencies (N/%) for rated males and females

	upper class		lower class	
	Anzahl	%	Anzahl	%
no signs of porotic hyperostosis	2	25,0%	3	60,0%
signs of porotic hyperostosis	6	75,0%	2	40,0%
Total	8	100,0%	5	100,0%

Table 44: porotic hyperostosis frequencies (N/%) for rated upper and lower class individuals

55.6% of the adults aged 19 – 39.9 yrs (N=9) and 75.0% of the mature/senile group (N=4) developed modifications (Table 42), while 40% of sub-adults (N=5) are affected. The second comparison shows that 66.7% of the rateable males (N=9) and 50.0% of the rateable females (N=4) have formed slight/moderate signs of porotic hyperostosis on the skull vault (Table 43). 75.0% of the upper class (N=8) and 40.0% of the lower class individuals (N=5) are affected by cribra cranii (Table 44).

5.2.2 Porotic hyperostosis - cribra orbitalia

Cribra Orbitalia					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	signs	24	68,6	68,6	68,6
	no signs	11	31,4	31,4	100,0
	Total	35	100,0	100,0	

Table 45: cribra orbitalia frequencies (N/%) for the overall population of Gemeinlebarn F

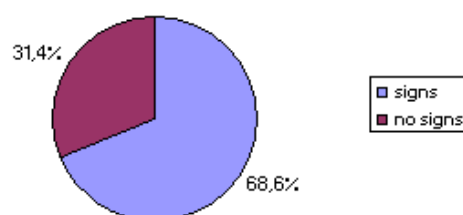


Figure 13: cribra orbitalia frequencies (N/%) for the overall population of Gemeinlebarn F

The orbital roof remains of 35 individuals were investigated (Table 45, Figure 13). 24 individuals (**68.6%**) showed signs of cribra orbitalia (Plate II a), whereas 11 individuals (31.4%) have developed no orbital modifications.

The frequencies (N and %) within the different social groups are displayed in Tables 46, 47 and 48.

	adult		mature/senile	
	Anzahl	%	Anzahl	%
no signs of cribra orbitalia	5	33,3%	4	57,1%
signs of cribra orbitalia	10	66,7%	3	42,9%

Table 46: cribra orbitalia frequencies (N/%) for rated adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs)

	males		females	
	Anzahl	%	Anzahl	%
no signs of cribra orbitalia	8	53,3%	1	16,7%
signs of cribra orbitalia	7	46,7%	5	83,3%
Total	15	100,0%	6	100,0%

Table 47: cribra orbitalia frequencies (N/%) for rated males and females

	upper class		lower class	
	Anzahl	%	Anzahl	%
no signs of cribra orbitalia	5	45,5%	4	40,0%
signs of cribra orbitalia	6	54,5%	6	60,0%
Total	11	100,0%	10	100,0%

Table 48: cribra orbitalia frequencies (N/%) for rated upper and lower class individuals

66.7% of adults aged 19 – 39.9 yrs (N=15) and 42.9% of mature/senile individuals aged >40 yrs (N=7) are affected by cribra orbitalia (Table 46), and 85.7% of sub-adults (N=13). When comparing sub-adults to adults older than 19 yrs, a trend ($p=0.077$) towards sub-adults is observed.

When focusing on the differences between sexes (N=21), again a trend ($p=0.148$) is noticeable, as 46.7% of the males (N=15) and 83.3% of the females older than 19 yrs (N=6) show distinct signs of cribra orbitalia (Table 47, Figure 14).

If younger individuals from the age of 15 onwards are also taken into account, a significant difference ($p=0.037$) (Table 49) occurs between males (N=16) where

50% are concerned, and females (N=10) where 90% are affected. The overall population (N=35) again shows a significant difference ($p=0.015$) between sexes, since 50% of the male (N=18) and 88.2% of the female population (N=17) developed cribra orbitalia (Table 49, Figure 14).

	individuals ≥ 19 yrs.		individuals ≥ 15 yrs.		all individuals	
	N	%	N	%	N	%
male	15	46,7	16,0	50	18	50
female	6	83,3	10,0	90	17	88,2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,350 ^b	1	,037		
Continuity Correction ^a	2,763	1	,096		
Likelihood Ratio	4,859	1	,027		
Fisher's Exact Test				,087	,045
Linear-by-Linear Association	4,183	1	,041		
N of Valid Cases	26				

a. Computed only for a 2x2 table

b. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,46.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,931 ^b	1	,015		
Continuity Correction ^a	4,289	1	,038		
Likelihood Ratio	6,306	1	,012		
Fisher's Exact Test				,027	,018
Linear-by-Linear Association	5,761	1	,016		
N of Valid Cases	35				

a. Computed only for a 2x2 table

b. 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,34.

Table 49: age group frequencies of Gemeinlebern F males and females with cribra orbitalia and respective χ^2 -tests; age groups with significant differences between males and females in red boxes;

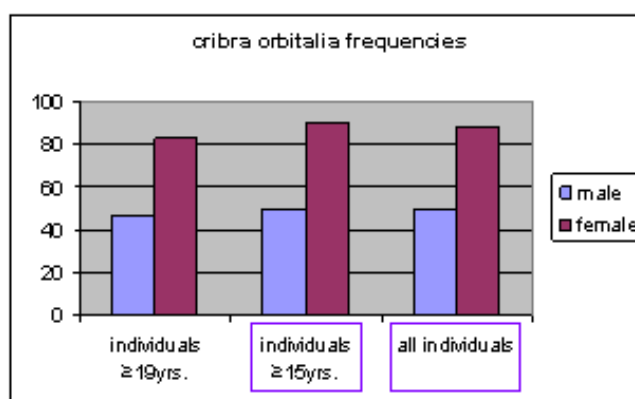


Figure 14: age group frequencies of Gemeinlebern F males and females with cribra orbitalia; age groups with significant differences between males and females in purple boxes;

The last comparison (Table 48) shows no significant difference between the two groups, as 54.5% of the upper (N=11) and 60.0% of the lower class individuals (N=10) suffered from cribra orbitalia.

5.2.3 Unspecific periostitis

Periostitis					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	signs	71	83,5	83,5	83,5
	no signs	14	16,5	16,5	100,0
	Total	85	100,0	100,0	

Table 50: unspecific periostitis frequencies (N/%) for the overall population of Gemeinlebarn F

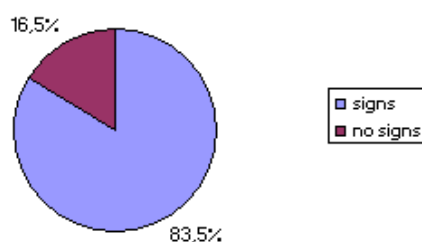


Figure 15: unspecific periostitis frequencies (N/%) for population of Gemeinlebarn F

The long bones of 85 individuals were rated for periostitis (Plate II b). 71 individuals (**83.5%**) are slightly/moderately affected, whereas 14 (16.5%) show no signs (Table 50, Figure 15).

Differences in frequencies (N and %) between social groups can be found in Tables 51, 52 and 53.

	adult		mature/senile	
	Anzahl	%	Anzahl	%
no signs of periostitis	6	14,6%	2	11,1%
signs of periostitis	35	85,4%	16	88,9%

Table 51: unspecific periostitis frequencies (N/%) for rated adult (19 – 39.9 yrs) and mature/senile individuals (>40 yrs)

	males		females	
	Anzahl	%	Anzahl	%
no signs of periostitis	6	16,7%	2	9,5%
signs of periostitis	30	83,3%	19	90,5%
Total	36	100,0%	21	100,0%

Table 52: unspecific periostitis frequencies (N/%) for rated males and females

	upper class		lower class	
	Anzahl	%	Anzahl	%
no signs of periostitis	4	16,0%	4	12,1%
signs of periostitis	21	84,0%	29	87,9%
Total	25	100,0%	33	100,0%

Table 53: unspecific periostitis frequencies (N/%) for rated upper and lower class individuals

Unspecific periostitis occurred on the long bones of 85.4% of the adults aged 19 – 39.9 yrs (N=41) and on 88.9% of the mature/senile group aged >40 yrs (N=18) (Table 51).

In the second comparison, slight/moderate indications of unspecific periostitis were found on the long bones of 83.3% of the male (N=36) and 90.5% of female population (N=21) (Table 52).

When focusing on the last two groups, it is shown that 84.0% of the upper class (N=25) and 87.9% of the lower class individuals (N=33) were affected (Table 53). Even after comparing classes solely for males older than 19 yrs (and females of the same age group respectively), no significant differences between the classes occurred.

5.3 Trauma

5.3.1 Intravital trauma

- Burial 16/1 (male, 30 - 40 yrs, lower class): a well-healed sprain fracture was found just below the left olecranon (Plate II c).
- Burial 17/2 (female, 22 - 30 yrs, upper class): the left clavicle shows a well-healed mid-shaft fracture leaving the bone deformed.
- Burial 25 (female, 50 - 60 yrs, upper class): the only existing vertebral body of the lumbar region contains a compression fracture (Plate II d).
- Burial 58 (female, 30 - 40 yrs, lower class): a vertical intravital trauma of uncertain cause was recorded, which affected the left, ventral surfaces of L2 and L3 which is probably reason for the formation of a huge ventral bone spore (Plate II e). Additionally, a slight impression is distinguishable on the caudal side of the vertebral body of L5.
- Burial 212 (male, 40 - 60 yrs, upper class): one of the lower rib-fragments shows a well-healed intravital fracture. The first left rib and the manubrium sterni merged (Plate III a) and the cranial half of the body of the sternum and some of the heads of the ribs are completely deformed. Most vertebrae and joints show massive degenerative changes and the cervical side of this individual's sphenoid body has developed exostoses, just like most of the other bones. In addition, L2 and L3 have formed a huge ventral cone (Plate III b).

5.3.2 Perimortal trauma

A high number of peri-mortal fractures have to be presumed for the population of Gemeinlebarn F. As most of the existing material appears severely fragmented and very badly preserved, it is very difficult to distinguish peri- from post-mortal fractures, so only clear cases with distinct signs of peri-mortal fractures are mentioned here.

- Burial 9 (male, 25 - 35 yrs, upper class): the edges of the left parietal and right frontal bone fragments appear peri-mortally fractured.
- Burial 15 (female, 25 - 35 yrs, lower class): the right radius and ulna are perimortally fractured.
- Burial 16/1 (male, 30 - 40 yrs, lower class): the frontal and temporal bone fragments, as well as the right femur contain signs of perimortal fractures.
- Burial 17/2 (female, 22 - 30 yrs, upper class): perimortal fractures found on the edges of the existing parietal bone fragments.
- Burial 242 (male, 19 - 23 yrs, lower class): an unusual perimortal trauma was recorded for the dorsal side of the distal end of the right femur, which contains a 0.7cm deep circular impression with a diameter of 1.5cm (Plate III c).

5.4 Degenerative changes

5.4.1 Vertebrae - articular surfaces

The intensity of wear of the articular surfaces of the individual's existing cervical/thoracic/lumbar vertebrae is not always constant. In such cases, the highest grade of modification was taken into account for statistics.

Cervical vertebrae

The degenerative condition of cervical vertebrae of 40 individuals aged >19 yrs was investigated and a mean degenerative modification of **3.05** (0=normal, fit; 1=small signs of wear; 2= slightly pathological on less than 50% of the joint surface; 3=slightly pathological on more than 50% of the joint surface; 4=pathological; 5=heavily pathological; 6=joint destroyed) was calculated (Table 54).

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Cervical Vertebrae	40	0	6	3,05	1,377
Valid N (listwise)	40				

Table 54: minimum, maximum and mean grade of degenerative modification of cervical vertebrae for investigated adult/mature/senile population of Gemeinlebarn F

Sex * Cervical Vertebrae Crosstabulation

Count		Cervical Vertebrae							Total
		normal, fit	small signs of wear	slightly pathological <50% joint surface	slightly pathological >50% joint surface	pathological	heavily pathological	destroyed	
Sex	male	0	1	8	7	4	3	2	25
	female	1	1	4	6	2	0	1	15
	Total	1	2	12	13	6	3	3	40

Table 55: number of individuals with cervical vertebrae affected to the various degrees for males and females aged >19 yrs of Gemeinlebarn F

Wealth * Cervical Vertebrae Crosstabulation									
Count		Cervical Vertebrae							Total
		normal, fit	small signs of wear	slightly pathological <50% joint surface	slightly pathological >50% joint surface	pathological	heavily pathological	destroyed	
Wealth	upper class	0	2	4	7	2	2	2	19
	lower class	1	0	8	6	4	1	1	21
Total		1	2	12	13	6	3	3	40

Table 56: number of individuals with cervical vertebrae affected to the various degrees for upper and lower class individuals aged >19 yrs of Gemeinlebar F

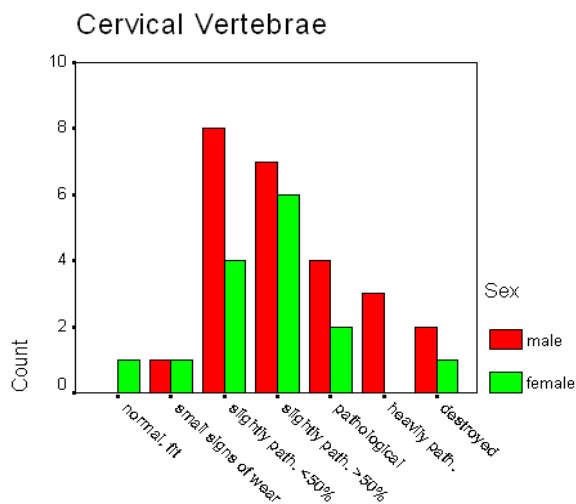


Figure 16: number of individuals with cervical vertebrae affected to the various degrees for males and females aged >19yrs of Gemeinlebar F

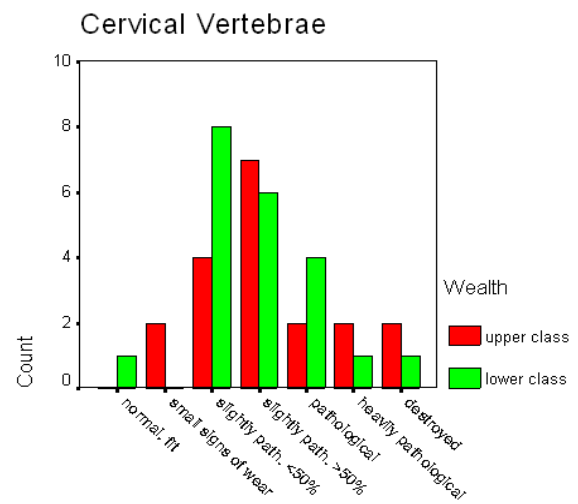


Figure 17: number of individuals with cervical vertebrae affected to the various degrees for upper and lower class individuals aged >19yrs of Gemeinlebar F

Table 55 and 56 (Figure 16 and 17) show the number of individuals with cervical vertebrae affected to the various degrees of joint modification for male/female and upper/lower class individuals aged >19 yrs.

Cervical Vertebrae			
Sex	Mean	N	Std. Deviation
male	3,24	25	1,363
female	2,73	15	1,387
Total	3,05	40	1,377

Table 57: mean degeneration of cervical vertebral joints for males and females aged >19 yrs of Gemeinlebar F

Cervical Vertebrae			
Wealth	Mean	N	Std. Deviation
upper class	3,21	19	1,475
lower class	2,90	21	1,300
Total	3,05	40	1,377

Table 58: mean degeneration of cervical vertebral joints for upper and lower class individuals aged >19 yrs of Gemeinlebar F

The comparison of mean cervical joint conditions reveals that the male mean of 3.24 (N=25) lies above the female mean of 2.73 (N=15) (Table 57) and the upper class mean of 3.21 (N=19) is a little higher than the lower class mean of 2.90 (N=21) (Table 58).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	Cervical Vertebrae				Cervical Vertebrae			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	2,68	19	,885	male	5,00	6	1,095
	female	2,45	11	1,036	female	3,50	4	2,082
	Total	2,60	30	,932	Total	4,40	10	1,647
upper / lower class	Cervical Vertebrae				Cervical Vertebrae			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	2,67	12	,888	upper class	4,14	7	1,864
	lower class	2,56	18	,984	lower class	5,00	3	1,000
	Total	2,60	30	,932	Total	4,40	10	1,647

Table 59: mean degeneration of cervical vertebral joints for males and females/ upper and lower class individuals of Gemeinlebar F aged 19 – 39.9 yrs and > 40 yrs

When comparing the social groups after dividing them into two adult groups aged 19 – 39.9 yrs (N=30) and > 40 yrs (N=10) (Table 59), the calculated means underline the results in Table 57 for males and females, as males tend to show slightly heavier signs of wear in their cervical vertebrae than females. The mean cervical joint modification for upper class individuals lies only slightly above the lower class individuals mean in the first age group, but is lower in the second age group.

Thoracic vertebrae

The degenerative condition of thoracic vertebrae of 45 individuals aged >19 yrs was evaluated. The mean degenerative modification of the sample is **3.04** (0=normal, fit, 1=small signs of wear, 2= slightly pathological on less than 50% of the joint surface, 3=slightly pathological on more than 50% of the joint surface, 4=pathological, 5=heavily pathological, 6=joint destroyed) (Table 60).

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Thoracic Vertebrae	45	1	5	3,04	1,021
Valid N (listwise)	45				

Table 60: minimum, maximum and mean grade of degenerative modification of thoracic vertebrae for investigated adult/mature/senile population of Gemeinlebar F

Sex * Thoracic Vertebrae Crosstabulation

Count		Thoracic Vertebrae					Total
		small signs of wear	slightly pathological <50% joint surface	slightly pathological >50% joint surface	pathological	heavily pathological	
Sex	male	1	10	7	12	2	32
	female	1	4	4	4	0	13
Total		2	14	11	16	2	45

Table 61: number of individuals with thoracic vertebrae affected to the various degrees for males and females aged >19 yrs of Gemeinlebar F

Wealth * Thoracic Vertebrae Crosstabulation

Count		Thoracic Vertebrae					Total
		small signs of wear	slightly pathological <50% joint surface	slightly pathological >50% joint surface	pathological	heavily pathological	
Wealth	upper class	0	5	3	8	1	17
	lower class	2	9	8	8	1	28
Total		2	14	11	16	2	45

Table 62: number of individuals with thoracic vertebrae affected to the various degrees for upper and lower class individuals aged >19 yrs of Gemeinlebar F

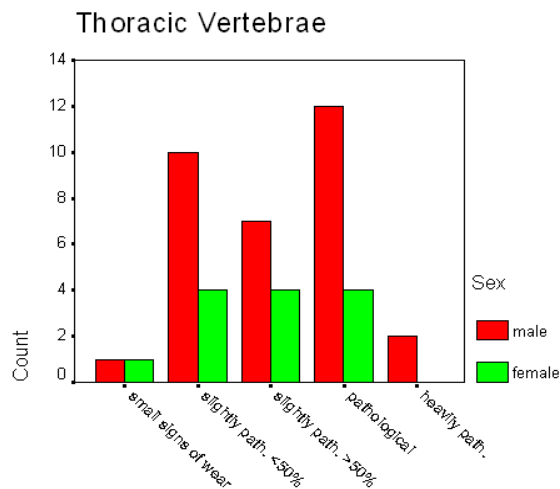


Figure 18: number of individuals with thoracic vertebrae affected to the various degrees for males and females aged >19yrs of Gemeinlebar F

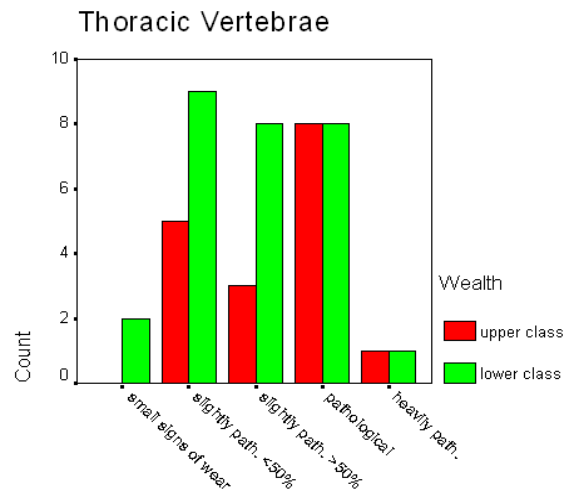


Figure 19: number of individuals with thoracic vertebrae affected to the various degrees for upper and lower class individuals aged >19yrs of Gemeinlebar F

Table 61 and 62 (Figure 18 and 19) display the number of thoracic vertebrae with the various pathological joint modifications for male/female and upper/lower class individuals aged >19 yrs No grade 0 thoracic vertebrae were found within this sample.

Sex	Mean	N	Std. Deviation
male	3,13	32	1,040
female	2,85	13	,987
Total	3,04	45	1,021

Table 63: mean degeneration of thoracic vertebral joints for males and females aged >19yrs of Gemeinlebar F

Wealth	Mean	N	Std. Deviation
upper class	3,29	17	,985
lower class	2,89	28	1,031
Total	3,04	45	1,021

Table 64: mean degeneration of thoracic vertebral joints for upper and lower class individuals aged >19yrs of Gemeinlebar F

The social comparison of the mean thoracic joint degeneration reveals that the male mean of 3.13 (N=32) lies above the female mean of 2.85 (N=13) (Table 63) and the upper class mean of 3.29 (N=17) is higher than the lower class mean of 2.89 (N=45) (Table 64).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	Thoracic Vertebrae				Thoracic Vertebrae			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	2,96	25	1,020	male	3,71	7	,951
	female	2,50	10	,850	female	4,00	3	,000
	Total	2,83	35	,985	Total	3,80	10	,789
upper / lower class	Thoracic Vertebrae				Thoracic Vertebrae			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	2,91	11	,944	upper class	4,00	6	,632
	lower class	2,79	24	1,021	lower class	3,50	4	1,000
	Total	2,83	35	,985	Total	3,80	10	,789

Table 65: mean degeneration of thoracic vertebral joints for males and females/ upper and lower class individuals of Gemeinlebern F aged 19 – 39.9 yrs and > 40 yrs

The social groups were re-divided into two adult groups aged 19 – 39.9 yrs (N=35) and > 40 yrs (N=10) (Table 65). The average joint degeneration is slightly higher for males than for females in the first age group and slightly lower in the second age group. The calculated means for upper and lower class individuals of both age groups confirm the results in Table 64.

Lumbar vertebrae

The lumbar vertebrae of 38 individuals aged >19 yrs were examined in terms of degenerative modification. The overall sample mean is **3.76** (0=normal, fit, 1=small signs of wear, 2= slightly pathological on less than 50% of the joint surface, 3=slightly pathological on more than 50% of the joint surface, 4=pathological, 5=heavily pathological, 6=joint destroyed) (Table 66).

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Lumbar Vertebrae	38	2	6	3,76	,913
Valid N (listwise)	38				

Table 66: minimum, maximum and mean grade of degenerative modification of lumbar vertebrae for investigated adult/mature/senile population of Gemeinlebern F

Sex * Lumbar Vertebrae Crosstabulation

Count		Lumbar Vertebrae					Total
		slightly pathological <50% joint surface	slightly pathological >50% joint surface	pathological	heavily pathological	destroyed	
Sex	male	1	7	11	5	0	24
	female	1	7	3	1	1	13
	of unknown sex	0	0	0	1	0	1
Total		2	14	14	7	1	38

Table 67:

number of individuals with lumbar vertebrae affected to the various degrees for males and females aged >19 yrs of Gemeinlebern F

Wealth * Lumbar Vertebrae Crosstabulation

Count		Lumbar Vertebrae					Total
		slightly pathological <50% joint surface	slightly pathological >50% joint surface	pathological	heavily pathological	destroyed	
Wealth	upper class	0	6	6	2	0	14
	lower class	2	8	8	5	1	24
Total		2	14	14	7	1	38

Table 68: number of individuals with lumbar vertebrae affected to the various degrees for upper and lower class individuals aged >19 yrs of Gemeinlebern F

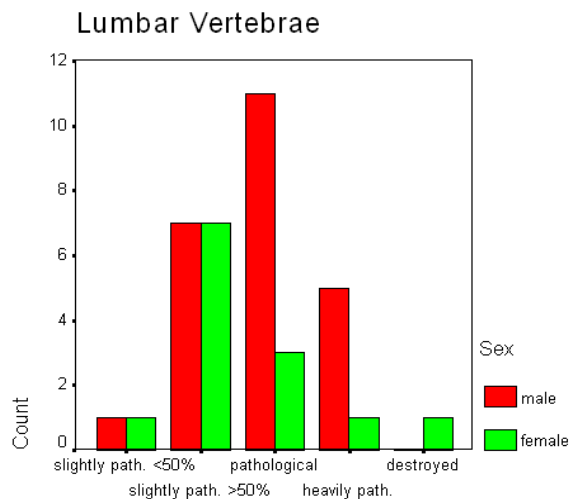


Figure 20: number of individuals with lumbar vertebrae affected to the various degrees for males and females aged >19 yrs of Gemeinlebern F

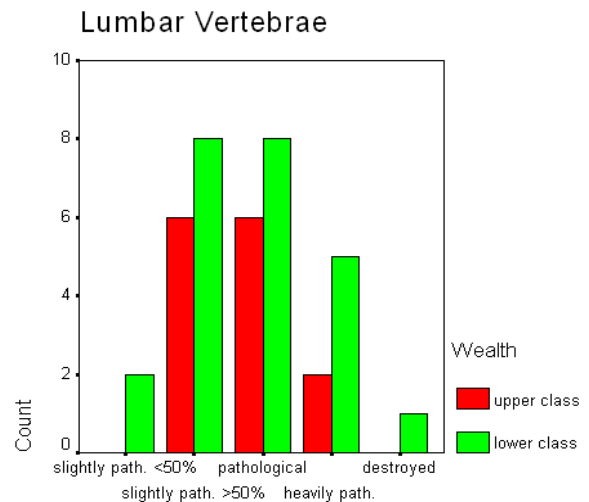


Figure 21: number of individuals with lumbar vertebrae affected to the various degrees for upper and lower class individuals aged >19 yrs of Gemeinlebern F

In Table 67 and 68 (Figure 20 and 21), the number of normal and pathological lumbar joint conditions for male/female and upper/lower class individuals aged >19 yrs are displayed.

Lumbar Vertebrae			
Sex	Mean	N	Std. Deviation
male	3,83	24	,816
female	3,54	13	1,050
Total	3,73	37	,902

Table 69: mean degeneration of lumbar vertebral joints for males and females aged >19yrs of Gemeinlebar F

Lumbar Vertebrae			
Wealth	Mean	N	Std. Deviation
upper class	3,71	14	,726
lower class	3,79	24	1,021
Total	3,76	38	,913

Table 70: mean degeneration of lumbar vertebral joints for males and females aged >19yrs of Gemeinlebar F

The comparison of mean lumbar joint conditions shows that the male mean of 3.83 (N=24) is slightly higher than the female mean of 3.54 (N=13) (Table 69) and the upper class mean of 3.71 (N=14) is similar to the lower class mean of 3.79 (N=24) (Table 70).

	individuals aged 19 – 39.9 yrs	individuals aged > 40 yrs																																
male/ female	Lumbar Vertebrae	Lumbar Vertebrae																																
	<table><tr><th>Sex</th><th>Mean</th><th>N</th><th>Std. Deviation</th></tr><tr><td>male</td><td>3,53</td><td>15</td><td>,743</td></tr><tr><td>female</td><td>3,60</td><td>10</td><td>1,174</td></tr><tr><td>Total</td><td>3,56</td><td>25</td><td>,917</td></tr></table>	Sex	Mean	N	Std. Deviation	male	3,53	15	,743	female	3,60	10	1,174	Total	3,56	25	,917	<table><tr><th>Sex</th><th>Mean</th><th>N</th><th>Std. Deviation</th></tr><tr><td>male</td><td>4,33</td><td>9</td><td>,707</td></tr><tr><td>female</td><td>3,33</td><td>3</td><td>,577</td></tr><tr><td>Total</td><td>4,08</td><td>12</td><td>,793</td></tr></table>	Sex	Mean	N	Std. Deviation	male	4,33	9	,707	female	3,33	3	,577	Total	4,08	12	,793
	Sex	Mean	N	Std. Deviation																														
	male	3,53	15	,743																														
	female	3,60	10	1,174																														
Total	3,56	25	,917																															
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female	3,33	3	,577																															
Total	4,08	12	,793																															
		ANOVA Table <table><tr><th></th><th>Sum of Squares</th><th>df</th><th>Mean Square</th><th>F</th><th>Sig.</th></tr><tr><td>Lumbar Vertebrae * Sex</td><td>2,250</td><td>1</td><td>2,250</td><td>4,821</td><td>,053</td></tr><tr><td>Between Groups</td><td>2,250</td><td>1</td><td></td><td></td><td></td></tr><tr><td>Within Groups</td><td>4,667</td><td>10</td><td>,467</td><td></td><td></td></tr><tr><td>Total</td><td>6,917</td><td>11</td><td></td><td></td><td></td></tr></table>		Sum of Squares	df	Mean Square	F	Sig.	Lumbar Vertebrae * Sex	2,250	1	2,250	4,821	,053	Between Groups	2,250	1				Within Groups	4,667	10	,467			Total	6,917	11					
	Sum of Squares	df	Mean Square	F	Sig.																													
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Total	6,917	11																																
upper/ lower class	Lumbar Vertebrae	Lumbar Vertebrae																																
	<table><tr><th>Wealth</th><th>Mean</th><th>N</th><th>Std. Deviation</th></tr><tr><td>upper class</td><td>3,40</td><td>5</td><td>,548</td></tr><tr><td>lower class</td><td>3,60</td><td>20</td><td>,995</td></tr><tr><td>Total</td><td>3,56</td><td>25</td><td>,917</td></tr></table>	Wealth	Mean	N	Std. Deviation	upper class	3,40	5	,548	lower class	3,60	20	,995	Total	3,56	25	,917	<table><tr><th>Wealth</th><th>Mean</th><th>N</th><th>Std. Deviation</th></tr><tr><td>upper class</td><td>3,89</td><td>9</td><td>,782</td></tr><tr><td>lower class</td><td>4,75</td><td>4</td><td>,500</td></tr><tr><td>Total</td><td>4,15</td><td>13</td><td>,801</td></tr></table>	Wealth	Mean	N	Std. Deviation	upper class	3,89	9	,782	lower class	4,75	4	,500	Total	4,15	13	,801
	Wealth	Mean	N	Std. Deviation																														
	upper class	3,40	5	,548																														
	lower class	3,60	20	,995																														
Total	3,56	25	,917																															
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		ANOVA Table <table><tr><th></th><th>Sum of Squares</th><th>df</th><th>Mean Square</th><th>F</th><th>Sig.</th></tr><tr><td>Lumbar Vertebrae * Wealth</td><td>2,053</td><td>1</td><td>2,053</td><td>4,008</td><td>,071</td></tr><tr><td>Between Groups</td><td>2,053</td><td>1</td><td></td><td></td><td></td></tr><tr><td>Within Groups</td><td>5,639</td><td>11</td><td>,513</td><td></td><td></td></tr><tr><td>Total</td><td>7,692</td><td>12</td><td></td><td></td><td></td></tr></table>		Sum of Squares	df	Mean Square	F	Sig.	Lumbar Vertebrae * Wealth	2,053	1	2,053	4,008	,071	Between Groups	2,053	1				Within Groups	5,639	11	,513			Total	7,692	12					
	Sum of Squares	df	Mean Square	F	Sig.																													
Lumbar Vertebrae * Wealth	2,053	1	2,053	4,008	,071																													
Between Groups	2,053	1																																
Within Groups	5,639	11	,513																															
Total	7,692	12																																

Table 71: mean degeneration of thoracic vertebral joints for males and females/ upper and lower class individuals of Gemeinlebar F aged 19 – 39.9 yrs and > 40 yrs

The social groups were then divided into two adult groups aged 19 – 39.9 yrs (N=25) and > 40 yrs (N=12 males and females/13 upper and lower class individuals) (Table 70). The average joint degeneration is slightly lower for males than for females in the first age group and almost significantly higher in the second age group ($p=0.053$).

Lower class individuals show slightly more signs of lumbar joint wear than upper class individuals in the first age group and within the second age group, this difference is almost significant ($p=0.071$).

Neither the division of males older than 19 yrs into upper and lower class groups, nor the division of females older than 19 yrs into respective groups brought any further significant differences.

5.4.2 Vertebral bodies

The vertebral bodies of 32 individuals were investigated. Schmorl's nodes (Plate IV a) were found on thoracic and/or lumbar vertebral bodies of 21 individuals (**65.6%**) (Table 72, Figure 22), consisting of 15 males and 6 females, and 12 upper class and 9 lower class individuals respectively. In no case Schmorl's nodes were observed in cervical vertebrae.

Schmorl's nodes					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Schmorl's nodes	21	65,6	65,6	65,6
	no signs of Schmorl's nodes	11	34,4	34,4	100,0
	Total	32	100,0	100,0	

Table 72: frequencies of adult/mature/senile Gemeinlebern F individuals with Schmorl's nodes on thoracic and/or lumbar vertebrae

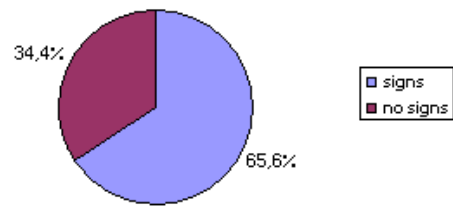


Figure 22: frequencies of adult/mature/senile Gemeinlebern F individuals with Schmorl's nodes on thoracic and/or lumbar vertebrae

Table 73 and 74 (Figure 23 and 24) give the number and frequencies of males/females and upper/lower class individuals with Schmorl's Nodes in the cervical, thoracic and lumbar region.

	cervical vertebrae	thoracic vertebrae	lumbar vertebrae
male (N=20)	0 (0%)	7 (46,7%)	12 (80%)
female (N=12)	0 (0%)	2 (16,7%)	4 (33,3%)

Table 73: number (frequencies) of males and females with Schmorl's nodes in the cervical, thoracic and lumbar region

	cervical vertebrae	thoracic vertebrae	lumbar vertebrae
upper class (N=14)	0 (0%)	4 (28,6%)	11 (78,6%)
lower class (N=18)	0 (0%)	5 (27,8%)	5 (27,8%)

Table 74: number (frequencies) of upper and lower class individuals with Schmorl's nodes in the cervical, thoracic and lumbar region

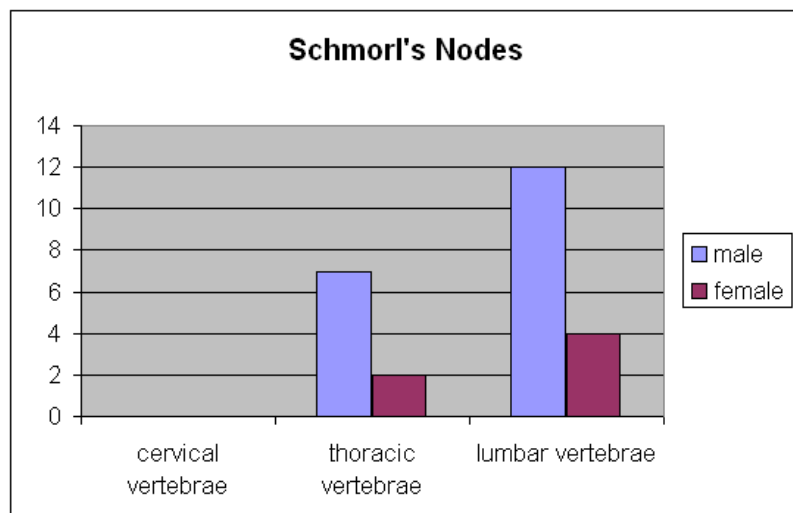


Figure 23: number of males and females with Schmorl's Nodes in the cervical, thoracic and lumbar region

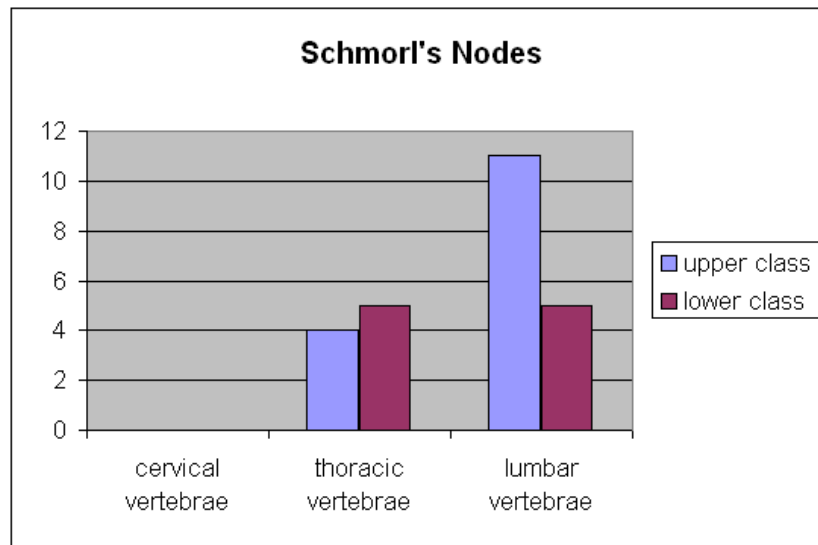


Figure 24: number of upper and lower class individuals with Schmorl's Nodes in the cervical, thoracic and/or lumbar region

	Sex			
	male		female	
	Schmorl's nodes		Schmorl's nodes	
	Anzahl	%	Anzahl	%
Schmorl's nodes	15	75,0%	6	50,0%
no signs of Schmorl's nodes	5	25,0%	6	50,0%

Table 75: number of males and females with signs of Schmorl's nodes on cervical, thoracic and/or lumbar vertebrae

	Wealth			
	upper class		lower class	
	Schmorl's nodes		Schmorl's nodes	
	Anzahl	%	Anzahl	%
Schmorl's nodes	12	85,7%	9	50,0%
no signs of Schmorl's nodes	2	14,3%	9	50,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,453 ^b	1	,035		
Continuity Correction ^a	3,010	1	,083		
Likelihood Ratio	4,747	1	,029		
Fisher's Exact Test				,061	,039
Linear-by-Linear Association	4,314	1	,038		
N of Valid Cases	32				

a. Computed only for a 2x2 table

b. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 4,81.

Table 76: number of upper and lower class individuals with signs of Schmorl's nodes on cervical, thoracic and/or lumbar vertebrae, and respective chi-square test

No significant differences were found between sexes (Table 75), where 15 out of 20 males (75%) and 6 out of 12 females (50%) are affected.

A significant difference ($p=0.035$) was recorded between the two social classes (Table 76): Schmorl's nodes were detected in 12 of the 14 upper class individuals (85.71%), and in 9 of the 18 lower class individuals (50%). The average age calculation for both groups shows that the mean age is higher in the upper class (36.71 yrs) than in the lower class sample (31.11 yrs).

If only males are taken into account, no significant differences occur between the social classes.

Large caudal impressions in lumbar vertebrae were recorded for:

- Burial 7 (male, 40 - 50 yrs, upper class)
- Burial 150 (male, 40 - 50 yrs, upper class)
- Burial 154 (female, 30 - 40 yrs, lower class)
- Burial 162 (male, 30 - 40 yrs, upper class)
- Burial 167 (male, 30 - 40 yrs, upper class)
- Burial 186 (male, 24 - 30 yrs, lower class)
- Burial 187 (female, 22 - 30 yrs, lower class)
- Burial 191 (female, 60 - 80 yrs, upper class)
- Burial 210 (male, 27 - 33 yrs, lower class)

5.4.3 Joint degeneration

right shoulder joint

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
right shoulder joint	16	1,00	4,00	2,1250	,95743
Valid N (listwise)	16				

Table 77: minimum, maximum and mean grade of degenerative modification of the right shoulder joint for investigated adult/mature/senile population of Gemeinlebern F

right shoulder joint

Sex	Mean	N	Std. Deviation
male	2,4444	9	1,13039
female	1,7143	7	,48795
Total	2,1250	16	,95743

Table 78: mean degeneration of right shoulder joints for males and females older than 19 yrs

right shoulder joint

Wealth	Mean	N	Std. Deviation
upper class	2,5000	8	1,19523
lower class	1,7500	8	,46291
Total	2,1250	16	,95743

Table 79: mean degeneration of right shoulder joints for upper and lower class individuals older than 19 yrs

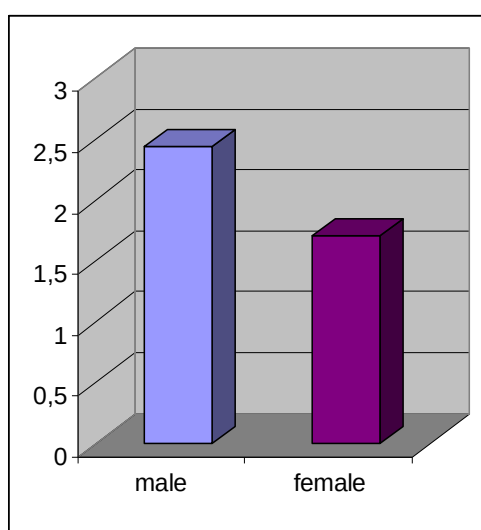


Figure 25: mean right shoulder joint degeneration for males and females older than 19 yrs

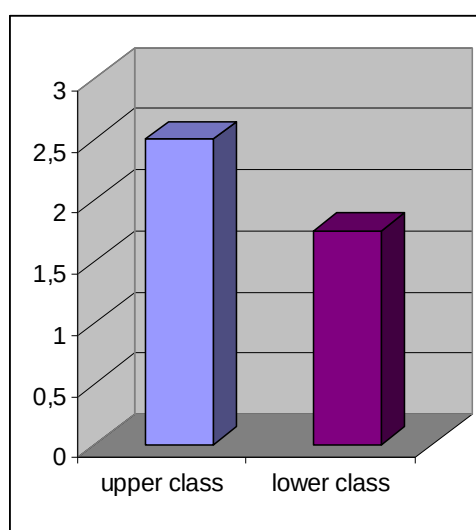


Figure 26: mean right shoulder joint degeneration for upper and lower class individuals older than 19 yrs

None of the investigated right shoulder joints (N=16) shows grade 5 or grade 6 modifications and the mean grade of affection is 2.13 (Table 77). The mean grade of degeneration for males is 2.44 (N=9) and 1.71 for females (N=7) (Table 78, Figure 25) and after dividing the sample into social classes, the upper class is

affected to 2.5 (N=8) and the lower class to 1.75 (N=8) (Table 79, Figure 26).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	right shoulder joint				right shoulder joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,8000	5	,83666	male	3,2500	4	,95743
	female	1,6000	5	,54772	female	2,0000	2	,00000
	Total	1,7000	10	,67495	Total	2,8333	6	,98319
upper/ lower class	right shoulder joint				right shoulder joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,7500	4	,95743	upper class	3,2500	4	,95743
	lower class	1,6667	6	,51640	lower class	2,0000	2	,00000
	Total	1,7000	10	,67495	Total	2,8333	6	,98319

Table 80: mean degeneration of right shoulder joint for males and females/ upper and lower class individuals of Gemeinlebarn F aged 19 – 39.9 yrs and > 40 yrs

The right shoulder joints belonging to males aged 19 to 39.9 yrs (N=5) show a mean degeneration of 1.80, whereas the right shoulder joints of females (N=5) are only affected to 1.60 on average. The difference between the male and female mean increases in age, as the male individuals older than 40 yrs (N=4) show a mean of 3.25 and the females 2.00 (N=2) (Table 80).

Upper class individuals between 19 and 39.9 yrs show a mean degeneration of 1.75 (N=4) and the average in the lower class group (N=6) is 1.67. The mean modification of individuals older than 40 yrs is 3.25 for upper class (N=4) and 2.00 for lower class individuals (N=2) (Table 80).

left shoulder joint

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
left shoulder joint	21	1,00	4,00	1,9762	,90106
Valid N (listwise)	21				

Table 81: minimum, maximum and mean grade of degenerative modification of the left shoulder joint for investigated adult/mature/senile population of Gemeinlebarn F

left shoulder joint

Sex	Mean	N	Std. Deviation
male	1,9667	15	,85496
female	2,0000	6	1,09545
Total	1,9762	21	,90106

Table 82: mean degeneration of left shoulder joints for males and females older than 19 yrs

left shoulder joint

Wealth	Mean	N	Std. Deviation
upper class	2,3000	10	,82327
lower class	1,6818	11	,90202
Total	1,9762	21	,90106

Table 83: mean degeneration of left shoulder joints for upper and lower class individuals older than 19 yrs

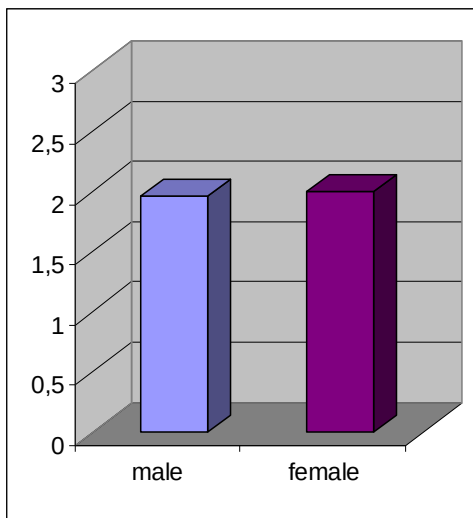


Figure 27: mean left shoulder joint degeneration for males and females older than 19 yrs

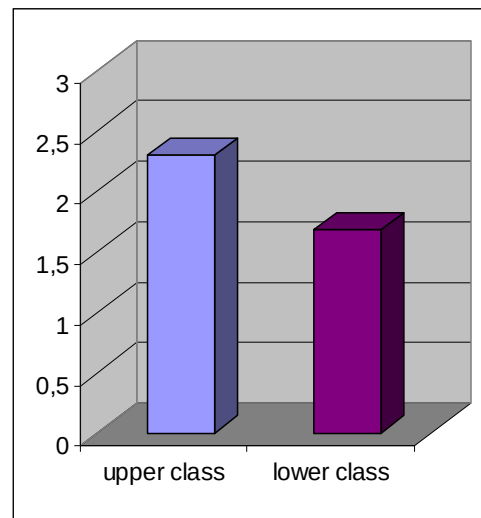


Figure 28: mean left shoulder joint degeneration for upper and lower class individuals older than 19 yrs

None of the existing left shoulder joints (N=21) shows grade 5 or grade 6 degeneration and the mean grade of modification within the population is 1.97 (Table 81). Males (N=15) show 1.96 average degeneration and females (N=6) show a mean modification of grade 2 (Table 82, Figure 27), and upper class individuals (N=10) are affected to grade 2.3 on average and lower class individuals (N=11) to grade 1.68 (Table 83, Figure 28).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	left shoulder joint				left shoulder joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,5714	7	,78680	male	2,3125	8	,79899
	female	1,5000	4	,57735	female	3,0000	2	1,41421
	Total	1,5455	11	,68755	Total	2,4500	10	,89598
upper/ lower class	left shoulder joint				left shoulder joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,7500	4	,50000	upper class	2,6667	6	,81650
	lower class	1,4286	7	,78680	lower class	2,1250	4	1,03078
	Total	1,5455	11	,68755	Total	2,4500	10	,89598

Table 84: mean degeneration of left shoulder joint for males and females/ upper and lower class individuals of Gemeinlebar F aged 19 – 39.9 yrs and >40 yrs

Left shoulder joints belonging to males aged 19 to 39.9 yrs (N=7) show a mean degeneration of 1.57, whereas the left shoulder joints of females (N=4) are only affected to 1.50 on average. Males older than 40 yrs (N=8) show a mean of 2.31 and females of 3.00 (N=2) (Table 84).

When comparing upper and lower class individuals, the upper class individuals aged 19 to 39.9 yrs (N=4) show a mean degeneration of 1.75 and the lower class group (N=7) of 1.43. The investigated individuals aged over 40 yrs show an average degenerative modification of 2.67 in the upper class (N=6) and 2.13 in the lower class group (N=4) (Table 84).

right elbow joint

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
right elbow joint	21	,00	3,00	1,3390	,88869
Valid N (listwise)	21				

Table 85: minimum, maximum and mean grade of degenerative modification of the right elbow joint for investigated adult/mature/senile population of Gemeinlebar F

right elbow joint			
Sex	Mean	N	Std. Deviation
male	1,5443	14	,91197
female	,9286	7	,73193
Total	1,3390	21	,88869

Table 86: mean degeneration of right elbow joints for males and females older than 19 yrs

right elbow joint			
Wealth	Mean	N	Std. Deviation
upper class	1,7183	12	,78436
lower class	,8333	9	,79057
Total	1,3390	21	,88869

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
right elbow joint * Wealth	Between Groups	(Combined)	4,028	1	4,028	6,504	,020
	Within Groups		11,767	19	,619		
	Total		15,795	20			

Table 87: mean degeneration of right elbow joints for upper and lower class individuals older than 19 yrs and respective chi2-test

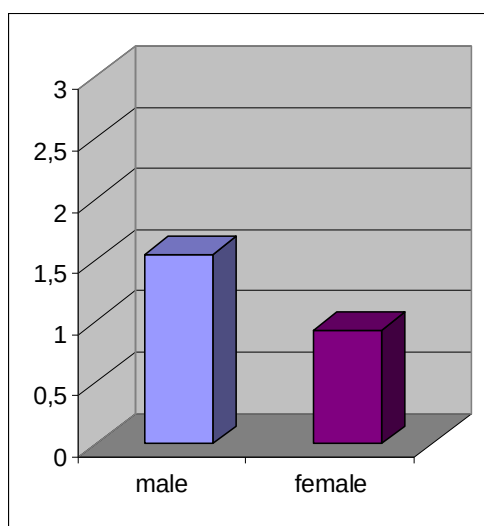


Figure 29: mean right elbow joint degeneration for males and females older than 19 yrs

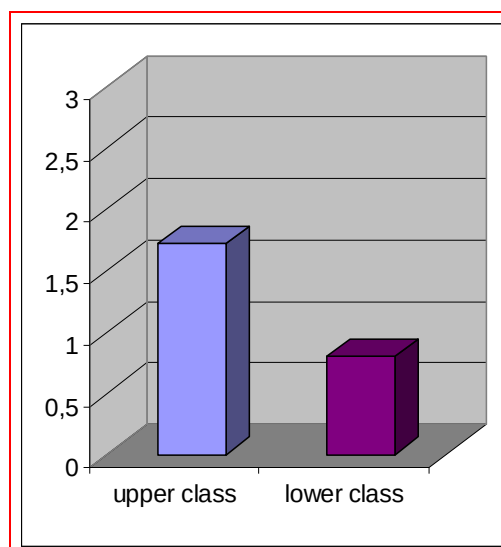


Figure 30: mean right elbow joint degeneration for upper and lower class individuals older than 19 yrs

None of the existing right elbow joints (N=21) shows grade 4, 5 or grade 6 degeneration and the mean grade of modification within the population is 1.34 (Table 85) (Plate IV b).

Males (N=14) show average degeneration of 1.55 and females (N=7) of 0.93 (Table 86, Figure 29). A significant difference ($p=0.020$) occurs when comparing the two social classes, as the mean degeneration for upper class members (N=12, average age: 37.75 yrs) is 1.72, as opposed to 0.83 for the lower class individuals (N=9, average age: 34.94 yrs) (Table 87, Figure 30).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	right elbow joint				right elbow joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,2650	8	1,07886	male	1,9167	6	,49160
	female	,7000	5	,67082	female	1,5000	2	,70711
	Total	1,0477	13	,95437	Total	1,8125	8	,53033
upper/ lower class	right elbow joint				right elbow joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,5886	7	,93848	upper class	1,9000	5	,54772
	lower class	,4167	6	,49160	lower class	1,6667	3	,57735
	Total	1,0477	13	,95437	Total	1,8125	8	,53033
ANOVA Table								
		Sum of Squares	df	Mean Square	F	Sig.		
right elbow joint * Wealth		4,437	1	4,437	7,517	,019		
Between Groups		4,437	1	4,437				
Within Groups		6,493	11	,590				
Total		10,930	12					

Table 88: mean degeneration of the right elbow joint for males and females/ upper and lower class individuals of Gemeinlebern F aged 19 – 39.9 yrs and > 40 yrs

The right elbow joints of males aged 19 to 39.9 yrs (N=8) show a mean degeneration of 1.27, compared with those of females in the same age group (N=5), which show a value of 0.70 on average. Males older than 40 yrs (N=6) have a mean of 1.92 and females of 1.5 (N=2) (Table 88).

A significant difference ($p=0.019$) between the upper and lower class groups was again found when only focusing on individuals aged 19 to 39.9 yrs: the mean degeneration of the upper class right elbow joints (N=7, average age: 31.85 yrs) is 1.59 as opposed to 0.42 in the lower class group (N=6, average age: 28.25 yrs). Individuals older than 40 yrs show an average degenerative modification of 1.90 in the upper class (N=5) and 1.67 in the lower class group (N=3) (Table 88).

left elbow joint

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
left elbow joint	21	,00	3,00	1,5714	,87372
Valid N (listwise)	21				

Table 89: minimum, maximum and mean grade of degenerative modification of the left elbow joint for investigated adult/mature/senile population of Gemeinlebern F

left elbow joint

Sex	Mean	N	Std. Deviation
male	1,5833	12	,70978
female	1,5000	8	1,16496
Total	1,5500	20	,89074

Table 90: mean degeneration of left elbow joints for males and females older than 19 yrs

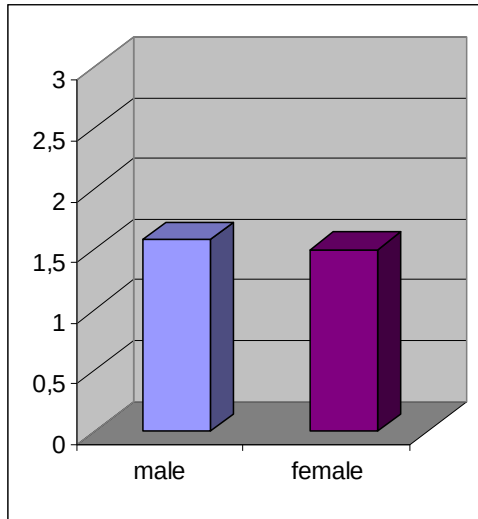


Figure 31: mean left elbow joint degeneration for males and females older than 19 yrs

left elbow joint

Wealth	Mean	N	Std. Deviation
upper class	1,7727	11	,72848
lower class	1,3500	10	1,00139
Total	1,5714	21	,87372

Table 91: mean degeneration of left elbow joints for upper and lower class individuals older than 19 yrs

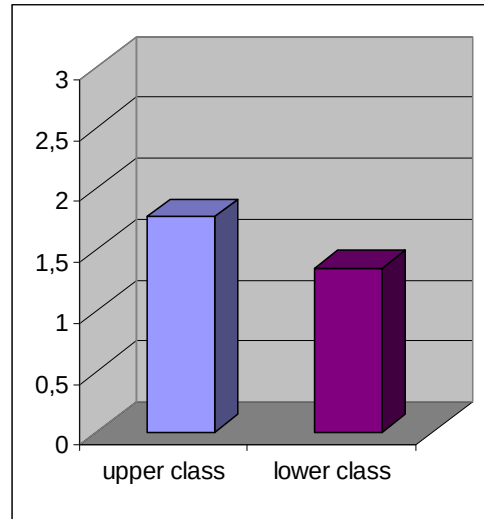


Figure 32: mean left elbow joint degeneration for upper and lower class individuals older than 19 yrs

The mean grade of modification within the population is 1.57. None of the existing left elbow joints (N=21) shows grade 4, 5 or grade 6 modifications (Table 89). Males (N=12) show a mean degeneration of 1.58, and females (N=8) of 1.5 (Table 90, Figure 31). Upper class individuals (N=11) are affected to grade 1.77 and lower class individuals (N=10) to grade 1.35 (Table 90, Figure 32).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	left elbow joint				left elbow joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,3750	6	,66615	male	1,7917	6	,74861
	female	,8750	4	1,18145	female	2,1250	4	,85391
	Total	1,1750	10	,88231	Total	1,9250	10	,76422
upper/ lower class	left elbow joint				left elbow joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,7500	5	,79057	upper class	1,7917	6	,74861
	lower class	,8333	6	,75277	lower class	2,1250	4	,85391
	Total	1,2500	11	,87321	Total	1,9250	10	,76422

Table 92: mean degeneration of the left elbow joint for males and females/ upper and lower class individuals of Gemeinlebern F aged 19 – 39.9 yrs and > 40 yrs

The mean grade of left elbow joint degeneration for the group of males aged 19 to 39.9 yrs (N=6) is 1.38 and for females aged 19 to 39.9 yrs (N=4) 0.88. The average left elbow joint degeneration of males older than 40 (N=6) is 1.79 and of females older than 40 (N=4) 2.13 (Table 92).

The comparison of the upper and lower class groups shows a distinct trend ($p=0.081$) towards upper class individuals within the age group 19 to 39.9 yrs, the mean grade of degeneration being 1.75 for upper class individuals (N=5) and 0.83 for lower class individuals (N=6). However, in the second age group (older than 40 yrs), the lower class individuals (N=4) with a mean of 2.13 appear to be affected to a higher degree than upper class individuals (N=6) with a mean of 1.79 (Table 92).

right proximal wrist joint

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
right proximal wrist	24	,00	4,00	1,8283	1,09440
Valid N (listwise)	24				

Table 93: minimum, maximum and mean grade of degenerative modification of the right proximal wrist joint for investigated adult/mature/senile population of Gemeinlebern F

right proximal wrist

Sex	Mean	N	Std. Deviation
male	2,0000	18	1,18818
female	1,1760	5	,46355
Total	1,8209	23	1,11837

Table 94: mean degeneration of right proximal wrist joints for males and females older than 19 yrs

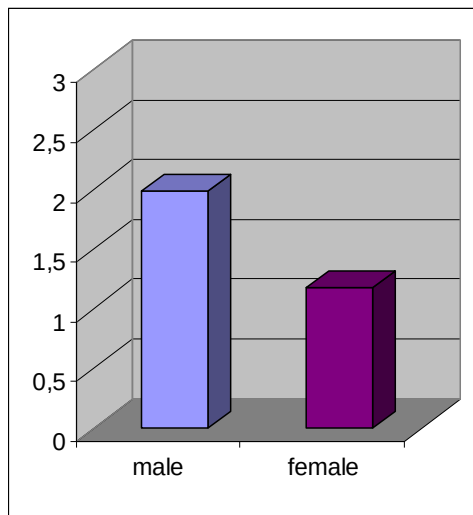


Figure 33: mean right proximal wrist joint degeneration for males and females older than 19yrs

right proximal wrist

Wealth	Mean	N	Std. Deviation
upper class	1,9091	11	1,20038
lower class	1,7600	13	1,04106
Total	1,8283	24	1,09440

Table 95: mean degeneration of right proximal wrist joints for upper and lower class individuals older than 19 yrs

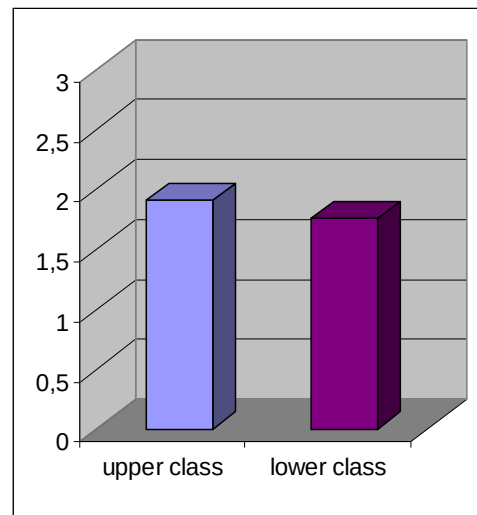


Figure 34: mean right proximal wrist joint degeneration for upper and lower class individuals older than 19yrs

The right proximal wrist joints of 24 individuals were investigated. The mean grade of modification is 1.83 and none of the existing right proximal wrist joints shows grade 5 or grade 6 degenerations (Table 93). Male individuals (N=18) show average modifications of grade 2.00 and females (N=5) of 1.18 (Table 94, Figure 33). Upper class individuals (N=11) developed modifications of 1.91 and lower class members (N=13) of 1.76 on average (Table 95, Figure 34).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	right proximal wrist				right proximal wrist			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,6818	11	1,18896	male	2,5000	7	1,08012
	female	,9700	4	,06000	female	2,0000	1	.
	Total	1,4920	15	1,05673	Total	2,4375	8	1,01550
upper/ lower class	right proximal wrist				right proximal wrist			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,6667	6	1,36626	upper class	2,2000	5	1,03682
	lower class	1,4380	10	,83971	lower class	2,8333	3	1,04083
	Total	1,5238	16	1,02877	Total	2,4375	8	1,01550

Table 96: mean degeneration of the right proximal wrist joint for males and females/ upper and lower class individuals of Gemeinlebern F aged 19 – 39.9 yrs and > 40 yrs

No significant differences were found when comparing the mean joint degeneration of the social groups. The mean of males aged 19 to 39.9 yrs (N=11) is 1.68 and for females (N=4) 0.97. Males older than 40 yrs (N=7) show an average degeneration of 2.5 and the only rateable female right proximal wrist in this age group contains grade 2 modifications (Table 96).

Upper class individuals aged 19 to 39.9 yrs (N=6) show a mean of 1.67 and lower class individuals (N=10) of 1.44. In the age group above 40 yrs, the upper class (N=5) mean is 2.20 and the lower class (N=3) mean is 2.83 (Table 96).

left proximal wrist joint

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
left proximal wrist	18	1,00	4,00	2,3333	1,08465
Valid N (listwise)	18				

Table 97: minimum, maximum and mean grade of degenerative modification of the left proximal wrist joint for investigated adult/mature/senile population of Gemeinlebern F

left proximal wrist			
Sex	Mean	N	Std. Deviation
male	2,3636	11	1,02691
female	2,3333	6	1,36626
Total	2,3529	17	1,11474

Table 98: mean degeneration of left proximal wrist joints for males and females older than 19 yrs

left proximal wrist			
Wealth	Mean	N	Std. Deviation
upper class	2,1875	8	,92341
lower class	2,4500	10	1,23491
Total	2,3333	18	1,08465

Table 99: mean degeneration of left proximal wrist joints for upper and lower class individuals older than 19 yrs

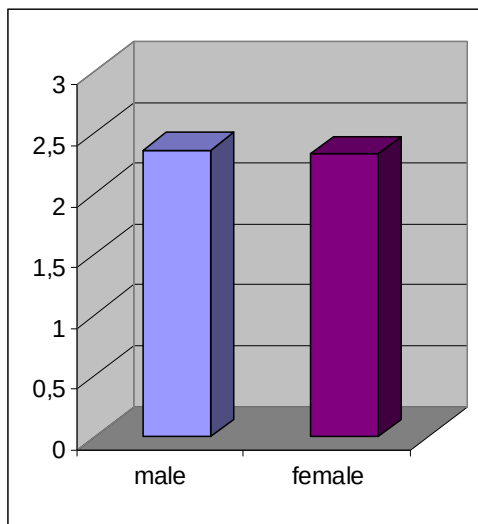


Figure 35: mean left proximal wrist joint degeneration for males and females older than 19yrs

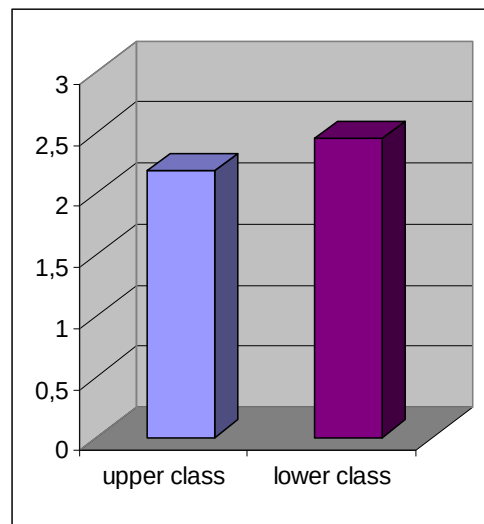


Figure 36: mean left proximal wrist joint degeneration for upper and lower class individuals older than 19yrs

The 18 ratable left proximal wrist joints contained degenerative changes ranging from grade 1 to grade 4. No individuals were found with grade 0, grade 5 or grade 6 modifications. The overall mean is 2.33 (Table 97).

On average, males (N=11) are affected to grade 2.36 and females (N=6) to grade 2.33 (Table 98, Figure 35). When divided into social classes, upper class individuals (N=8) show grade 2.19 modifications and lower class individuals (N=10) grade 2.45 (Table 99, Figure 36).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	left proximal wrist				left proximal wrist			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	2,0833	6	,73598	male	2,7000	5	1,30384
	female	2,0000	4	1,41421	female	3,0000	2	1,41421
	Total	2,0500	10	,98460	Total	2,7857	7	1,21988
upper/ lower class	left proximal wrist				left proximal wrist			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,9000	5	,74162	upper class	2,6667	3	1,15470
	lower class	2,1667	6	1,12546	lower class	2,8750	4	1,43614
	Total	2,0455	11	,93420	Total	2,7857	7	1,21988

Table 100: mean degeneration of the left proximal wrist joint for males and females/ upper and lower class individuals of Gemeinlebern F aged 19 – 39.9 yrs and > 40 yrs

The comparison of the means within the defined social groups shows no significant difference. The average male aged 19 to 39.9 yrs (N=6) has

modifications of grade 2.08 and the average female (N=4) of grade 2.00. The mean of males older than 40 yrs (N=5) is 2.7 and of females (N=2) 3.00 (Table 100).

Upper class individuals aged 19 to 39.9 yrs (N=5) show a mean of 1.90 and lower class individuals (N=6) of 2.17. In the age group above 40 yrs, the average degeneration for upper class individuals (N=3) is 2.67 and for lower class (N=4) individuals 2.88 (Table 100).

right radio-ulnar joint

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
right radio-ulnar joint	20	,00	3,00	1,5875	,74901
Valid N (listwise)	20				

Table 101: minimum, maximum and mean grade of degenerative modification of the right radio-ulnar joint for investigated adult/mature/senile population of Gemeinlebarn F

right radio-ulnar joint

Sex	Mean	N	Std. Deviation
male	1,6964	14	,82146
female	1,3333	6	,51640
Total	1,5875	20	,74901

Table 102: mean degeneration of right radio-ulnar joints for males and females older than 19 yrs

right radio-ulnar joint

Wealth	Mean	N	Std. Deviation
upper class	1,6250	10	,96645
lower class	1,5500	10	,49721
Total	1,5875	20	,74901

Table 103: mean degeneration of right radio-ulnar joints for upper and lower class individuals older than 19 yrs

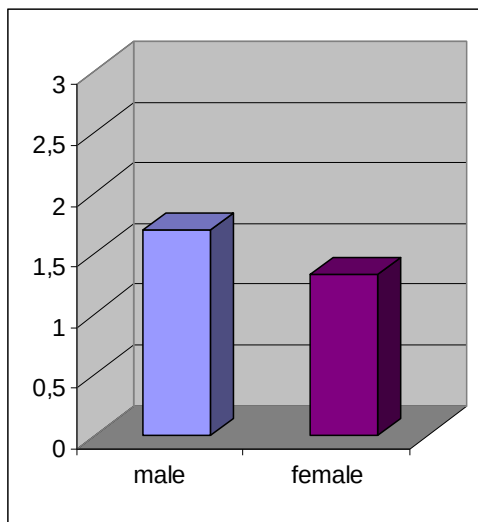


Figure 37: mean right radio-ulnar joint degeneration for males and females older than 19yrs

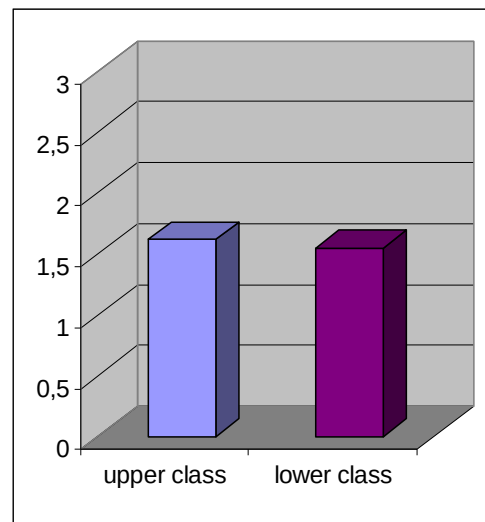


Figure 38: mean right radio-ulnar joint degeneration for upper and lower class individuals older than 19yrs

20 right radio-ulnar joints were evaluated and none showed degenerative modifications exceeding grade 3. The calculated mean is 1.59 (Table 101). Males (N=14) show a mean degeneration of 1.7 and females (N=6) of 1.33 (Table 102, Figure 37). On average, upper class individuals (N=10) are affected to grade 1.62 and lower class individuals (N=10) to grade 1.55 (Table 103, Figure 38).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	right radio-ulnar joint				right radio-ulnar joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,5313	8	,93003	male	1,9167	6	,66458
	female	1,2000	5	,44721	female	2,0000	1	.
	Total	1,4038	13	,77418	Total	1,9286	7	,60749
upper/ lower class	right radio-ulnar joint				right radio-ulnar joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,2083	6	1,00519	upper class	2,2500	4	,50000
	lower class	1,5714	7	,53452	lower class	1,5000	3	,50000
	Total	1,4038	13	,77418	Total	1,9286	7	,60749

Table 104: mean degeneration of the right radio-ulnar joint for males and females/ upper and lower class individuals of Gemeinlebar F aged 19 – 39.9 yrs and > 40 yrs

No significant differences occurred when comparing the various groups (Table 104). In the age group 19 – 39.9 yrs, males (N=8) show grade 1.53 and females (N=5) grade 1.20 on average. The 6 investigated male individuals aged older

than 40 yrs show a mean of 1.92 and the only existing female joint of 2.0. Upper class individuals between 19 and 39.9 yrs show a mean degeneration of 1.21 (N=6) and the average in the lower class group (N=7) is 1.57. The mean modification of individuals older than 40 yrs is 2.25 for upper class (N=4) and 1.5 for lower class individuals (N=3).

left radio-ulnar joint

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
left radio-ulnar joint	20	,00	3,00	1,4925	,79708
Valid N (listwise)	20				

Table 105: minimum, maximum and mean grade of degenerative modification of the left radio-ulnar joint for investigated adult/mature/senile population of Gemeinlebar F

left radio-ulnar joint			
Sex	Mean	N	Std. Deviation
male	1,5192	13	,90405
female	1,4429	7	,61062
Total	1,4925	20	,79708

Table 106: mean degeneration of left radio-ulnar joints for males and females older than 19 yrs

left radio-ulnar joint			
Wealth	Mean	N	Std. Deviation
upper class	1,7045	11	,82778
lower class	1,2333	9	,71764
Total	1,4925	20	,79708

Table 107: mean degeneration of left radio-ulnar joints for upper and lower class individuals older than 19 yrs

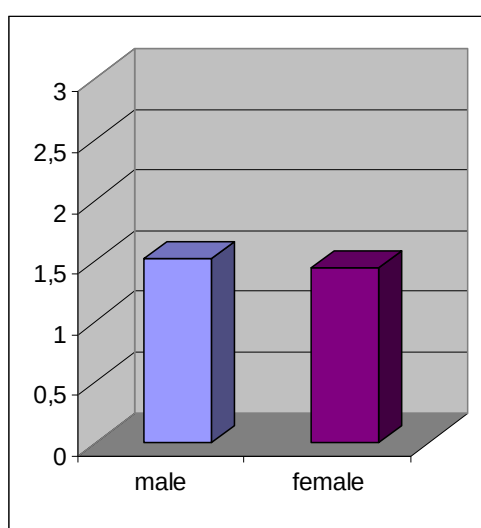


Figure 39: mean left radio-ulnar joint degeneration for males and females older than 19yrs

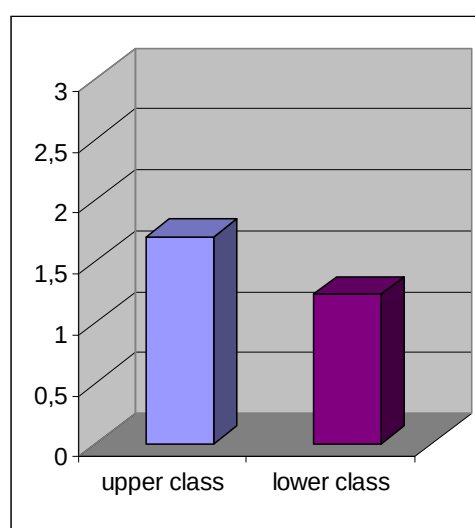


Figure 40: mean left radio-ulnar joint degeneration for upper and lower class individuals older than 19yrs

The 20 investigated left radio-ulnar joints did not contain degenerative modifications exceeding grade 3. The calculated mean is 1.49 (Table 105). Males (N=13) show a mean degeneration of grade 1.52 and females (N=6) of 1.44 (Table 106, Figure 39). Upper class members (N=11) are affected to grade 1.7 on average and lower class individuals (N=9) to grade 1.23 (Table 106, Figure 40).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	left radio-ulnar joint				left radio-ulnar joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,2188	8	1,06434	male	2,0000	5	,00000
	female	1,1667	3	,76376	female	1,8667	3	,23094
	Total	1,2045	11	,95406	Total	1,9500	8	,14142
upper/ lower class	left radio-ulnar joint				left radio-ulnar joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,5357	7	1,02499	upper class	2,0000	4	,00000
	lower class	,7000	5	,44721	lower class	1,9000	4	,20000
	Total	1,1875	12	,91157	Total	1,9500	8	,14142

Table 108: mean degeneration of the left radio-ulnar joint for males and females/ upper and lower class individuals of Gemeinlebarn F aged 19 – 39.9 yrs and > 40 yrs

The comparison between the various groups revealed no significant differences (Table 108).

The age group 19 – 39.9 yrs contains 8 males, which are affected to grade 1.22 and 3 females affected to grade 1.17 on average. Male individuals older than 40 yrs (N=4) show a mean of 2.00 and females (N=4) of 1.90.

Upper class individuals aged 19 to 39.9 yrs contain grade 1.54 (N=7) and the lower class group (N=5) grade 0.70 modifications on average. The mean degeneration of individuals older than 40 yrs is 2.00 for upper class (N=4) and 1.90 for lower class individuals (N=4).

right hip joint

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
right hip joint	18	,50	6,00	2,2083	1,35649
Valid N (listwise)	18				

Table 109: minimum, maximum and mean grade of degenerative modification of the right hip joint for investigated adult/mature/senile population of Gemeinlebern F

right hip joint			
Sex	Mean	N	Std. Deviation
male	2,2750	10	1,62639
female	2,1250	8	1,02644
Total	2,2083	18	1,35649

Table 110: mean degeneration of right hip joints for males and females older than 19 yrs

right hip joint			
Wealth	Mean	N	Std. Deviation
upper class	2,3250	10	,83375
lower class	2,0625	8	1,87916
Total	2,2083	18	1,35649

Table 111: mean degeneration of right hip joints for upper and lower class individuals older than 19 yrs

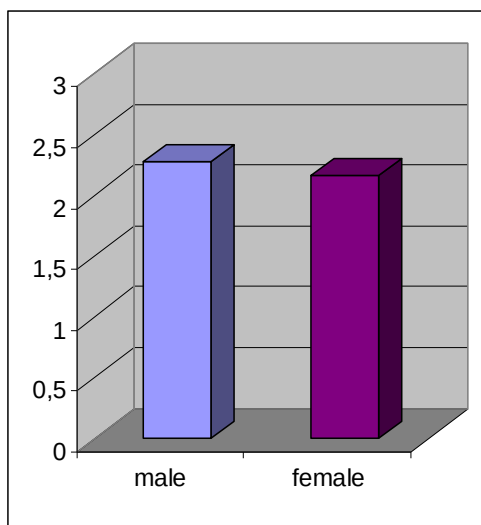


Figure 41: mean right hip joint degeneration for males and females older than 19yrs

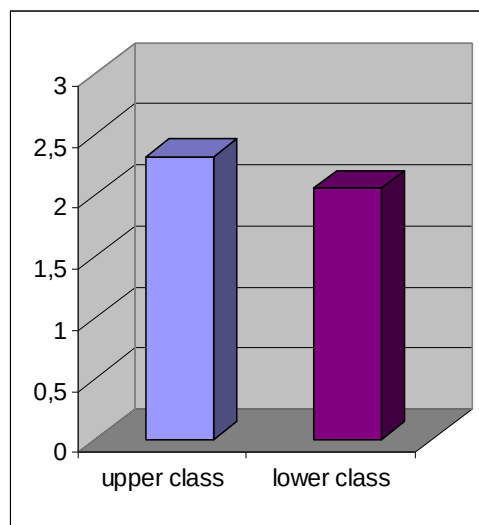


Figure 42: mean right hip joint degeneration for upper and lower class individuals older than 19yrs

All of the evaluated right hip joints (N=18) contained degenerative modifications. The average grade of degeneration is 2.21 for the overall population (Table 109). Males (N=10) show a mean modification of grade 2.28 and females (N=8) of grade 2.16 (Table 110, Figure 41). Upper class individuals (N=10) are affected to

grade 2.32 and lower class individuals (N=8) to grade 2.06 on average (Table 111, Figure 42).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	right hip joint				right hip joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	2,1000	5	2,24722	male	2,4500	5	,90830
	female	1,1667	3	,76376	female	2,7000	5	,67082
	Total	1,7500	8	1,81265	Total	2,5750	10	,76422
upper/ lower class	right hip joint				right hip joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,6667	3	,57735	upper class	2,6071	7	,78868
	lower class	1,8000	5	2,36114	lower class	2,5000	3	,86603
	Total	1,7500	8	1,81265	Total	2,5750	10	,76422

Table 112: mean degeneration of the right hip joint for males and females/ upper and lower class individuals of Gemeinlebar F aged 19 – 39.9 yrs and > 40 yrs

No significant differences occurred when comparing the various social groups (Table 112).

The 5 male individuals in age group 19 – 39.9 yrs show average modifications of grade 2.10 and the 3 females of grade 1.17. The mean grade of degeneration of male individuals older than 40 yrs (N=5) is 2.45 and of females (N=5) 2.70.

The average modification of upper class individuals aged 19 to 39.9 yrs is 1.67 (N=3) and 1.80 for the lower class group (N=5) of the same age group. The mean degeneration of individuals older than 40 yrs is 2.60 for upper class (N=7) and 2.50 for lower class individuals (N=3).

left hip joint

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
left hip joint	24	,50	3,50	1,8438	,85278
Valid N (listwise)	24				

Table 113: minimum, maximum and mean grade of degenerative modification of the left hip joint for investigated adult/mature/senile population of Gemeinlebar F

left hip joint			
Sex	Mean	N	Std. Deviation
male	1,8393	14	,90727
female	1,8500	10	,81820
Total	1,8438	24	,85278

Table 114: mean degeneration of left hip joints for males and females older than 19 yrs

left hip joint			
Wealth	Mean	N	Std. Deviation
upper class	2,1042	12	,77941
lower class	1,5833	12	,87473
Total	1,8438	24	,85278

Table 115: mean degeneration of left hip joints for upper and lower class individuals older than 19 yrs

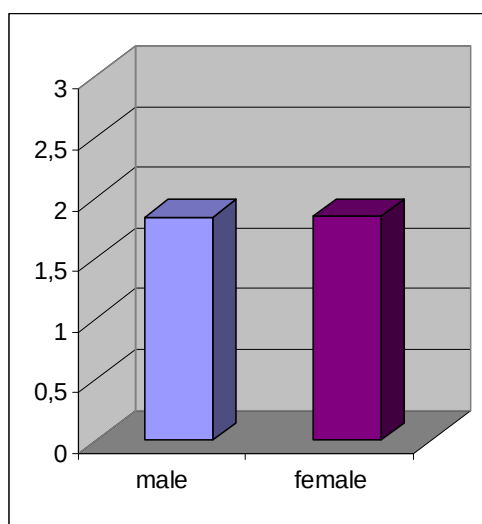


Figure 43: mean left hip joint degeneration for males and females older than 19yrs

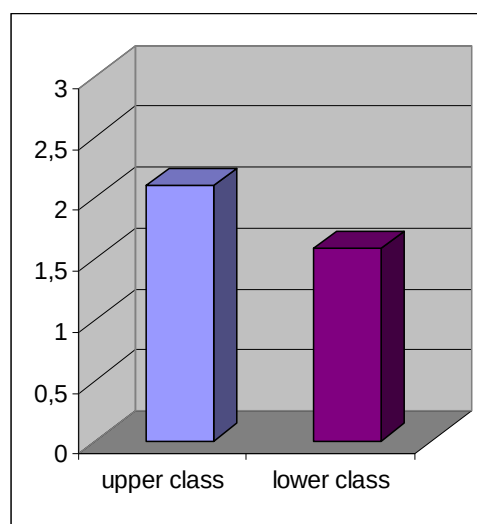


Figure 44: mean left hip joint degeneration for upper and lower class individuals older than 19yrs

The investigated left hip joints (N=24) show evidence of degeneration within the range of 0.50 and 3.50 and the average grade of degeneration is 1.84 (Table 113). Males (N=14) show average modifications of grade 1.84 and females (N=10) of 1.85 (Table 114, Figure 43). On average, upper class individuals (N=12) are affected to grade 2.1 and lower class individuals (N=12) to grade 1.58 (Table 115, Figure 44).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	left hip joint				left hip joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,4167	6	,91742	male	2,1563	8	,81216
	female	1,5000	6	,83666	female	2,3750	4	,47871
	Total	1,4583	12	,83824	Total	2,2292	12	,70274
upper/ lower class	left hip joint				left hip joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,7500	4	,95743	upper class	2,2813	8	,67397
	lower class	1,3125	8	,79899	lower class	2,1250	4	,85391
	Total	1,4583	12	,83824	Total	2,2292	12	,70274

Table 116: mean degeneration of the left hip joint for males and females/ upper and lower class individuals of Gemeinlebern F aged 19 – 39.9 yrs and > 40 yrs

No significant differences occurred when comparing the various social groups (Table 116).

The age group 19 – 39.9 yrs contained 6 males with grade 1.42 mean modification and 6 females with a grade 1.50 mean. The mean grade of degeneration for male individuals older than 40 yrs (N=8) is 2.16 and for females (N=4) in that age group 2.38.

Upper class individuals aged 19 to 39.9 yrs contain mean degenerative changes of grade 1.75 (N=4) and lower class individuals of the same age (N=8) of grade 1.31. The mean degeneration of individuals older than 40 yrs is 2.28 for upper class (N=8) and 2.13 for lower class individuals (N=4).

right knee joint

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
right knee joint	21	,00	4,00	1,7086	,95867
Valid N (listwise)	21				

Table 117: minimum, maximum and mean grade of degenerative modification of the right knee joint for investigated adult/mature/senile population of Gemeinlebern F

right knee joint

Sex	Mean	N	Std. Deviation
male	1,7292	12	1,12925
female	1,6811	9	,73669
Total	1,7086	21	,95867

Table 118: mean degeneration of right knee joints for males and females older than 19 yrs

right knee joint

Wealth	Mean	N	Std. Deviation
upper class	1,9150	12	,99511
lower class	1,4333	9	,88706
Total	1,7086	21	,95867

Table 119: mean degeneration of right knee joints for upper and lower class individuals older than 19 yrs

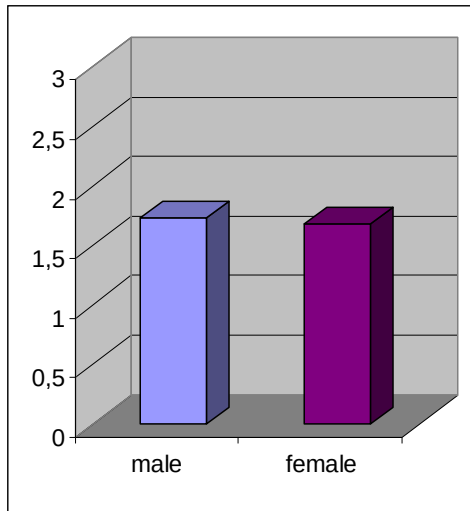


Figure 45: mean right knee joint degeneration for males and females older than 19yrs

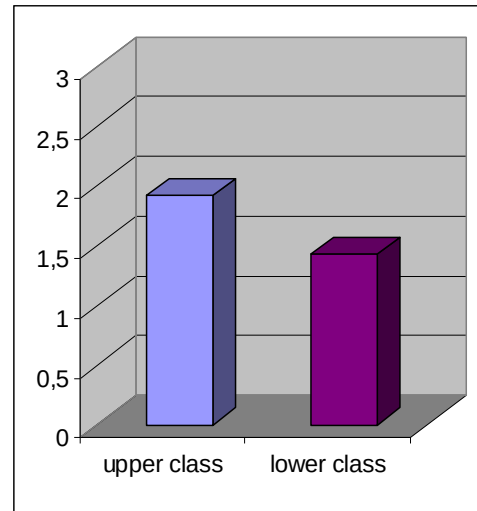


Figure 46: mean right knee joint degeneration for upper and lower class individuals older than 19yrs

The investigated right knee joints (N=21) are modified to within the range of 0.00 and 4.00. The average grade of degeneration is 1.70 (Table 117). The average modification of males (N=12) is 1.73 and of females (N=9) it is 1.68 (Table 118, Figure 45). Upper class members (N=12) are affected to grade 1.92 and lower class individuals (N=9) to grade 1.43 on average (Table 119, Figure 46).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	right knee joint				right knee joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,3750	6	1,06946	male	2,0833	6	1,16648
	female	1,1260	5	,21652	female	2,3750	4	,47871
	Total	1,2618	11	,77945	Total	2,2000	10	,92466
upper/ lower class	right knee joint				right knee joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,5260	5	,84905	upper class	2,1929	7	1,05768
	lower class	1,0417	6	,71443	lower class	2,2167	3	,70059
	Total	1,2618	11	,77945	Total	2,2000	10	,92466

Table 120: mean degeneration of the right knee joint for males and females/ upper and lower class individuals of Gemeinlebarn F aged 19 – 39.9 yrs and > 40 yrs

No significant differences were found between the various social groups (Table 120).

Right knee joints of males aged 19 to 39.9 yrs (N=6) show a mean degeneration of 1.38, whereas the right knee joints of females (N=5) in this age group are affected to an average of 1.13. Males older than 40 yrs (N=6) show a mean of 2.08 and females of 2.38 (N=4).

When comparing upper and lower class individuals, the upper class individuals aged 19 to 39.9 yrs (N=5) show a mean degeneration of 1.53 and the lower class group (N=6) of 1.04. The investigated individuals over 40 yrs show an average degenerative modification of 2.19 in the upper class (N=7) and 2.22 in the lower class group (N=3).

left knee joint

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
left knee joint	19	,00	4,60	2,0411	1,13099
Valid N (listwise)	19				

Table 121: minimum, maximum and mean grade of degenerative modification of the left knee joint for investigated adult/mature/senile population of Gemeinlebarn F

left knee joint			
Sex	Mean	N	Std. Deviation
male	2,3458	12	1,30322
female	1,5186	7	,46842
Total	2,0411	19	1,13099

Table 122: mean degeneration of left knee joints for males and females older than 19 yrs

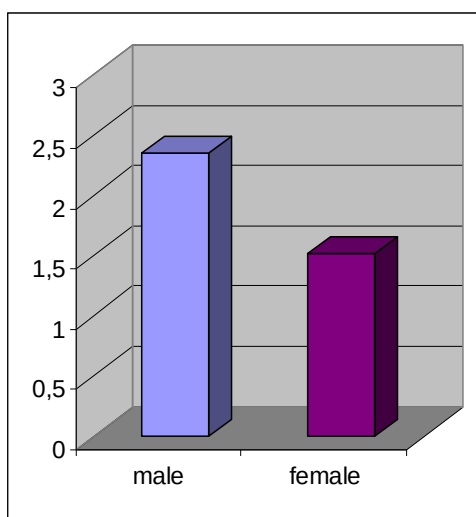


Figure 47: mean left knee joint degeneration for males and females older than 19yrs

left knee joint			
Wealth	Mean	N	Std. Deviation
upper class	2,0150	12	1,05717
lower class	2,0857	7	1,33595
Total	2,0411	19	1,13099

Table 123: mean degeneration of left knee joints for upper and lower class individuals older than 19 yrs

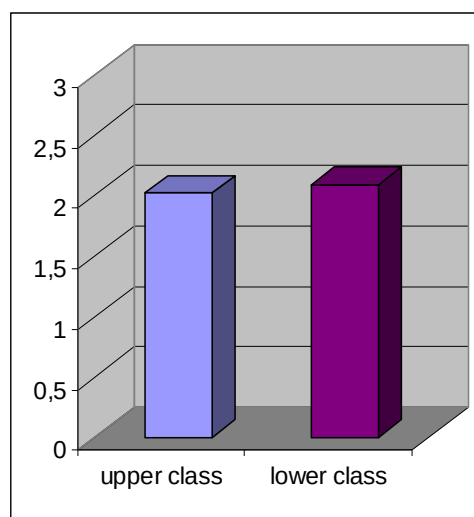


Figure 48: mean left knee joint degeneration for upper and lower class individuals older than 19yrs

The highest grade of modification on the investigated left knee joints (N=19) is 4.60 and the average grade is 2.04 (Table 121). On average, males (N=12) are affected to grade 2.35 and females (N=7) to grade 1.52 (Table 122, Figure 47). Upper class individuals (N=12) show a mean degeneration of grade 2.02 and lower class members (N=7) of grade 2.09 (Table 123, Figure 48).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	left knee joint				left knee joint			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	2,1500	6	1,41067	male	2,5417	6	1,28624
	female	1,3260	5	,40851	female	2,0000	2	,00000
	Total	1,7755	11	1,11666	Total	2,4063	8	1,11562
upper/ lower class	left knee joint				left knee joint			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,9329	7	1,22422	upper class	2,1300	5	,89275
	lower class	1,5000	4	1,00000	lower class	2,8667	3	1,50111
	Total	1,7755	11	1,11666	Total	2,4063	8	1,11562

Table 124: mean degeneration of the left knee joint for males and females/ upper and lower class individuals of Gemeinlebar F aged 19 – 39.9 yrs and > 40 yrs

No significant differences were found between the defined social groups (Table 124). The left knee joints of the males aged 19 to 39.9 yrs (N=6) are affected to grade 2.15 on average and of females (N=5) to 1.33. The mean of males older than 40 yrs (N=6) is 2.54 and of females within the same age group 2.00 (N=2). Upper class individuals aged 19 to 39.9 yrs (N=7) show a mean degeneration of 1.93 and the lower class group (N=4) of 1.50. The investigated individuals over 40 yrs contain average degenerative modifications of grade 2.13 in the upper class (N=5) and 2.87 in the lower class group (N=3).

right proximal ankle

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
right proximal ankle	23	,00	3,00	1,5600	,85531
Valid N (listwise)	23				

Table 125: minimum, maximum and mean grade of degenerative modification of the right proximal ankle for investigated adult/mature/senile population of Gemeinlebar F

right proximal ankle			
Sex	Mean	N	Std. Deviation
male	1,7107	15	,81853
female	1,2775	8	,90517
Total	1,5600	23	,85531

Table 126: mean degeneration of right proximal ankle joints for males and females older than 19 yrs

right proximal ankle			
Wealth	Mean	N	Std. Deviation
upper class	1,8583	12	,67414
lower class	1,2345	11	,94138
Total	1,5600	23	,85531

Table 127: mean degeneration of right proximal ankle joints for upper and lower class individuals older than 19 yrs

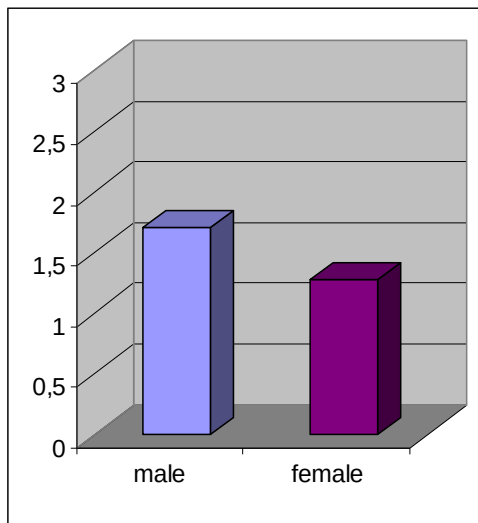


Figure 49: mean right proximal ankle joint degeneration for males and females older than 19yrs

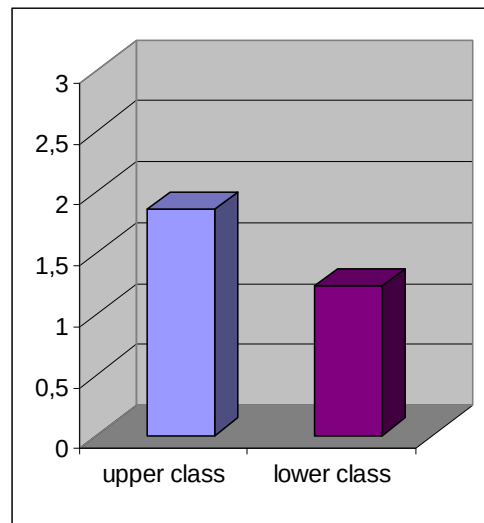


Figure 50: mean right proximal ankle joint degeneration for upper and lower class individuals older than 19yrs

The investigated right proximal ankle joints (N=23) do not contain degenerative changes greater than grade 3.00 and the average grade of degeneration is 1.56 (Table 125) (Plate IV c). Males (N=15) show average modifications of grade 1.71 and females (N=8) of grade 1.28 (Table 126, Figure 49). The mean modification for upper class individuals is 1.86 (N=12) and for lower class members 1.23 (N=11) (Table 127, Figure 50).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	right proximal ankle				right proximal ankle			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,6289	9	,95336	male	1,8333	6	,62583
	female	,9533	6	,78592	female	2,2500	2	,35355
	Total	1,3587	15	,92591	Total	1,9375	8	,57864
upper/ lower class	right proximal ankle				right proximal ankle			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,5786	7	,72850	upper class	2,2500	5	,35355
	lower class	1,1663	8	1,08123	lower class	1,4167	3	,52042
	Total	1,3587	15	,92591	Total	1,9375	8	,57864
ANOVA Table								
right proximal ankle * Wealth		Between Groups	(Combined)	Sum of Squares	df	Mean Square	F	Sig.
		Within Groups		1,302	1	1,302	7,500	,034
		Total		1,042	6	,174		
				2,344	7			

Table 128 : mean degeneration of the right proximal ankle for males and females/ upper and lower class individuals of Gemeinlebern F aged 19 – 39.9 yrs and > 40 yrs

The right proximal ankle joints of males aged 19 to 39.9 yrs (N=9) contain degenerative changes of 1.63 and those belonging to females (N=6) of 0.95 on average. The mean of males older than 40 yrs (N=6) is 1.83 and of females in that age group 2.25 (N=2) (Table 128).

When comparing upper and lower class individuals, the upper class individuals aged 19 to 39.9 yrs (N=7) show a mean degeneration of 1.58 and the lower class group (N=8) of 1.16. A significant difference ($p=0.034$) between the upper and lower class group is found when comparing over 40 year old individuals: upper class individuals (N=7) are affected to grade 2.25 on average and lower class individuals (N=3) to 1.42 (Table 128).

left proximal ankle

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
left proximal ankle	26	,00	3,00	1,7919	,71048
Valid N (listwise)	26				

Table 129: minimum, maximum and mean grade of degenerative modification of the left proximal ankle for investigated adult/mature/senile population of Gemeinlebarn F

left proximal ankle

Sex	Mean	N	Std. Deviation
male	1,7600	17	,75652
female	1,8522	9	,65310
Total	1,7919	26	,71048

Table 130: mean degeneration of left proximal ankle joints for males and females older than 19 yrs

left proximal ankle

Wealth	Mean	N	Std. Deviation
upper class	1,9063	16	,53131
lower class	1,6090	10	,93342
Total	1,7919	26	,71048

Table 131: mean degeneration of left proximal ankle joints for upper and lower class individuals older than 19 yrs

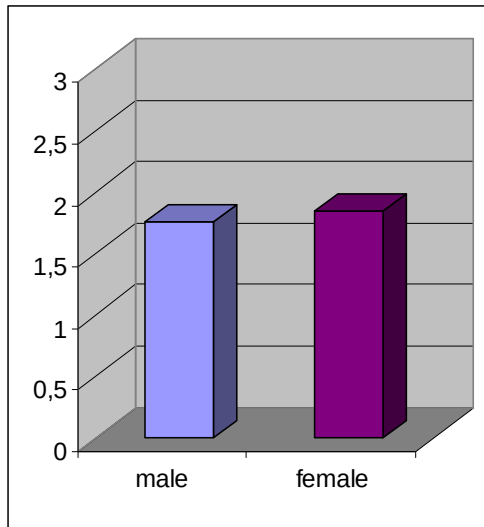


Figure 51: mean left proximal ankle joint degeneration for males and females older than 19yrs

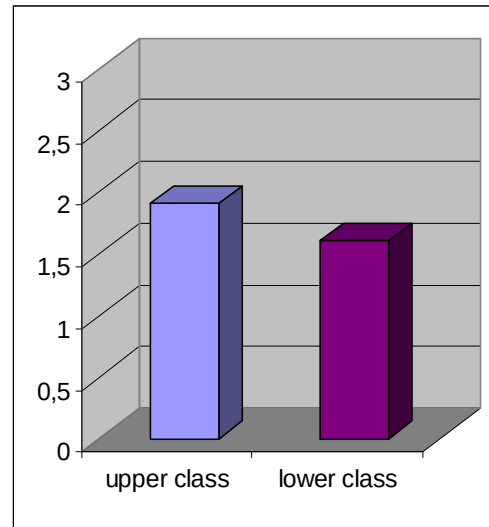


Figure 52: mean left proximal ankle joint degeneration for upper and lower class individuals older than 19yrs

None of the existing left proximal ankle joints (N=26) shows grade 4, 5 or grade 6 degeneration and the mean grade of modification within the population is 1.79 (Table 129). On average, males (N=17) developed degenerations of grade 1.76 and females (N=9) of grade 1.85 (Table 130, Figure 51). Upper class members (N=16) show a mean modification of 1.91 and lower class individuals (N=10) of 1.61 (Table 131, Figure 52).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	left proximal ankle				left proximal ankle			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	1,7427	11	,81215	male	1,7917	6	,71443
	female	1,5340	5	,61707	female	2,2500	4	,50000
	Total	1,6775	16	,74246	Total	1,9750	10	,65032
upper/ lower class	left proximal ankle				left proximal ankle			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	1,8611	9	,54645	upper class	1,9643	7	,54827
	lower class	1,4414	7	,92972	lower class	2,0000	3	1,00000
	Total	1,6775	16	,74246	Total	1,9750	10	,65032

Table 132: mean degeneration of the left proximal ankle for males and females/ upper and lower class individuals of Gemeinlebarn F aged 19 – 39.9 yrs and > 40 yrs

No significant differences were found when comparing the defined social groups (Table 132).

The left proximal ankle joints of males aged 19 to 39.9 yrs (N=11) contain a mean degeneration of 1.74 while the females (N=5) are only affected to 1.53 on average. Males older than 40 yrs (N=6) have a mean of 1.79 and females of 2.25 (N=4).

The mean degeneration of the upper class individuals left proximal ankle joints (N=9) is 1.86 as opposed to 1.44 in the lower class group (N=7). Individuals older than 40 yrs show an average degenerative modification of 1.96 in the upper class (N=7) and 2.00 in the lower class group (N=3).

right distal ankle

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
right distal ankle	29	,00	4,00	2,2531	,91008
Valid N (listwise)	29				

Table 133: minimum, maximum and mean grade of degenerative modification of the right distal ankle for investigated adult/mature/senile population of Gemeinlebar F

right distal ankle

Sex	Mean	N	Std. Deviation
male	2,2295	20	1,02746
female	2,3056	9	,62222
Total	2,2531	29	,91008

Table 134: mean degeneration of right distal ankle joints for males and females older than 19 yrs

right distal ankle

Wealth	Mean	N	Std. Deviation
upper class	2,3794	16	,70975
lower class	2,0977	13	1,12048
Total	2,2531	29	,91008

Table 135: mean degeneration of right distal ankle joints for upper and lower class individuals older than 19 yrs

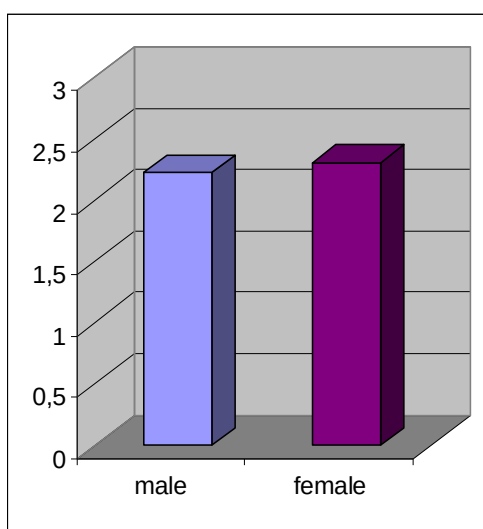


Figure 53: mean right distal ankle joint degeneration for males and females older than 19yrs

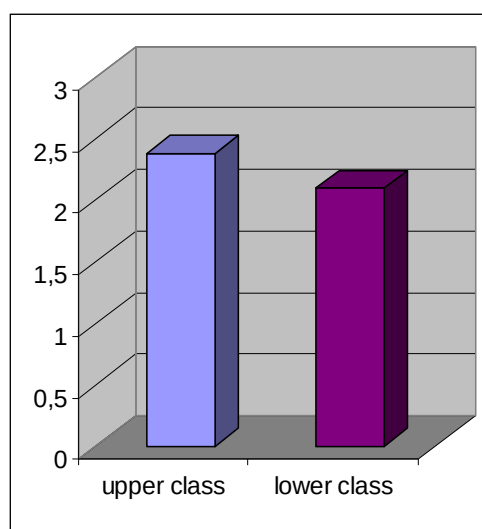


Figure 54: mean right distal ankle joint degeneration for upper and lower class individuals older than 19yrs

The investigated right distal ankle joints (N=29) contain no degenerative changes greater than grade 4.00. The average grade of degeneration is 2.25 (Table 133). Males (N=20) are affected to grade 2.23 and females (N=9) to grade 2.31 on average (Table 134, Figure 53). Upper class individuals (N=16) show a mean degeneration of grade 2.38 and lower class members (N=13) of grade 2.1 (Table 135, Figure 54).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	right distal ankle				right distal ankle			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	2,1038	13	1,00383	male	2,4629	7	1,10900
	female	2,1786	7	,59010	female	2,7500	2	,70711
	Total	2,1300	20	,86471	Total	2,5267	9	1,00047
upper/ lower class	right distal ankle				right distal ankle			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	2,3190	10	,67304	upper class	2,4800	6	,82244
	lower class	1,9410	10	1,02282	lower class	2,6200	3	1,51433
	Total	2,1300	20	,86471	Total	2,5267	9	1,00047

Table 136: mean degeneration of the right distal ankle for males and females/ upper and lower class individuals of Gemeinlebar F aged 19 – 39.9 yrs and > 40 yrs

The right distal ankles belonging to males aged 19 to 39.9 yrs (N=13) contain degenerative changes of 2.10 and those belonging to females (N=7) of 2.18 on average. The mean of males older than 40 yrs (N=7) is 2.46 and of females in

the same age group 2.75 (N=2) (Table 136).

When comparing upper and lower class individuals, the upper class individuals aged 19 to 39.9 yrs (N=10) show a mean degeneration of 2.32 and the lower class group (N=10) of 1.94. Upper class individuals (N=6) are affected to grade 2.48 on average and lower class individuals (N=3) to 2.62 (Table 136).

left distal ankle

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
left distal ankle	28	,50	4,00	2,2796	,90448
Valid N (listwise)	28				

Table 137: minimum, maximum and mean grade of degenerative modification of the left distal ankle for investigated adult/mature/senile population of Gemeinlebar F

left distal ankle			
Sex	Mean	N	Std. Deviation
male	2,3947	19	,96345
female	2,0367	9	,75802
Total	2,2796	28	,90448

Table 138: mean degeneration of left distal ankle joints for males and females older than 19 yrs

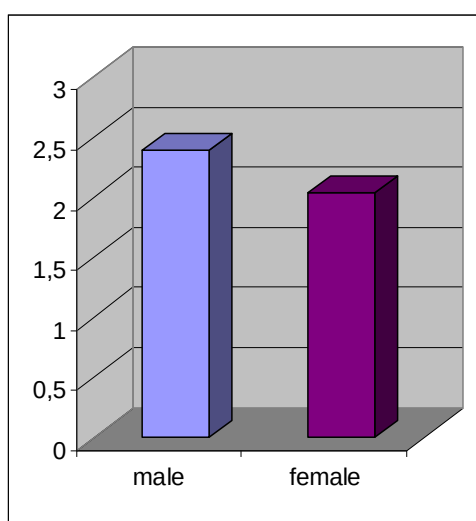


Figure 55: mean left distal ankle joint degeneration for males and females older than 19yrs

left distal ankle			
Wealth	Mean	N	Std. Deviation
upper class	2,3429	17	,60742
lower class	2,1818	11	1,26536
Total	2,2796	28	,90448

Table 139: mean left distal ankle joint degeneration for upper and lower class individuals older than 19yrs

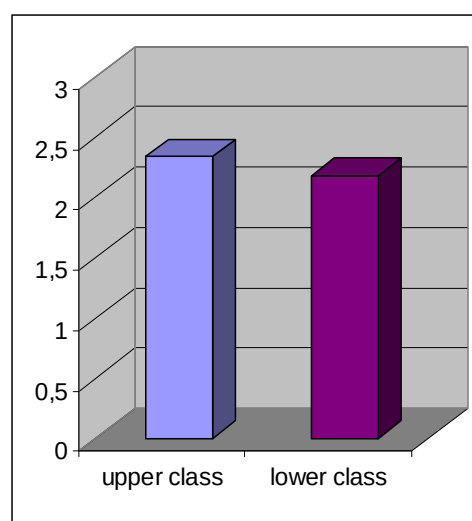


Figure 56: mean left distal ankle joint degeneration for upper and lower class individuals older than 19yrs

None of the existing left distal ankle joints (N=28) exceeds grade 4 degeneration and the mean grade of modification within the population is 2.28 (Table 137) (Plate IV d). Males (N=19) are affected to grade 2.39 and females (N=9) to grade 2.04 on average (Table 138, Figure 55). Upper class individuals (N=17) show a mean degeneration of grade 2.34 and lower class individuals (N=11) of 2.18 (Table 139, Figure 56).

	individuals aged 19 – 39.9 yrs				individuals aged > 40 yrs			
male/ female	left distal ankle				left distal ankle			
	Sex	Mean	N	Std. Deviation	Sex	Mean	N	Std. Deviation
	male	2,3138	13	,94503	male	2,5700	6	1,06977
	female	1,7083	6	,57915	female	2,6933	3	,69974
	Total	2,1226	19	,87874	Total	2,6111	9	,91731
upper/ lower class	left distal ankle				left distal ankle			
	Wealth	Mean	N	Std. Deviation	Wealth	Mean	N	Std. Deviation
	upper class	2,3830	10	,53676	upper class	2,2857	7	,73840
	lower class	1,8333	9	1,11102	lower class	3,7500	2	,35355
	Total	2,1226	19	,87874	Total	2,6111	9	,91731
ANOVA Table								
left distal ankle * Wealth					Sum of Squares	df	Mean Square	F
Between Groups					3,335	1	3,335	6,874
Within Groups					3,336	7	,476	
Total					6,732	8		
								Sig.
								,034

Table 140: mean degeneration of the left distal ankle joint for males and females/ upper and lower class individuals of Gemeinlebern F aged 19 – 39.9 yrs and > 40 yrs

The left distal ankle joints of males aged 19 to 39.9 yrs (N=13) show a mean degeneration of 2.31, while the females (N=6) are only affected to 1.71 on average. Males older than 40 yrs (N=6) have a mean of 2.57 and females of 2.69 (N=3) (Table 140).

When comparing upper and lower class individuals, the upper class individuals aged 19 to 39.9 yrs (N=10) show a mean degeneration of 2.38 and the lower class group (N=9) of 1.83. A significant difference ($p=0.034$) between the upper and lower class group is found when comparing over 40 year old individuals: upper class individuals (N=7) are affected to grade 2.29 on average and lower class individuals (N=2) to 3.75 (Table 140).

6. Discussion

Most of the investigated symptoms within the overall Gemeinlebarn F sample occurred with relatively high frequency, particularly linear enamel hypoplasia (69.4%), periodontal disease (63.5%), dental calculus (77.6%), porotic hyperostosis (55.6%), cribra orbitalia (68.8%) and unspecific periostitis (83.5%).

6.1 Teeth

“Because the teeth directly interact with the environment, they are susceptible to damage from physical and biological influences not operating on other skeletal elements. A study of dental pathology can be useful in investigating the health and diets of individuals and populations.” (WHITE, 1991, p. 352)

The average grade of molar abrasion, as well as the frequencies of caries, linear enamel hypoplasia (LEH), dental calculus and periodontal diseases within the defined social groups sheds a little more light on possible subsistence variation among these groups.

6.1.1 Molar abrasion

Molar abrasion is commonly seen as one of the most useful indicators for age estimation of skeletal remains, as tooth wear increases with age (e.g. BROTHWELL, 1981; SMITH, 1984). But composition and preparation techniques of food may also have great influence on the grade of attrition; therefore molar abrasion is one of the crucial factors in reconstructing eating habits on a population level (WHITE, 1991; STECKEL et al., 2006).

No significant differences in terms of molar abrasion were found between the various social groups of Gemeinlebarn F, which implies that all members of society, independent of sex or class, shared the same diet, mainly comprising vegetables prepared in a largely similar way.

The abrasion means are similar to those of Pottenbrunn-Ratzersdorf (GEROLD,

1997), where the highest grade of dental attrition was also found on the first molars (Table 141).

	GEMEINLEBARN F	POTTENBRUNN
MALES	3.7 – 4.0	3.5 – 4.0
FEMALES	3.4 – 4.0	2.6 – 3.3

Table 141: average wear of first permanent molars of males and females in the Gemeinlebarn F (N_{M1}=141) and the Pottenbrunn site

It should be noted, that the results of the two male groups correspond to a greater degree than those of the female ones. The females in the Gemeinlebarn F sample show almost the same degree of abrasion on the first molar as males, whereas in the Pottenbrunn sample, the difference between the sexes is slightly more distinct (but again not significant).

6.1.2 Caries

Generally the oral microflora contains various bacterial species (e.g. *Streptococci*, *Staphylococci* and *Enterobacteriaceae*) which in their entirety have a certain influence on the formation of caries. These bacteria (especially *Streptococcus mutans*) show great affinity to the glycoproteins in the saliva and as a result a biofilm - plaque - builds up on the tooth surface. One of the most important factors in the following genesis of caries is the individual's diet. On the one hand, nutrient deficiencies of, for example, vitamin A, C or D are responsible for the production of low-quality enamel/dentin and on the other hand, food provides the necessary substrates (fermentable carbohydrates) for lytic bacterial activity and the progression of caries. It is well known that a diet rich in carbohydrates (sucrose) has a strongly cariogenic effect (WHITE, 1991; CARLI-THIELE, 1996; KATZENBERG and SAUNDERS, 2008).

The appearance of caries cannot always be observed at first glance. "Dental caries is the progressive decalcification of enamel or dentine. The macroscopic appearance of caries can vary from opaque spots on the crown to gaping cavities in the tooth." (WHITE, 1991, p. 352)

The caries frequency of 19.7% (16.3% permanent and 11.1% deciduous dentition) and the caries intensity of 2.9% (3.0% for permanent and 2.3% for deciduous teeth) indicate a relatively low level of carbohydrates in the diet of the Gemeinlebarn F population. The present *foramina caeca* do not appear to have had any influence on the development of caries in terms of a *locus minoris resistentiae*.

No significant differences were found between males and females, and between upper and lower class individuals respectively, which implies an equal distribution of carbohydrates in the diet of the Gemeinlebarn F early Bronze Age society.

In the comparison of caries frequencies and intensities of Gemeinlebarn F, Pottenbrunn-Ratzersdorf and Franzhausen I, the overall populations appear to be affected by caries to a similar degree (intravital tooth loss not taken into account) (Table 142).

	GEMEINLEBARN F	POTTENBRUNN	FRANZHAUSEN I
C. FREQUENCY	19.7%	20.0%	15.5%
C. INTENSITY	2.9%	3.2%	3.2%

Table 142: comparison of caries frequencies and caries intensities for the overall populations (deciduous and permanent teeth) of Gemeinlebarn F (N=147/2,003 teeth), Pottenbrunn-Ratzersdorf (N=74/405 teeth) (GEROLD, 1997 and NOVOTNY, 2006) and Franzhausen I (N=554/8,181 teeth) (WILTSCHKE-SCHROTTA, 1988)

Nonetheless, taking a closer look at the sites reveals a distinct difference: interestingly, no carious lesions were found on permanent teeth of females (N=18/94 teeth) in Pottenbrunn, whereas in Gemeinlebarn F 29% of the female population (N=31/399 teeth) were found to be affected and in Franzhausen I 22.5% (N=169/3,000 teeth).

The respective caries frequency for males is 24.1% in Gemeinlebarn F (N=58/956 teeth), 40% in Pottenbrunn (N=17/271 teeth) and 25.5% in Franzhausen I (N=145/2,722 teeth) (Table 143, Figure 57).

	GEMEINLEBARN F	POTTENBRUNN	FRANZHAUSEN I
male	24.1%	40%	25.5%
female	29%	0%	22.5%

Table 143: caries frequencies for males and females (>19 yrs) of Gemeinlebarn F, Pottenbrunn-Ratzersdorf and Franzhausen I

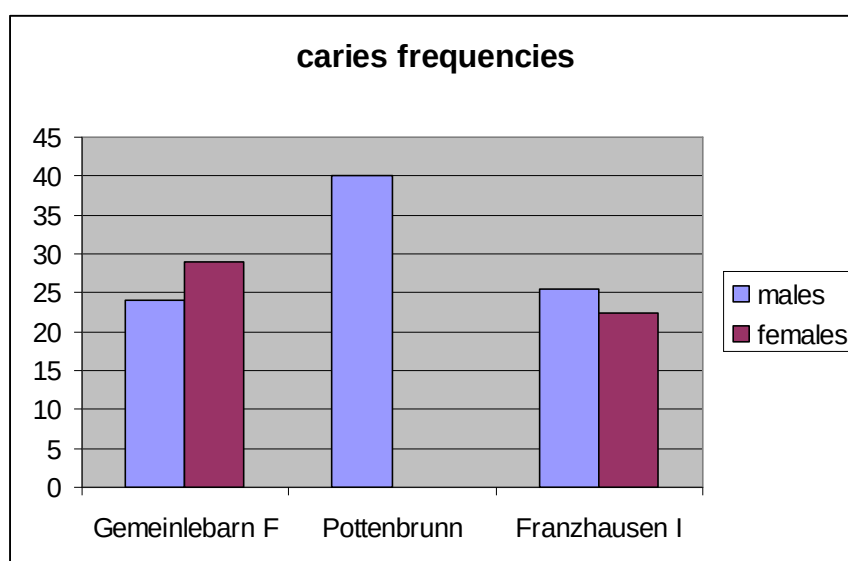


Figure 57: comparison of caries frequencies (%) for males and females (>19 yrs) of Gemeinlebarn F, Pottenbrunn-Ratzersdorf and Franzhausen I

Adults of all age groups have been included in all three samples, so to clarify the existing differences, a closer look taking the various age classes into account will hopefully be the subject of future investigations. At the moment, however, the observations suggest that in the early Bronze Age Traisen-Valley, sex roles within the investigated societies vary and are not to be seen as a general adaptation to the environment, but instead as being socially constructed on a local basis.

The caries intensity for Gemeinlebarn F (2.9%, N=2,003) is slightly less than in Pottenbrunn (3.2%, N=405) and Franzhausen (3.2%, N=8,181), as well as the overall sample of earlier European populations between 3,000 and 1,000 B.C.

(3.1%, N=29,999), investigated by BROTHWELL in 1963 and the British Bronze Age sample (4.8%, N=730) investigated by ROBERTS and COX in 2003.

6.1.3 Linear enamel hypoplasia

“Because enamel does not remodel and it preserves better than any other hard tissue, developmental disturbances provide an excellent source of information towards reconstructing a retrospective stress and morbidity history of human populations, past or present” (LARSON, 1997, p. 44).

LARSON (1997) states that the formation of enamel is a regular process that is subject to factors such as metabolic insults arising from nutritional deficiencies or disease that may either slow or stop growth. Linear enamel hypoplasia (LEH) is therefore related to pathological stress, for example malnutrition (e.g. calcium or protein deficiency) or infectious diseases such as scarlet fever occurring in the developmental stages of the tooth. GOODMAN (1991) proved that individuals with hypoplasias are exposed to more stress than those without. He also reaffirmed that even though these indicators of stress do not cause death they are associated with hardship, and the intensity of the transversal hypoplastic lines that form around the circumference of the tooth crown can directly be linked to the level of physiological stress.

More than two thirds (69.4%) of the Gemeinlebarn F population (N=144) developed linear enamel hypoplasias, which were only found on permanent dentition. The affected teeth mainly showed grade 1 and grade 2 modifications (two cases of grade 3), which signifies a slight general nutritional deficiency, possibly caused by seasonal changes in the environment.

Significant differences were found between the sub-adult group and the overall adult group (adult, mature and senile individuals), and between the adult and mature/senile group respectively. This phenomenon is probably a result of the general insufficient food supply: as malnutrition tends to increase the rate of infections it can also be the cause of premature death. It is very likely that most children in the Gemeinlebarn F sample suffered from infections and died at an early age. The LEH frequencies for the adult and the mature/senile age groups of

Gemeinlebarn F also underline the assumption that individuals surviving exposure to stress in young years are more likely to lose the ability to respond to other stresses later on in life (GOODMAN, 1991).

A further significant difference ($p=0.018$) was detected between upper and lower class females older than 19 yrs, indicating that upper class females were less affected than lower class females, but this result is likely to be misleading, since the mean age of the upper class (44.29 yrs) is notably higher than in the lower class group (29.71 yrs).

Compared to the contemporaneous Pottenbrunn sample where 33% of the investigated teeth ($N=86$) show signs of linear enamel hypoplasia (GEROLD, 1997), the individuals of Gemeinlebarn F seem to be affected to a much larger extent. For Franzhausen I the only existing linear enamel hypoplasia frequency of 56.3% refers to children ($N=87$) (SCHULTZ, 1989 and 2001b). Unfortunately, the existing frequencies for those three sites cannot be directly compared because of the different statistical approaches. However, in a general dental survey of British material of Bronze Age dates, more than 58% of the examined individuals showed hypoplastic defects on more than one tooth (AUFDERHEIDE, RODRIGUEZ-MARTIN, 1998).

As spotted enamel hypoplasia is generally considered to be of genetic origin (SCHULTZ, 1988), it will not be further discussed in this palaeopathological study.

6.1.4 Para- / Periodontal diseases

“Periodontal disease involves an inflammatory response to one or more irritants. This inflammation often results in slight to severe resorption of the alveolar process, creating an abnormally large distance between bone and the cemento-enamel junction of the tooth” (ORTNER, 2003, p. 593)

Besides inheritable predisposition, irritants such as calculus and metabolic disorders (e.g. scurvy or protein deficiency) can cause inflammation of soft tissue around the tooth (gingivitis) which induces the recession of alveolar bone and may even lead to exfoliation. Occasionally, small cavities filled with pus start

forming inside the periodontium (adjacent to the root apices) and a periodontal abscess is diagnosed.

Signs of periodontal disease on permanent dentition were recorded for 63.5% of the overall Gemeinlebarn F population (N=74).

The obvious relationship between periodontal disease and age (Figure 58) has already been proved in several clinical studies. HILLSON (1996) concludes that children are rarely affected before puberty, but from then on there is not only a gradual increase in the number of affected people up to 40 or 50 years of age, but also an increase in severity.

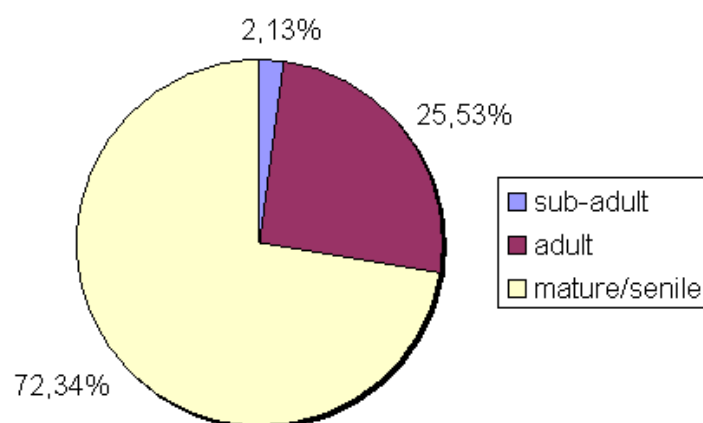


Figure 58: age group frequencies (%) of Gemeinlebarn F individuals with periodontal changes

Periodontal disease appears to be slightly more frequent among males than females (SCHULZE, 1964; HILLSON, 1996), which is also the case in Gemeinlebarn F, even though the difference here is not significant.

The comparison of the two social classes reveals a significantly higher frequency of periodontal changes in the upper class group (90.9%, N=22) than in the lower class group (76.5%, N=34). Even when focusing solely on adult individuals aged 19 to 39.9 yrs, the upper class shows a higher frequency (85.7%, N=14) than the lower class (73.3%, N=30). Most authors explain variations within populations as a result of differences not only in oral hygiene practices and dental treatment, but also in diet (see HILLSON, 1996). One of the main reasons for the difference between the social groups in Gemeinlebarn F has to be seen in the average age. In the upper class group, older than 19 yrs, the mean age is 39.09 years, in contrary to the lower class group where it is 31.5 years. When focussing on 19 to

39.9 year old individuals, the average age is 31.42 years in the upper class and 29.7 years in the lower class group.

Unfortunately, the frequency of individuals suffering from periodontal disease (63.5%) in Gemeinlebarn F (N=74) cannot be compared to the respective frequency of adult/mature/senile individuals in Pottenbrunn (43.6%), since the number of affected tooth sockets (N=156) was calculated in Pottenbrunn rather than the number of affected individuals. In Franzhausen I, however, 92.96% of the investigated individuals (N=213) suffered from alveolar atrophy and a correlation between age and the severity of the disease was also detected. The sample of 250 British skulls dating from Neolithic to Saxon times investigated by BROTHWELL (1961) showed an alveolar recession frequency of 64%, almost identical to the result of Gemeinlebarn F.

6.1.5 Dental calculus (tartar)

Dental plaque mainly consists of proteins, food particles and microorganisms, which adhere to the tooth surface. Once plaque has mineralized, it can be recognized as calculus (syn. *tartar*). Since the saliva plays an important role in the mineralization process, the teeth closest to the salivary glands generally show the most pronounced calculus formation. Nevertheless, the initiation of mineralization is related to the extent of plaque, which forms as a result of poor oral hygiene or carbohydrate consumption (HILLSON, 1996).

Calculus is generally seen as one of the main irritants causing inflammation around the tooth, which then results in periodontal disease (SCHULZE, 1964; ORTNER, 2003).

77.6% of the Gemeinlebarn F individuals (N=147) suffered from (supra-gingival) calculus and were mainly affected to a slight or moderate degree.

23 cases of calculus on deciduous dentition were recorded and clearly the calculus frequency increases with age. The occurring significant difference between adult (91.3%) and mature/senile (85.7%) individuals indicating a decrease in advanced years is probably inconclusive, since the sample size of individuals older than 39.9 yrs is relatively small (N=21) and apart from several

cases with intravital tooth loss, there is a tendency for calculus to separate from the teeth during transportation and the cleaning process of skeletal material. This is most likely to have happened to the Gemeinlebarn F sample and therefore the results are unreliable.

The comparison of the various social groups (sex and class) did not reveal any significant differences between the individuals, even when solely focusing on adults aged 19 to 39.9 yrs

In Pottenbrunn, calculus was found on 33.6% of the examined adult/mature/senile teeth, but again this figure cannot be compared to the population of Gemeinlebarn F where the frequency of affected individuals, including children, was calculated instead. In Franzhausen I, calculus was recorded for 87.53% of the investigated overall population (N=187).

6.1.6 Hypercementosis

Two main types of dental cementum are found on the roots of teeth: *acellular and cellular* cementum. As the name implies, acellular cementum lacks cellular components and it lies directly on top of the dentin mainly located towards the crown of the tooth. Cellular cementum is found on the bottom third/half of the root apices and is produced in phases throughout a lifetime. If the cellular cementum appears thickened, hypercementosis is diagnosed (SCHULZE, 1964).

There are different causes for hypercementosis that have to be considered. Local disorders such as chronic apical periodontitis can trigger the overproduction of cellular cementum, as well as endocrine disturbances such as acromegaly, and Paget's disease (e.g. LUCAS, 1955; SCHULZE, 1964).

A connection to periodontal disease and/or intravital tooth loss is most likely in burial 25 (female, 50 - 60 yrs, upper class), burial 35 (male, 50 - 60 yrs, lower class), burial 66 (male, 45 - 55 yrs, lower class), burial 100/2 (male, 30 - 40 yrs, upper class), burial 156 (male, 30 - 40 yrs, lower class) and burial 191 (female, 60 - 80 yrs, upper class), as respective signs are clearly distinguishable in those cases.

The evaluation of the alveolar margin was impossible for the individual in burial 183 (male, 30 - 40 yrs, lower class) and none of the missing teeth was intravitaly lost, however the occurring hypercementosis can probably also be linked to local disorders rather than to endocrine or other diseases.

6.2 Nutrition Deficiency Symptoms

LARSEN (1997) notes that “stress” is the central study of health and well-being and assists in reconstructing adaptation and behaviour in earlier human societies. It is a product of three key factors, namely environmental constraints, cultural systems and host resistance.

6.2.1 Porotic Hyperostosis

Cribra Cranii

Porotic hyperostosis of the skull vault (*cribra cranii*) is diagnosed when the external surface of the skull appears porotic and thickened.

It is generally believed that apart from genetic anaemias (sickle-cell anaemia or thalassemia), this phenomenon is caused by iron deficiencies which results in the expansion of spaces containing hematopoietic marrow within the bones (WHITE, 1991). In contrast, WALKER et al. (2009) argue that iron-deficiency anaemia does not physiologically explain the characteristic marrow hypertrophy, since it decreases red blood cell production which is necessary for marrow expansion. Instead, megaloblastic anaemias (as well as hereditary haemolytic anaemias) trigger the overproduction of red blood cells and are therefore more likely to be responsible for porotic hyperostosis. The main causes of megaloblastic anaemias are chronic dietary deficiencies and malabsorption of vitamin B₁₂ and/or folic acid.

Other authors have shown that a range of other diseases involving inflammatory processes on the skull bone (e.g. periostitis, osteitis and inflammatory processes of the scalp) can also cause such morphological changes (LEWIS, ROBERTS, 1997; ORTNER, 2003).

Cribra Orbitalia

Porotic modifications on the orbital roof known as *cribra orbitalia* have been described as mainly related to chronic anaemia (LARSEN, 1997; ORTNER, 2003) and/or vitamin deficiency (WALKER et al., 2009).

ORTNER (2003) sums up the different reasons for anaemia found by various authors, the most frequent being parasitic disease, chronic iron deficiency (e.g. lack of iron in the diet or diarrhoeal disease) and chronic deficiency of the amino acid tryptophan. But as mentioned above, marrow hypertrophy, which is responsible for the porotic appearance of the bone surface, cannot be explained by iron deficiency, and is more likely to be linked with megaloblastic anaemias.

Instead, vitamin deficiencies such as scurvy (vitamin C deficiency) or rickets (vitamin D deficiency) (WALKER et al. 2009) often cause subperiosteal hematomas which are also responsible for orbital roof lesions, later identified as *cribra orbitalia*.

Unfortunately, most skulls of the Gemeinlebarn F sample were found damaged and heavily eroded, and the number of skulls able to be investigated for porotic hyperostosis in terms of *cribra cranii* (N=18) and *cribra orbitalia* (N=35) is extremely small. Nevertheless, each sample contained indications of each of the respective symptoms on more than half of the rateable skulls (*cribra cranii*: 55.6%; *cribra orbitalia*: 68.6%). It is unlikely that genetic anaemias such as thalassaemia major, thalassaemia minor and sickle cell anemia (HERSHKOVITZ et al., 1997; WAPLER et al., 2004) are responsible for porotic modifications in Gemeinlebarn F, since the frequency of affected individuals is too high.

When comparing individuals older than 19 yrs to the sub-adult sample, a trend towards sub-individuals ($p=0.077$) can be detected in terms of *cribra orbitalia*, while no significant difference between the adult and the mature/senile, as well as the social class groups was observed.

STUART-MACADAM (1991) analyzed a number of studies with regard to porotic hyperostosis (*cribra cranii* and *cribra orbitalia*) in 1982 and found that in almost every case there was no significant difference between males and females. This

also applies to individuals older than 19 yrs in Gemeinlebarn F, even though a trend ($p=0.148$) towards females in cribra orbitalia is noticeable here.

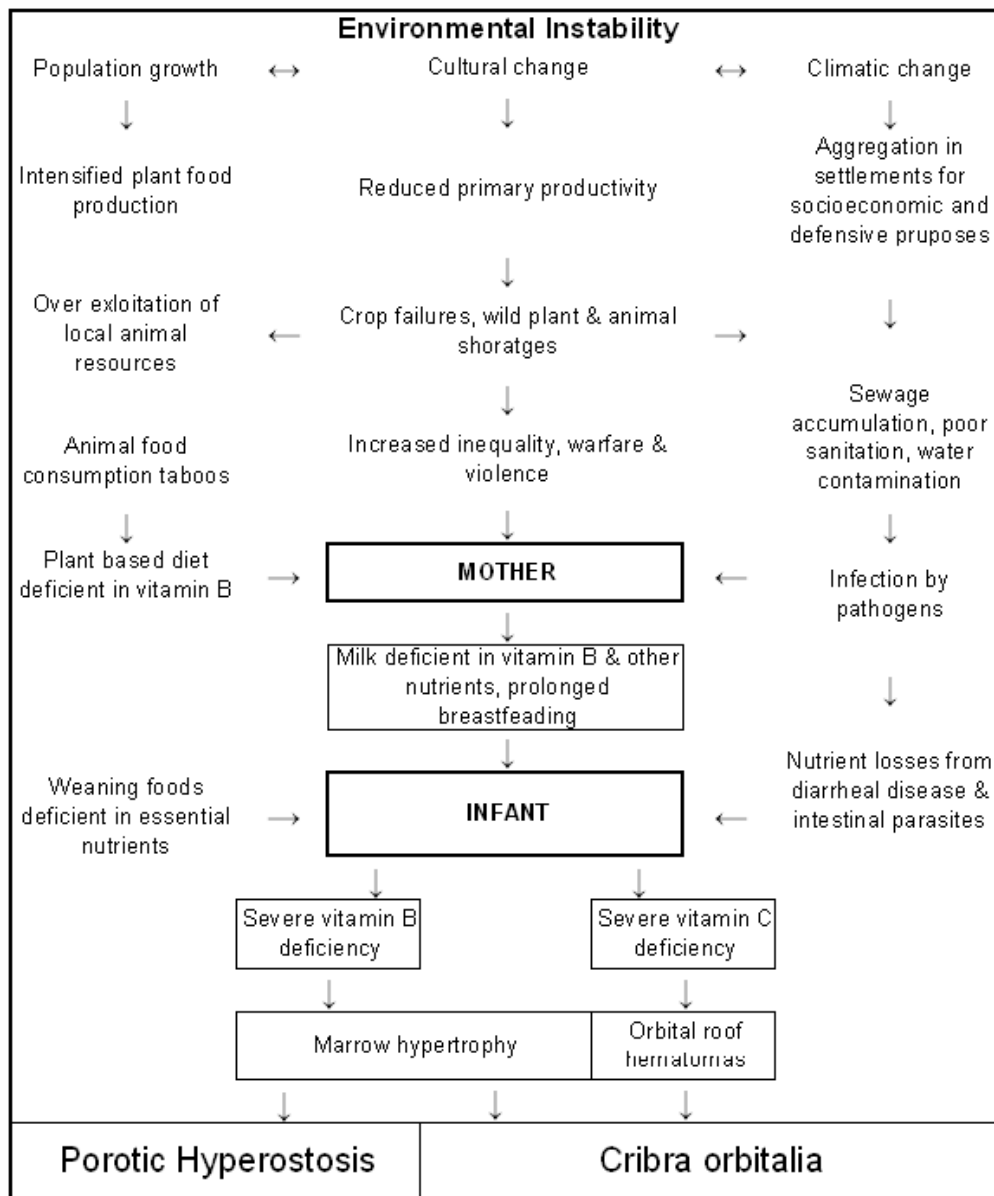
Interestingly, this trend becomes significant if the sample is extended by sub-adults aged at least 15 yrs ($p=0.045$) and becomes even more significant when including children as well ($p=0.018$).

No significant differences in cribra orbitalia were observed between the two social classes.

Over the years, cribra orbitalia has often been associated with cribra cranii and a correlation between the two symptoms was generally assumed. However, ROTHSCILD et al. (2004) examined skulls from different continents and time periods and clearly found no relationship between cribra orbitalia and porotic hyperostosis. A link between cribra orbitalia and cribra cranii should, therefore, not be established automatically, as the two symptoms may have different causes and possible multiple nutritional deficiencies make their identification even more difficult (LEWIS and ROBERTS, 1997).

WALKER et al. (2009) show the relationships of variables related to the aetiology of porotic hyperostosis in terms of cribra cranii and cribra orbitalia (Figure 59).

This model possibly also applies to the general condition of Gemeinlebarn F in early Bronze Age and explains why children were more prone to suffer from nutrition deficiencies than adults.



6.2.2 Periosteal reactions

Periosteal reactions of the bone usually start with the formation of woven bone, which later remodels into lamellar bone once it is integrated into the underlying cortex.

SCHULTZ (2001a) mainly distinguishes between haemorrhagic and tumorous bone changes (periostosis), and inflammatory bone modifications (periostitis). Tumorous changes were not investigated in this study and therefore shall not be discussed further.

Haemorrhagic bone reactions (ossified subperiosteal haematomas) are of non-infectious cause and are a typical symptom of scurvy (vitamin C deficiency), which, when occurring in children, is also known as *Möller-Barlow* disease (ORTNER, 2003). In addition, a deficiency in vitamin C decreases the osteoblastic and odontoblastic activity, and affects the sufficient development of bone (and dentin) (MARCOVE, 1992).

Long bone appositions can also be the result of non-specific infections such as non-specific periostitis and non-specific osteomyelitis (the medullary cavity is also inflamed), as well as of specific infections such as treponemastosis and leprosy, and mechanical trauma (GOLDSTEIN, 1963; VAN DER MERWE et al., 2010).

The investigated sample of Gemeinlebarn F mainly contains healed periosteal lesions, as well as local haematomas on the jaw (Plate V a) and on pelvic bones. The overall appearance of the reactions suggests a well-contained chronic process since 83.5% of the overall population (N=85) showed signs of periosteal reactions, even though only being rated slight to moderate.

Children were also affected, for example in burial 26 where a female infant aged 8 - 16 months of unknown social class with ossified subperiosteal haematomas on the existing radii and ulnae, as well as signs of cribra orbitalia and porotic changes on the mandible, was found. In burial 190 (female?, approx. 2 yrs, unknown social class), a local haemorrhage was diagnosed posterior of the left mandibular fossa. Such cases represent *Möller-Barlow* disease.

The comparison of the various social groups did not reveal any statistically significant differences in prevalence within the population.

Even though periostitis has been found in Pottenbrunn and Franzhausen I samples, the frequency for individuals with periosteal bone reactions in Gemeinlebarn F (83.5%) cannot be compared to the neighbouring burial sites, since there are no existing frequencies for the respective overall populations.

6.3 Other pathological changes

Hyperostosis frontalis interna

Excessive bone development on the inner table of the frontal bone such as in burial 5 (male, 19 - 23 yrs, lower class) and burial 191 (female, 60 - 80 yrs, upper class) is diagnosed as hyperostosis frontalis interna (hfi) (Plate V b). In Gemeinlebarn F, 8 out of 20 investigated individuals (40%) showed respective bone growths. The small endocranial osteoma on a small frontal bone fragment in burial 35 (male, 50 - 60 yrs, lower class) probably represents an early stage of hfi.

Internal hyperostosis rarely occurs outside the frontal region, but in some cases it can extend to the temporal, parietal and occasionally to the occipital bone (MULHERN et al., 2006; HAJDU et al., 2009). In Gemeinlebarn F, this phenomenon was recorded for burial 66 (male, 45 - 55 yrs, lower class), where internal hyperostotic modifications were found on the internal parietal and temporal lamina, as well as in the area of the right sigmoid sinus.

The exact causes of hfi are still unknown. In the past it has mainly been related to sex and age and connected with hormonal stimulation, since today it is predominantly found in older women (HERSHKOVITZ et al., 1999; SHE and SZAKACS, 2004). It is also commonly linked to genetic predisposition (GLAB et al., 2006) and existing behavioural disturbances (DEVRIENDT et al., 2005; WALDRON, 2009).

On the one hand, the fact that in Gemeinlebarn F internal frontal hyperostosis

was mainly observed in male skulls should not automatically lead to the assumption that this condition was locally predominant in males, since the existing female skulls are less sufficiently preserved in this sample. On the other hand, a higher prevalence of hfi in males in historic samples as opposed to modern samples has previously been observed (HERSHKOVITZ et al., 1999; RÜHLI et al., 2004; FLOHR and WITZEL, 2011). The presence of hfi in modern males is related to endocrine disorders (HERSHKOVITZ et al., 1999; RÜHLI et al., 2004) and in historic males possibly even to a higher leptin level due to an increased metabolic rate (RÜHLI and HENNEBERG, 2002).

Meningeal diseases

Signs of inflammation of the endocranial lamina (epidural haematoma, granular to tile-shaped appositions) (Plate V c) as are found in 15 of the investigated 42 endocranial lamina (35.7%), often indicate **meningitis** or **meningoencephalitis**, especially when occurring in combination with **intensified digital impressions** due to high intracranial pressure (SCHULTZ, 1993 and 2001b; ORTNER, 2003). If new bone formations are present **pachymeningitis**, an inflammation of the dura mater, can be diagnosed (ORTNER, 2003).

In most cases, meningitis and meningoencephalitis are infections caused by bacteria (e.g. *Haemophilus influenzae*, *Neisseria meningitides*, *Streptococcus Pneumoniae* and *Mycobacterium tuberculosis*), viruses (e.g. measles, mumps) or fungi (e.g. *Cryptococcus*) (PATTERSON, 2008). Sometimes they can be classified as secondary infections that follow other diseases like mastoiditis and otitis media, and they also occur in connection with vitamin A, C or D deficiencies, which are characterized by a haemorrhagic tendency and can therefore also trigger an inflammation of the meninges (LEWIS, 2004). Meningeal diseases are presumed to have a higher prevalence in children than in adults, simply because children are more prone to infectious diseases related to nutrition deficiencies than adults, especially after weaning (SCHULTZ, 1993).

Most inflammatory bone reactions of the endocranium were found in the region of the internal occipital tuberosity (e.g. burial 13, 15 and 47) and some adult

individuals as in burial 61, 70 and 136 had additionally formed a penny-sized impression where the transverse meets the sagittal sinus. The respective area of the approx. 6 year old child in burial 74/1 also appears widened and the digital impressions are slightly intensified, again indicating increased intracranial pressure.

A proliferative process in the right transversal sinus was diagnosed for the individual in burial 1, and in the sigmoid sinuses of the individuals in burials 66, 164 and 229, while porotic changes in the sagittal, transversal or the sigmoid sinus were diagnosed in burials 25, 40, 98, 143 and 207.

These symptoms could be associated with **perisinusitis**, which may occur in severe cases of meningeal disease when the infection spreads to the venous sinuses (SCHULTZ, 1993). This is possible for burials 25 (female, 50 - 60 yrs, upper class), 40 (female?, approx. 5 yrs, of unknown social class) and 98 (male?, 4 - 5 yrs, unknown social class), where the bone surface adjacent to the venous sinus also shows inflammatory bone reactions.

Previous investigations by SCHULTZ (2001b) showed that 10% of the children in Gemeinlebarn F (N=20) developed meningeal reactions. Currently, this is one of the lowest percentages for mid-European infant populations in Early Bronze Age, where frequencies range from 10% to 22%.

Usually the transverse and the sigmoid sinuses are more pronounced on the right side than on the left (SCHULTZ and TESCHLER-NICOLA, 1987). In some cases such as in burial 32/2 (female, 13 - 14 yrs, unknown social class), the sinus on the left side is notably larger than the one the right (Plate V d).

Moreover, some individuals appear to have a far more pronounced bulb of the jugular vein on the left rather than the right side as in burial 116 (?, 8 - 12 yrs, unknown social class). In burial 70 (female?, 12 - 14 yrs, lower class), the right jugular fossa has ossified (Plate V e) and the penny-sized impression next to internal occipital tuberosity was probably formed in consequence. At this point it is unclear whether these observations are a pathological effect or of genetic origin.

A thin layer of indefinable, smooth milky-white apposition of unknown origin was found on the internal lamina of the frontal bones in burials 21/2 (female, 6 - 7 yrs, unknown social class), 27/1 (? , 4 - 5 yrs, upper class) and 181 (male?, 8 - 10 yrs, unknown social class). The child in burial 181 additionally shows intensified digitate impressions. The same milky-white apposition was also recorded for the right parietal bone, close to the sagittal suture in burial 69 (male?, approx. 4 yrs, unknown social class), and here the occipital part of the sagittal sulcus additionally appears intensified.

Even though the first impression implied that the apposition only seemed to occur on infant endocrania, the apposition was also found on sufficiently preserved rib fragments of one adult individual (burial 136: male, 27 - 33 yrs, lower class).

Sinusitis

Signs of inflammation in maxillary, frontal and especially sphenoid sinuses were not often recorded, mainly because of insufficient preservation of the material, and also because neither x-ray, nor invasive methods were used for systematic investigation of these diseases.

Nevertheless, maxillary sinusitis was diagnosed in 5 of 19 investigated individuals (26.3%), for instance in burials 35 (male, 40 - 50 yrs, lower class) and 135 (female, 30 - 40 yrs, lower class), where the maxillary walls of the existing bone fragments appear porotic. A case of healed chronic maxillary sinusitis was observed in burial 100/1 (male, 27 - 33 yrs, upper class) where trabecular-shaped bone appositions had formed.

Signs of inflammation were also found in frontal sinus fragments of 4 out of 31 individuals (12.1%), and in 1 out of 8 existing sphenoid sinus fragments (12.5%), namely in burial 254 (female, 15 - 18 yrs, unknown social class).

Clinical studies on the bacteriology of acute sphenoid sinusitis in recent humans have shown that delayed treatment always results in serious morbidity or mortality and that in complicated cases the infection can cause cavernous sinus thrombosis and bacterial meningitis (LEW et al., 1983).

Besides bacterial infection through, for example *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis* (seen in WALDRON, 2009),

chronic respiratory diseases can also be linked to an increased exposure to polluted air, such as smoke from open fires, kilns or bronze-smelting processes (SCHULTZ, 1993; ROBERTS, 2007). Therefore, the quantity of maxillary sinusitis within a population can also be considered as an indicator for poor air quality, since respiratory diseases not only affect trachea and lungs, but the whole respiratory tract including the maxillary, frontal and sphenoid sinus cavities (LEWIS et al., 1995; MERRETT and PFEIFFER, 2000; ROBERTS, 2007). Infections of the maxillary sinus can also be of dental origin, when peri-apical abscesses or periodontal disease create a passage into the maxillary cavity (SCHULTZ, 1993; MERRETT and PFEIFFER, 2000). However, this was not recorded for any of the cases in Gemeinlebarn F.

Stomatitis

Stomatitis is an inflammation of the oral mucosa which can be triggered by various pathogens such as viral (e.g. measles, chickenpox), bacterial (*Actinomyces bovi* and *Actinomyces israelii*) and fungal (*Candida albicans*) infections, as well as mechanical irritations (EMAMI et al, 2008; WENIG, 2008). Chronic forms of stomatitis manifest themselves in trabecular- to wart-shaped appositions on the palatal surface and are often found in connection with nutritional deficiencies such as scurvy and dental diseases (SCHULTZ, 1993). 3 of the 18 investigated individuals in Gemeinlebarn F (16.7%) show respective modifications.

The individual in burial 106 (male, 30-40 yrs, upper class) suffered from periodontitis and probably also gingivitis, since a pea-size apical abscess around the roots of the carious upper right M¹ was found. It is very likely, that this infection also affected the palate.

Pleuritis

Pleuritis (pleurisy) can be explained as an exudative inflammation with accumulation of fluid in the pleura cavity, which can be caused by pyogenic organisms, tuberculosis and tumours (RIEDE and COSTABEL, 1995). If the pleura is infected as a result of bacterial pneumonia (e.g. *Pneumococcic*

lobar pneumonia), the fever either rises until the patient dies from cardiovascular collapse and multiple organ failure, or alternatively it stops rather abruptly and the symptoms disappear within the next 10 days. Whether or not an individual survives bacterial pneumonia is likely to be determined mainly by the quality of the immune system (AUFDERHEIDE and RODRIGUEZ-MARTIN, 1998). In cases of haemorrhagic bone appositions, a tumour on the pleura has to be considered (REUTER, 2004).

Signs of infection were recorded for burials 29 (male, 24 - 30 yrs, upper class), 30 (female?, approx. 10 yrs, unknown social class), 106 (male, 30 - 40 yrs, upper class) and 132 (female, 40 - 60 yrs, upper class), where periosteal reactions were detected on the interior side of one or more rib fragments.

The sufficiently preserved rib fragments in burial 136 (male, 27 - 33 yrs, lower class) are covered with the same milky-white texture as was detected on endocranial fragments of the children in burials 21/2 and 27/1 and 69 (see meningeal diseases).

Osteoporosis

Osteoporosis is a state of diminished bone mass, which commonly occurs later on in life, since bone mass generally increases until the age of 25-30 before the process starts to reverse (WALDRON, 2009). It is more frequent in females than in males, mainly because of the sudden decrease of osteoclast-depressing oestrogen in menopausal women, while the male testosterone decreases more slowly and gradually (ORTNER and PUTSCHAR, 1981; KANIS et al. 1994). Inactivity and dietary factors such as lack of calcium and Vitamin D increase the risk of osteoporosis for both sexes (CALDWELL, 1962; WALDRON, 2009). Since vertebrae are very spongy bones they are generally affected to the greatest degree and a reduced stability due to osteoporosis commonly leads to typical compression fractures (MARCOVE and ARLEN, 1992) as in burial 121 (female, 50 - 80 yrs, upper class).

In Gemeinlebarn F, osteoporosis was only found in mature and senile individuals.

6.4 Degenerative Changes

Synovial joints usually change throughout the lifetime of an individual. Traces of wear manifest themselves on and around the articular surfaces and may even allow assumptions on the intensity of use. COHEN and ARMELAGOS (1984, p.590-591) make a point of interpreting arthritis and muscular robusticity as an indicator for "...the severity of peak or intermittent demand on muscles and joints rather than simply the number of hours of work involved..."

6.4.1 Vertebrae

6.4.1.1 Schmorl's nodes

Schmorl's nodes are found on vertebral bodies and it is generally believed they are formed if disrupted cartilage in herniates into the adjacent vertebra due to high pressure on the nucleus pulposus of the intervertebral disc.

They may appear in various shapes and sizes and are extremely common in the lower thoracic and lumbar region (FACCIA and WILLIAMS, 2008; WALDRON, 2009).

Since the spine degenerates with age, Schmorl's nodes occur more frequently in older individuals than in younger ones. If they are present in younger spines, they can either be linked to metabolic and neoplastic diseases such as osteoporosis and hyperparathyroidism or to exposure to great stress such as excessive overloading of the skeleton and trauma (DAR et al., 2010). PENG et al. (2003) alternatively suggest Schmorl's nodes can be secondary to osteonecrosis beneath the cartilaginous endplate.

65.6% of the evaluated adult/mature/senile individuals (N=32) in Gemeinlebern F have formed one or more Schmorl's nodes on one or both vertebral surfaces of one or more thoracic and/or lumbar vertebrae (Plate IV a). The frequency is slightly higher than the results from recent individuals investigated by PFIRRMANN and RESNICK (2001) where Schmorl's nodes were present in 58% (N=100) and also higher than in the study of historic populations carried out by

DAR et al. (2010) where 48.3% were affected (N=240). In both studies Schmorl's nodes have their highest prevalence in the region from T4 to T11/T12.

The comparison between sexes revealed no significant difference. However, the comparison between upper and lower class individuals showed that upper class individuals (N=14) were affected to a significantly higher degree with a frequency of 85.71% than those belonging to the lower class (N=18) where 50% showed modifications. The mean age difference in those two groups (upper class: 36.71 yrs, lower class: 31.11 yrs) at least partially explains the detected significant difference.

6.4.1.2 Vertebral deformation and compression fractures

Most vertebrae had formed osteophytes to various degrees on the edge of the vertebral bodies (Plate VI d).

The massive deformation of the existing cervical vertebral bodies in burial 44 (male, 30 - 40 yrs, lower class) is a product of high pressure, leaving the anterior parts lower than the posterior parts.

The deformation of the cervical body in burial 150 (male, 40 - 50 yrs, upper class) shows signs of osteoporosis, which is likely to be the cause of deformation in this case.

A compression fracture was found in the lumbar region of the spine in burial 25 (female, 50 - 60 yrs, upper class) (Plate II d). In this case, the fracture was probably initiated by the demineralization of the bone, probably due to osteomalacia.

6.4.2 Joints

In the most common form of arthritis, **osteoarthritis (degenerative joint disease)**, the articular cartilage in a joint is destroyed, while new bone material builds up in terms of marginal lipping and formation of osteophytes.

It is commonly found on the facet joints of the spine, with the cervical and lumbar regions generally most affected (WALDRON, 2009).

WHITE (1991) distinguishes between two types of osteoarthritis, namely primary and secondary osteoarthritis, which have different causes: while the primary form is a combination of several factors such as age, genetic predisposition and mechanical stress, secondary osteoarthritis is related to trauma or bacterial infection of the joint. However, distinguishing between degenerative changes and modification due to inflammatory processes is difficult for macerated skeletal material (SCHULTZ, 1988).

As far as the degenerative changes in Gemeinlebarn F are concerned, only minimal modifications were observed. The mean grades of degenerative joint lesions reveal no statistically relevant differences between the various social groups for the shoulder joints (r. / l.), the left elbow joint, the radio-ulnar joints (r. / l.), the proximal wrists (r. / l.), the hip and the knee joints (r. / l.), the left proximal and the right distal ankle. But three joints, the right elbow- (Plate IV b), the right proximal (Plate IV c) and the left distal ankle-joint (Plate IV d), show significant relations to the social classes.

In summary, it can be said that individuals belonging to the upper class reveal more pronounced changes particularly at the right elbow joint, a possible consequence of higher workload, but when calculating the mean age for the different social groups, a difference occurred which also has to be taken into account. The average age of the upper class group, older than 19 yrs, is 37.75 years, whereas it is 34.94 years in the lower class group. After removing all individuals older than 40 years, the average age is 31.85 years in the upper class and 28.25 in the lower class group.

Only the comparison of the average left distal ankle-joint degeneration between mature upper and lower class individuals (N=9, both sexes included) shows that the 2 lower class individuals contain significantly more distinct signs of degeneration than the 7 upper class individuals ($p=0.034$). But again, these observations have to be interpreted with caution, as the sample size is very small.

Investigations on the physical activity and social status in the early Bronze Age society of Mokrin in Serbia, carried out by PORČIĆ and STEFANOVIĆ (2009) on

the basis of musco-skeletal markers, also showed no simple correlation between social status and the overall labour intensity. However, they found a positive correlation between social status and the use of the upper arms and shoulders in the male sample, and also offer different models to describe this phenomenon including special status-related activities (modification theory) and gaining of high status through straining activities like warfare or hunting (assortment theory).

Forming a **false joint (pseudoarthroses)** is a form of secondary osteoarthritis. Eburnation shows that there was movement at the false joint and the individual was relatively mobile (WALDRON, 2009). This probably also applies for the individual in and burial 209 (male?, 30 - 40 yrs, lower class), who not only developed a false joint on the right hip (Plate VI e), but shows corresponding signs of eburnation on the femoral head and massive osteophyte formation in the lumbar region.

Since osteoarthritis of the hip is strongly related to age, the shorter life span in prehistoric times explains the relatively low frequency of affected individuals in contrast to contemporary samples (JURMAIN and KILGORE, 1995).

The individual in burial 74/2 (male, 40 - 50 yrs, upper class) represents a case of **congenital dysplasia**.

Hyperarthrosis of the knee joint is suspected in burial 163 (female, 40 - 60 yrs, upper class), where at least one peppercorn-size osteoma was recorded on the ridge within the articular surface of the left patella fragment.

WEISS and JURMAIN (2007) are cautious about automatically linking osteoarthritis to the overall level of activity, especially when samples are not divided into age and sex groups. According to their studies, individuals prone to severe stress starting at a young age are likely to develop more severe forms of osteoarthritis later on in life. They also suggest that not all joints respond to mechanical stress in the same way.

6.4.3 Osteochondritis dissecans

“Osteochondritis dissecans is the condition in which an osteochondral (or an almost purely chondral) fragment is delimited and loosened from an articular end of an apparently normal bone (usually the lower end of a femur), and finally may even be extruded into the joint space.” (MARCOVE, 1992; p.176)

Osteochondritis dissecans is either caused by direct trauma or recurring microtrauma which is commonly seen in individuals with high physical activity and it is usually more prevalent in males than in females (WALDRON, 2009).

In the Gemeinlebarn F sample it was diagnosed on the articular surface of the right radial head of the individual in burial 100/2 (male, 30 - 40 yrs, upper class) and on the distal articular surface of the right radius in burial 167 (male, 30 - 40 yrs, upper class).

In burial 244 (male, 35 - 45 yrs, lower class), a large cyst-like impression found on the proximal articular surface of the proximal digital bone (I) of the right foot also suggests the former presence of a loose fragment in the respective joint.

7. Summary

The question of social differences within early Bronze Age societies of east Austria has been of great interest since the burial site of Gemeinlebarn F (1880 – 1680 cal. BC) was first investigated for archaeological and anthropological features in the early 1990s. Grave goods and burial customs comply with the traditions of the *Unterwölblinger* culture group in which strong influences of the *Věteřov* culture (Gemeinlebarn III) are traceable, and social classification of the deceased was primarily based on grave dimensions, grave goods and the degree of disturbance through grave robbery.

In order to provide more details regarding social and sex related differences, the focus in this thesis was laid on nutrition deficiency symptoms and degenerative joint conditions.

The existing 224 individuals were investigated macroscopically and/or by using a reflected-light microscope, and 173 (66 males, 44 females, 2 adults of unknown sex and 61 subadults) were sufficiently preserved to be included in the study.

The sample was divided into various groups in terms of sex, age and social rank to reveal possible links between pathological and degenerative changes and the social status.

No distinct differences between the defined social groups were found with regard to molar abrasion, caries, porotic hyperostosis, cribra orbitalia and unspecific periostitis and vertebral joint degeneration. A statistically significant difference in linear enamel hypoplasia frequencies between upper and lower class females older than 19 years (≥ 19 yrs including adult, mature and senile individuals) was obtained despite the fact the sample size was small: only 25% of the upper class females suffered from linear enamel hypoplasia, whereas 68.4% of the lower class females are affected. The significant difference can clearly be explained by the difference in age, since the average age is 44.29 years in the upper class and 29.71 years in the lower class group.

Another significant difference was detected when comparing periodontal disease frequencies for upper and lower class individuals of both sexes, older than 19

years: this time the upper class showed a higher percentage (90.9%) than the lower class individuals (76.5%). After limiting the sample size to adults aged 19 to 39.9 years, the upper class again contains a significantly higher percentage of affected individuals (85.7%) than the lower class (73.3%). However, the average age is again higher in both upper class samples (≥ 19 yrs and 19-39.9 yrs), which can probably be seen as one of the main reasons for the detected difference between the social classes.

A significant difference between the two social classes of both sexes, older than 19 years, was also recorded when investigating Schmorl's nodes which were detected in 85.71% of the upper class individuals (mean age: 36.71 yrs) and just 50% of the lower class individuals (mean age: 31.11 yrs).

The mean grades of joint degeneration reveal statistically significant differences between the social categories for the right elbow, the left proximal and the right distal ankle joint. In the case of the right elbow joints of both sexes, older than 19 years, a higher grade of degeneration was noticed in the upper class whose members are affected to an average grade of 1.72, than in the lower class who show a mean of 0.83. When reducing the sample to adults aged 19 to 39.9 years, the difference is also statistically significant, since the mean degeneration in the upper class is 1.59 but 0.42 in the lower class. Again, the average age of the upper class members is higher in both samples (≥ 19 yrs and 19-39.9 yrs), which has to be considered for correct interpretation of these results.

When comparing mean grades of degeneration of the right proximal ankle joint for mature and senile upper and lower class individuals another significant difference occurred, since the upper class members are affected to grade 2.25, whereas the lower class individuals only show a mean of 1.42. In contrast, the investigation of the left distal ankle joint indicates that in this case the lower class with a mean grade of degeneration of 3.75 is affected to a higher degree than the upper class with a mean of 2.29. Because the sample size in the latter two comparisons (right proximal and left distal ankle) was very small, these results are not considered reliable.

No statistically significant differences were found between males and females, and despite the fact that, in general, only minimal modifications were recorded, individuals belonging to the upper class generally reveal the same, if not higher

frequencies and more pronounced changes. However, the first impression, that the contrast is more distinct between the social classes in this local early Bronze Age society is put into perspective by the calculation of age means for the respective social groups. Still, the hypothesis that individuals belonging to the lower class are more prone to physical stress has to be rejected.

8. Zusammenfassung

Die Frage nach sozialen Unterschieden innerhalb frühbronzezeitlicher Populationen in Ostösterreich stellt sich seit dem das Gräberfeld Gemeinlebern F (1880 – 1680 cal. BC) in den 1990er Jahren erstmalig archäologisch und anthropologisch untersucht wurde. Die Grabbeigaben sowie die Bestattungssitte entsprechen jenen der *Unterwölblinger* Kulturgruppe, wobei sich bereits ein starker Einfluß der *Větřov*-Kultur (Gemeinlebern III) bemerkbar macht. Auf der Basis von Grabdimension, Grabausstattung und Ausmaß der Beraubung konnte bereits ein sozialer Unterschied der hier Bestatteten ermittelt und eine Einteilung in „reich“ und „arm“ vorgenommen werden.

Das Ziel der vorliegenden Arbeit bestand darin, mehr über die sozialen und geschlechtsspezifischen Unterschiede innerhalb dieser Population zu erfahren, wobei das Hauptaugenmerk auf Nahrungsmangelkrankungen und degenerative Gelenksveränderungen gelegt wurde.

Skelettreste von insgesamt 224 Individuen wurden makroskopisch bzw. mit Hilfe eines Auflichtmikroskops untersucht und 173 (66 Männer, 44 Frauen, 2 Erwachsene unbekannten Geschlechts und 61 sub-adulte Individuen) waren gut genug erhalten, um in diese Studie miteinbezogen zu werden.

Die Individuen wurden je nach Geschlecht, Alter und sozialer Stufe in verschiedene Gruppen unterteilt, um eventuelle Zusammenhänge zwischen pathologischen bzw. degenerativen Veränderungen und der sozialen Stellung sichtbar zu machen.

Es wurden keine nennenswerten Unterschiede zwischen den Gruppen hinsichtlich der molaren Abrasion, Karies, parodontischer Hyperostose, Cribra Orbitalia und unspezifischer Periostitis, sowie der Degeneration von Wirbeln gefunden. Ein statistisch signifikanter Unterschied in den einzelnen Frequenzen für lineare Schmelzhypoplasien wurde zwischen „reichen“ und „armen“ Frauen über 19 Jahren entdeckt: nur 25% der „reichen“ Frauen weisen entsprechende Spuren an den Zähnen auf, wohingegen 68,4% der „armen“ Frauen betroffen sind. Berücksichtigt man jedoch das durchschnittliche Alter in diesen beiden

Gruppen, wird dieser signifikante Unterschied schnell relativiert: lineare Schmelzhypoplasien wurden häufiger in jüngeren Individuen nachgewiesen und das durchschnittliche Alter bei den sozial höher eingestuften Frauen beträgt hier 44,29 Jahre, wohingegen es bei den sozial niedriger eingestuften Frauen nur bei 29,71 Jahren liegt.

Ein weiterer signifikanter Unterschied wurde beim Vergleich der Frequenzen von Paradontalerkrankungen bei Erwachsenen (Männer und Frauen) gefunden: „reiche“ Individuen (90,9%) schienen wesentlich stärker betroffen zu sein als „arme“ Individuen (76,5%). Nachdem das Sample auf Individuen zwischen 19 und 39,9 Jahren reduziert wurde, fand sich nachwievor in der sozial höher gestellte Gruppe ein signifikant höherer Prozentsatz von Betroffenen (85,7%) als in der sozial niedriger gestellten (73,3%). Der für die Gruppen berechnete Altersdurchschnitt relativiert aber auch hier wieder die beiden statistisch signifikanten Ergebnisse, da er in beiden Vergleichen in der „reichen“ Schicht höher ist.

Beim Vergleich der beiden sozialen Klassen (≥ 19 Jahre, beide Geschlechter inkludiert) konnte ein weiterer signifikanter Unterschied hinsichtlich Schmorl'scher Knötchen ermittelt werden: 85,71% der höheren (durchschnittliches Alter: 36,71 Jahre) und nur 50% der niedrigeren Schicht (durchschnittliches Alter: 31,11 Jahre) hatten Schmorl'sche Knötchen auf thorakalen und/oder lumbalen Wirbeln ausgebildet.

Der Vergleich der durchschnittlichen Gelenksdegeneration brachte statistisch signifikante Unterschiede zwischen den sozialen Schichten beim rechten Ellbogen, sowie dem linken proximalen als auch dem rechten distalen Sprunggelenk. Im Fall des rechten Ellbogengelenks zeigen „reiche“ Erwachsene (beide Geschlechter inkludiert) mit einem Wert von 1,72 einen höheren durchschnittlichen Abnutzungsgrad als „arme“ mit 0,83. Auch nachdem das Sample auf Individuen im Alter von 19 bis 39,9 Jahren beschränkt wurde, blieb das Ergebnis signifikant (höhere Schicht: 1,59; niedrigere Schicht: 0,42). Aber auch hier müssen die Ergebnisse nach der Berechnung des Durchschnittsalters relativiert werden, da dieses in der „reichen“ Gruppe in beiden Vergleichen höher ist, als in der „armen“. Beim Vergleich der durchschnittlichen Degeneration des rechten proximalen Sprunggelenks fand sich bei Individuen über 40 Jahre (beide Geschlechter inkludiert) ein signifikanter Unterschied zwischen den beiden

sozialen Schichten. Wiederum erscheinen die Gelenke der "reichen" Individuen starker abgenutzt (2,25) als jene der "armen" Individuen (1,42). Im Gegensatz dazu zeigt dieselbe Untersuchung am linken distalen Sprunggelenk eine signifikant höhere Abnutzung in der niedrigeren Schicht (3,75) als in der höheren (2,29). Aufgrund des geringen Stichprobenumfangs in den beiden letzten Vergleichen (rechtes proximales und linkes distales Sprunggelenk), müssen auch diese Ergebnisse mit äußerster Vorsicht betrachtet werden.

Zwischen Männer und Frauen wurden keine statistisch signifikanten Unterschiede gefunden. Obwohl die meisten pathologischen und degenerativen Veränderungen generell nur sehr schwach ausgeprägt sind, weisen Mitglieder der höheren Schicht ausgeprägtere Modifikationen und mindestens dieselben, wenn nicht höhere Frequenzen auf. Der erste Eindruck lässt vielleicht größere Unterschiede zwischen den sozialen Schichten als zwischen den Geschlechtern in dieser frühbronzezeitlichen Gesellschaft vermuten, aber diese Annahme muss nach der Berechnung des durchschnittlichen Alters für die einzelnen Gruppen relativiert werden. Die Hypothese, dass Mitglieder der sozial niedrigeren Schicht größerem Stress ausgesetzt waren als sozial höher gestellte Individuen, muss jedenfalls verworfen werden.

9. PLATES

Plate I

- a: Burial 5 (male, 19-23 yrs, lower class): slight signs of linear enamel hypoplasia on the lower right canine and premolars
- b: Burial 100/2 (male, 30-40 yrs, upper class): alveolar resorption on the lower left mandible indicating periodontal disease
- c: Burial 191 (female, 60-80 yrs, upper class): hypercementosis on the upper left P¹ (and P²)
- d: Burial 219 (male, ~5 yrs, unknown social class): 3 views of fused lower central incisors

PLATE I



a



b



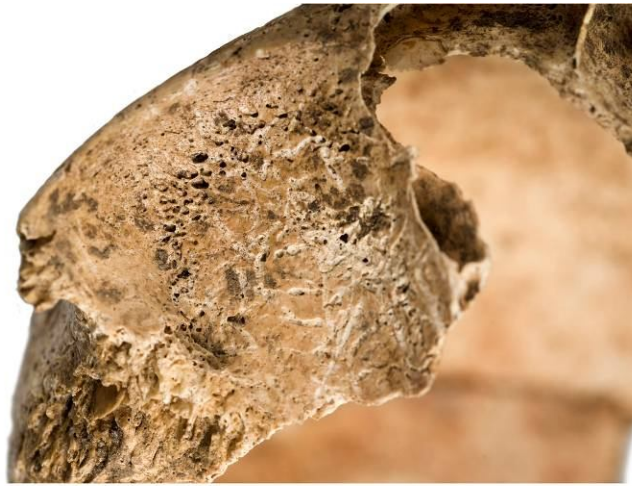
c



d

PLATE II

- a: Burial 3 (female, 15-18 yrs, lower class): signs of cribra orbitalia in right orbital roof
- b: Burial 32/1 (male, 19-23 yrs, lower class). periosteal reactions on right femur
- c: Burial 16/1 (male, 30-40 yrs, lower class): well-healed sprain fracture below left trochlear notch
- d: Burial 25 (female, 50-60 yrs, upper class): 2 views of a compression fracture on lumbar vertebra
- e: Burial 58 (female, 30-40 yrs, lower class): 3 views of the ventral bone spore in the lumbar region



a



b



c



d



e

PLATE III

- a: Burial 212 (male, 40-60 yrs, upper class): fusion of manubrium sterni and first left rib
- b: Burial 212 (male, 40-60 yrs, upper class): 2 views of the ventral bone spore that has formed on L2 and L3
- c: Burial 242 (male, 19-23 yrs, lower class): round, perimortal fracture on the distal posterior shaft of the right femur

PLATE III



PLATE IV

- a: Burial 210 (male, 27-33 yrs, lower class): typical Schmorl's node on thoracic vertebra
- b: Burial 62 (male, 30-40 yrs, upper class): 3 views of the right trochlear notch with slight marginal lipping
- c: Burial 46 (male, 35-45 yrs, upper class): superior articular surface of right talus and articular surface of tibial malleolus with slight marginal lipping
- d: Burial 126 (male, 40-50 yrs, lower class): slight marginal lipping on articular surfaces of the left distal ankle joint

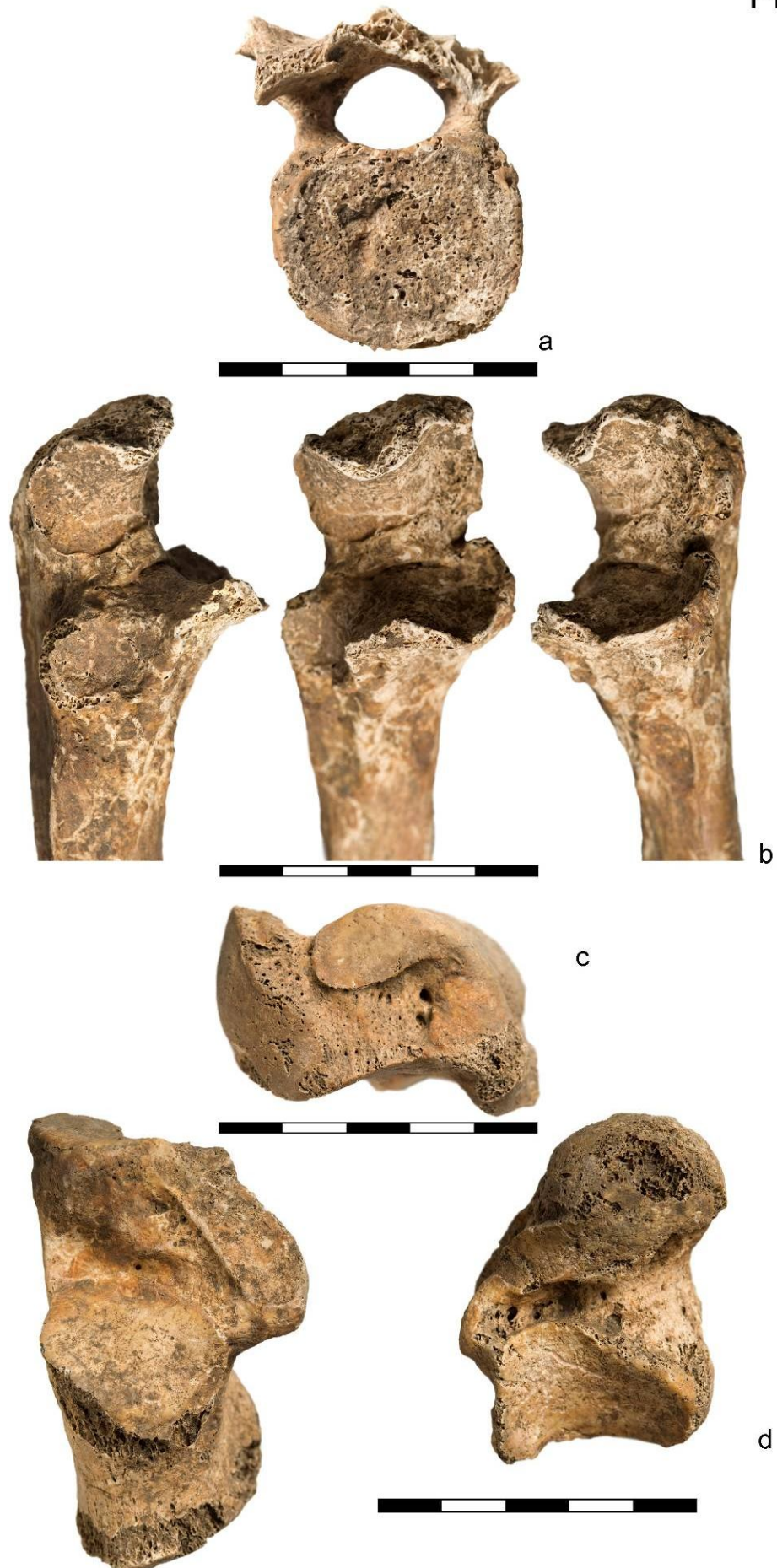


PLATE V

- a: Burial 215 (male, 27-33 yrs, lower class): ossified haematoma on lower right mandible indicating vitamin C-deficiency
- b: Burial 5 (male, 19-23 yrs, lower class): distinct signs of hyperostosis frontalis interna
- c: Burial 90 (?, ~5 yrs, unknown social class): the porotic apposition on the endocranium of the left temporal bone indicates the individual suffered from meningeal disease
- d: Burial 32/2 (female, 13-14 yrs, unknown social class): the left transversal sinus impression is more intense on the left than on the right instead of vice versa
- e: Burial 70 (female, 12-14 yrs, lower class): the right jugular fossa has ossified

PLATE V

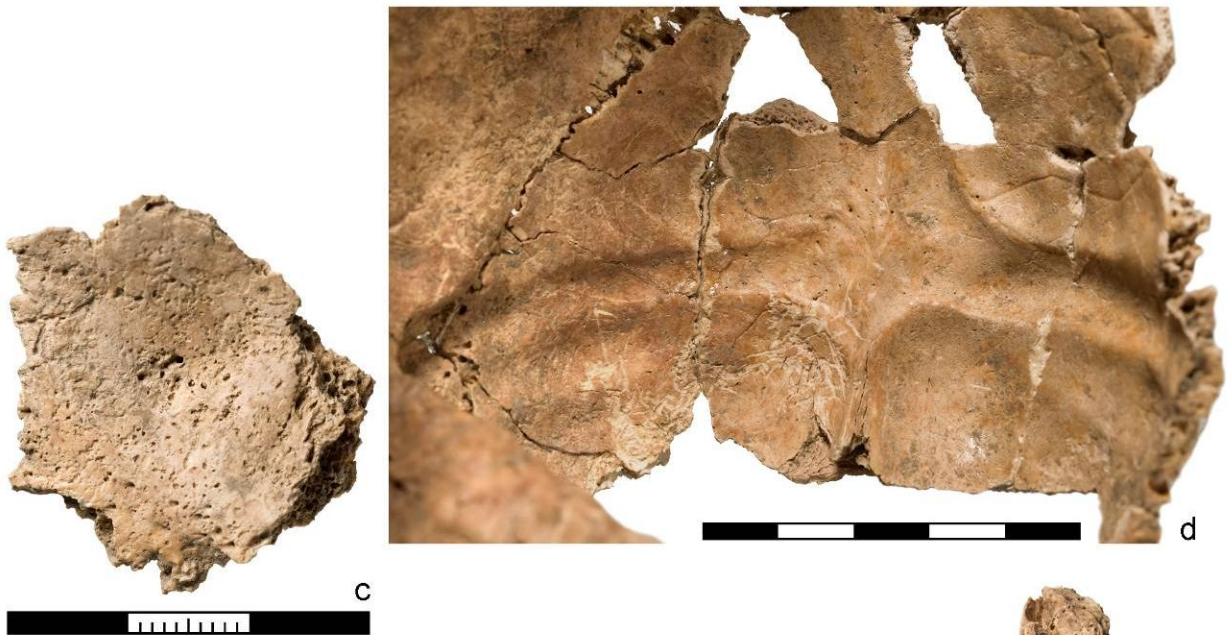
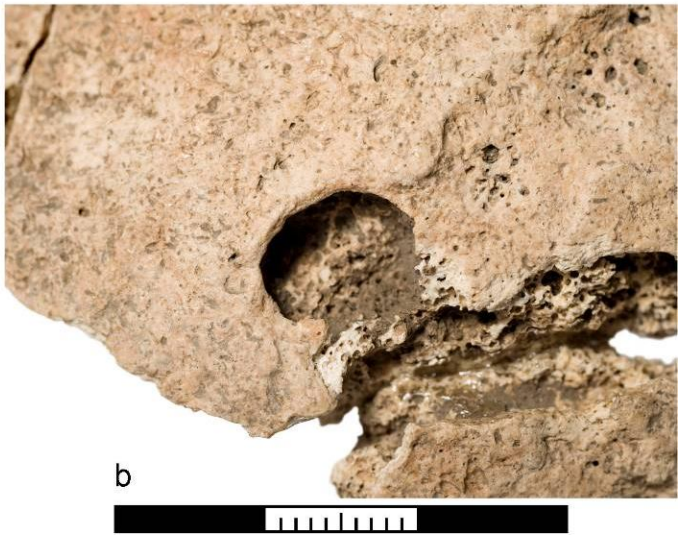
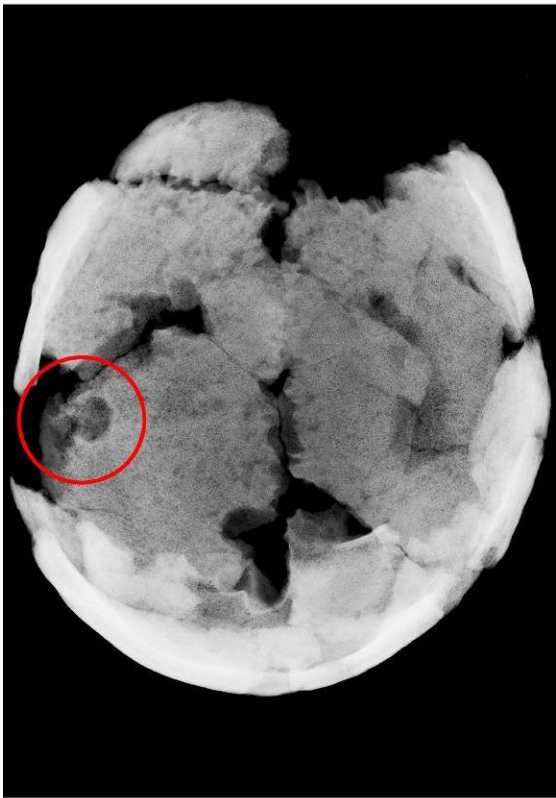


PLATE VI

- a: Burial 229 (female, 35-45 yrs, lower class): circular cranial lesion(s) with unknown aetiology on left parietal bone
- b: Burial 229 (female, 35-45 yrs, lower class): close-up of the cranial lesion (red circle) in a
- c: Burial 229 (female, 35-45 yrs, lower class): x-ray of cranial lesion(s) on the left parietal bone
- d: Burial 74/2 (male, 40-50 yrs, upper class): osteophyte development on lumbar vertebra
- e: Burial 209 (male, 30-40 yrs, lower class): formation of false right hip joint with distinct signs of wear on the articular surface



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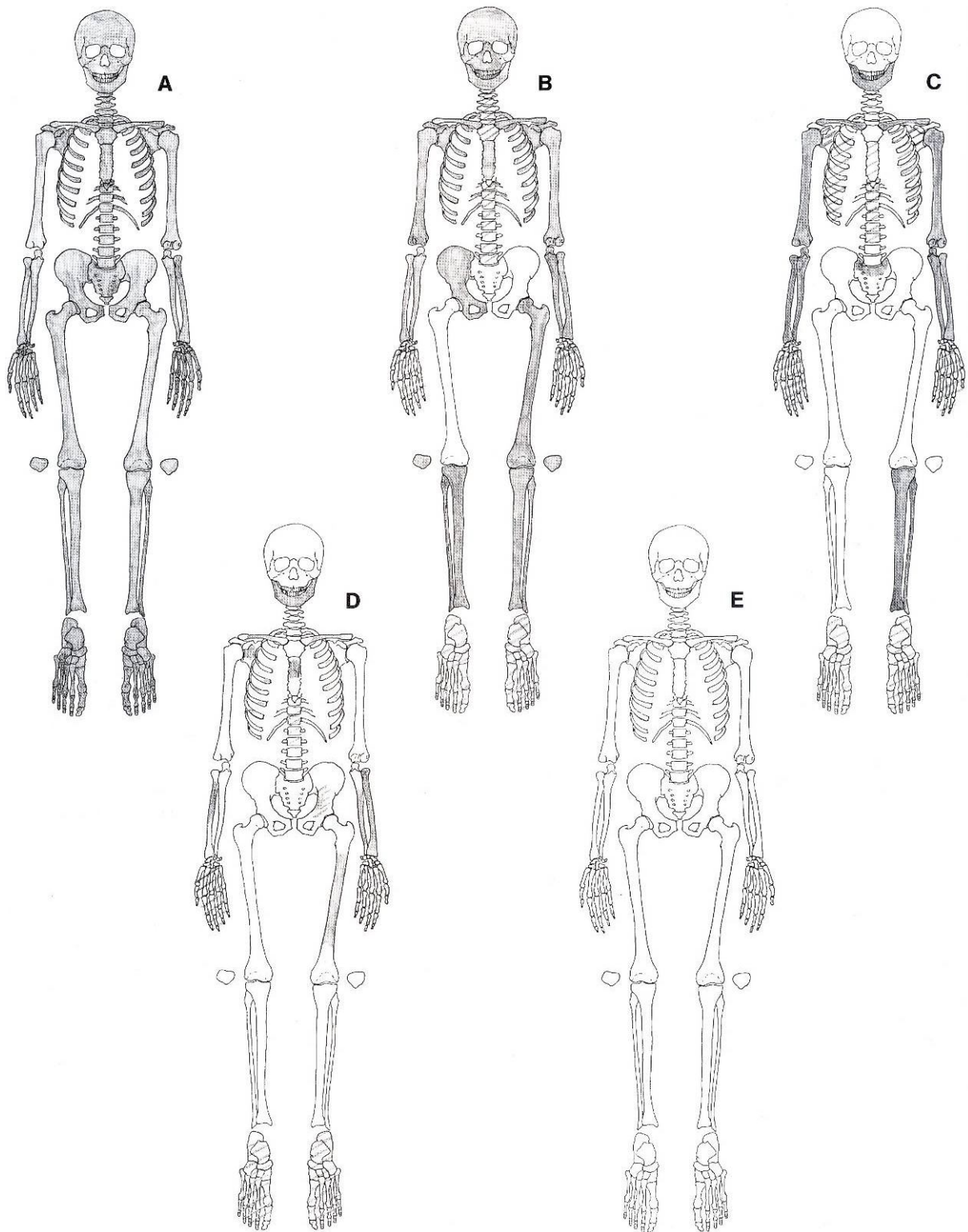
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12. Appendix

Appendix 1



Appendix 1: Gemeinlebern F. Grades of skeletal preservation. A: skeletal remains completely preserved (e.g. burial 7); B: skeletal remains mainly preserved (e.g. burial 29); C: skeletal remains partly preserved (e.g. burial 62); D: (skeletal) remains poorly preserved (e.g. burial 94); E: no skeletal remains found (e.g. burial 76).

Appendix 2

Object	
Befundnummer	
Age	
Sex	

Permanent Teeth

	M3	M2	M1	P2	P1	C	I2	I1	I1	I2	C	P1	P2	M1	M2	M3
Paradontitis/-ose																
Caries																
Hypoplasia																
Calculus																
Abrasion																
Status																
Status																
Abrasion																
Calculus																
Hypoplasia																
Caries																
Paradontitis/-ose																
	M3	M2	M1	P2	P1	C	I2	I1	I1	I2	C	P1	P2	M1	M2	M3

Status IL ... Intravital loss, ossification of the alveole
 PL... Postmortal loss
 X... Alveolar bone missing/no identification possible
 IT... Isolated tooth
 BT... Tooth broken off intravital/Trauma

Abrasion 1... none
 2... only enamel
 3... dentin-spots visible (enamel imperfecta)
 4... connected dentin-spots
 5... exposed dentin with enamel left
 6... only rest of the root

Calculus/ Hypoplasia/ Paradontitis/Paradontosis

I... slight signs
 II... moderate signs
 III... average signs
 IV... heavy signs
 V... very heavy signs

Caries E... caries only on enamel
 P... caries reached pulpa
 A... apical process caused by caries
 I... Pin-size
 II... Sesame-size
 III... Peppercorn-size
 IV... Ricecorn-size
 V... half of the crown destroyed (Molars)
 VI... Crown fully destroyed (Molars)

Hypoplasia L... Linear
 S... Spotted

Appendix 3

Object	
Befundnummer	
Age	
Sex	

Deciduous Teeth

	m2	m1	c	i2	i1	i1	i2	c	m1	m2
Paradontitis/-ose										
Caries										
Hypoplasia										
Calculus										
Abrasion										
Status										
Status										
Abrasion										
Calculus										
Hypoplasia										
Caries										
Paradontitis/-ose										
	m2	m1	c	i2	i1	i1	i2	c	m1	m2

Status IL ... Intravital loss, ossification of the alveole
 PL... Postmortal loss
 X... Alveolar bone missing/no identification possible
 IT... Isolated tooth
 BT... Tooth broken off intravitaly/Trauma

Abrasion 1... none
 2... only enamel
 3... dentin-spots visible (enamel imperfecta)
 4... connected dentin-spots
 5... exposed dentin with enamel left
 6... only rest of the root

Hypoplasia L... Linear
 S... Spotted

Calculus/ Hypoplasia

I... slight signs
 II... moderate signs
 III... average signs
 IV... heavy signs
 V... very heavy signs

Caries E... caries only on enamel
 P... caries reached pulpa
 A... apical process caused by caries
 I... Pin-size
 II... Sesame-size
 III... Peppercorn-size
 IV... Ricecorn-size
 V... half of the crown destroyed (Molars)
 VI... Crown fully destroyed (Molars)

Paradontitis/-ose

I... slight signs
 II... moderate signs
 III... average signs
 IV... heavy signs
 V... very heavy signs

Appendix 4

Object	
Befundnummer	
Age	
Sex	

PATHOLOGIES

CRANIUM

➤ Cranium cerebrale

Lamina externa: ____

left	<i>Proliferative Processes</i>	right
____	Apposition	____
____	Porotic hyperostosis	____
____	Tumour (osteoma etc.)	____
	<i>Destructive Processes</i>	
____	Cysts	____
____	Tumour (metastasis, osteosarcoma etc.)	____
____	Trauma	____
____	Trapanation	____

Lamina interna: ____

left	<i>Proliferative Processes</i>	right
____	Apposition	____
____	Porotic hyperostosis	____
____	Tumour (osteoma etc.)	____
	<i>Destructive Processes</i>	
____	Cysts	____
____	Tumour (metastasis, osteosarcoma etc.)	____
____	Trauma	____
____	Trapanation	____
____	Intensified Impressiones digitatae	____

➤ **Basis cranii**

Facies cervicalis: ____

left		right
____	Proliferative processes (appositions)	____
____	Destructive processes	____
____	Trauma	____

Facies cerebralis: ____

- Fossa cranii anterior: ____

left		right
____	Proliferative processes (appositions)	____
____	Destructive processes	____
____	Trauma	____

- Fossa cranii media: ____

left		right
____	Proliferative processes (appositions)	____
____	Destructive processes	____
____	Trauma	____

- Fossa cranii posterior: ____

left		right
____	Proliferative processes (appositions)	____
____	Destructive processes	____
____	Trauma	____

➤ **Sinus Durae Matris**

left	Sinus sagittalis ____	right
____	Sinus transversus	____
____	Sinus sigmoideus	____

➤ **Sinus paranasales**

left		right
____	Sinus maxillaris	____
____	Sinus frontalis	____
____	Sinus sphenoidalis	____

➤ **Orbita (Pars orbitalis ossis frontalis/Ala minor ossis sphenoidalis)**

left		right
____	Proliferative Process	____
____	Destructive Process	____

➤ **Meatus acusticus**

- externus:

left		right
____	Proliferative Process	____
____	Destructive Process	____

- internus:

left		right
____	Proliferative Process	____
____	Destructive Process	____

➤ **Palatum**

left

Proliferative Process
Destructive Process

right

➤ **Maxilla**

left

Proliferative Process
Destructive Process

right

➤ **Mandibula**

left

Proliferative Process
Destructive Process

right

➤ **Notes**

1	No pathology
2	Pathology
3	Possible pathology
4	Evaluation impossible
5	Missing

A	Anaemia
Ap	Apposition
H	Haematoma
O	Osteitis/Osteomyelitis
P	Periostitis
T	Tumor (Osteom, etc.)
MR-I	Inflamed meningitic reaction
MR-IH	Inflamed-haemorrhagic meningitic reaction
Ep-H	Epidural haematoma
CO	Cribrum Orbitale

Appendix 5

Object	
Befundnummer	
Age	
Sex	

PATHOLOGIES

POSTCRANIUM

➤ Scapula

left	<i>Proliferative Processes</i>	right
___	Apposition	___
___	Porotic hyperostosis	___
___	Tumour (osteoma etc.)	___
<i>Destructive Processes</i>		
___	cysts	___
___	Tumour (metastasis, osteosarcoma etc.)	___
___	Trauma	___

➤ Clavicula

left	<i>Proliferative Processes</i>	right
___	Apposition	___
___	Porotic hyperostosis	___
___	Tumour (osteoma etc.)	___
<i>Destructive Processes</i>		
___	cysts	___
___	Tumour (metastasis, osteosarcoma etc.)	___
___	Trauma	___

➤ **Humerus**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Ulna**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Radius**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Ossa carpi**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Ossa metacarpi**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Ossa digitorum manus**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Os coxae**

- Os ilii

left	<i>Proliferative Processes</i>	right
_____	Apposition	_____
_____	Porotic hyperostosis	_____
_____	Tumour (osteoma etc.)	_____
	<i>Destructive Processes</i>	
_____	cysts	_____
_____	Tumour (metastasis, osteosarcoma etc.)	_____
_____	Trauma	_____

- Os ischii

left	<i>Proliferative Processes</i>	right
_____	Apposition	_____
_____	Porotic hyperostosis	_____
_____	Tumour (osteoma etc.)	_____
	<i>Destructive Processes</i>	
_____	cysts	_____
_____	Tumour (metastasis, osteosarcoma etc.)	_____
_____	Trauma	_____

- Os pubis

left	<i>Proliferative Processes</i>	right
_____	Apposition	_____
_____	Porotic hyperostosis	_____
_____	Tumour (osteoma etc.)	_____
	<i>Destructive Processes</i>	
_____	cysts	_____
_____	Tumour (metastasis, osteosarcoma etc.)	_____
_____	Trauma	_____

➤ **Femur**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Tibia**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Fibula**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Ossa tarsi**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Ossa metatarsi**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Ossa digitorum pedis**

left	<i>Proliferative Processes</i>	right
—	Apposition	—
—	Porotic hyperostosis	—
—	Tumour (osteoma etc.)	—
	<i>Destructive Processes</i>	
—	cysts	—
—	Tumour (metastasis, osteosarcoma etc.)	—
—	Trauma	—

➤ **Costae**

left	<i>Proliferative Processes</i>	right
_____	Apposition	_____
_____	Porotic hyperostosis	_____
_____	Tumour (osteoma etc.)	_____
<i>Destructive Processes</i>		
_____	cysts	_____
_____	Tumour (metastasis, osteosarcoma etc.)	_____
_____	Trauma	_____

Location: _____

➤ **Notes**

1	No pathology
2	Pathology
3	Possible pathology
4	Evaluation impossible
5	Missing

A	Anaemia
H	Haematoma
O	Osteitis/Osteomyelitis
P	Periostitis

Appendix 6

Object: BefundNr.: Age: Sex:	
---------------------------------------	--

Rechtes Bogen- gelenk cranial Rechtes Bogen- gelenk caudal	Deck- platte Wirbel- körper Grund- platte	Linkes Bogen- gelenk cranial Linkes Bogen- gelenk caudal	
---	--	---	--

Schädel	Th1	Th11
C1	Th2	Th12
Dens C2	Th3	L1
C3	Th4	L2
C4	Th5	L3
C5	Th6	L4
C6	Th7	L5
C7	Th8	S1
	Th9	S2
	Th10	
	Th11	
	Th12	

Appendix 7

Object	
Befundnr	
Age	
Sex	

		right			left		
		edge	face	whole	edge	face	whole
shoulder joint	Caput humeri						
	Cavitas glenoidalis						
elbow joint	Capitulum humeri						
	Caput radii						
	Trochlea						
	Incisura trochlearis						
proximal wrist	Proximal row of ossa carpi						
	Facies art.carpea (radius)						
	Caput ulnae						
radio-ulnar joint	Circumferentia art. (radius)						
	Incisura radialis (ulna)						
	Incisura ulnaris (radius)						
	Circumferentia art. (ulna)						
hip joint	Caput femoris						
	Fovea capitis femoris						
	Acetabulum						
knee joint	Condylus med.femoris						
	Condylus lat.femoris						
	lower edge Fossa intercondylaris						
	Condylus med.tibiae						
	Condylus lat.tibiae						
	Facies patellaris med. (femur)						
	Facies patellaris lat. (femur)						
	Facies med. (patella)						
proximal ankle	Facies art.inf. (tibia)						
	Facies art.sup. (talus)						
	Facies malleolaris med. (talus)						
	Facies art.malleoli (fibula)						
	Facies malleolaris lat. (talus)						
distal ankle	Facies art.calcan.post (talus)						
	Facies art.tal.post. (calcaneus)						
	Facies art.calcan.med. (talus)						
	Facies art.tal.med. (calcaneus)						
	Facies art.calcan.ant. (talus)						
	Facies art.tal.ant. (calcaneus)						
	Facies art.navicul. (talus)						
	Facies art.prox. (os naviculare)						

- 0 normal, fit joint
- I joint is fit, but small signs of wear
- II joint slightly pathological
- III >50% of joint pathological
- IV joint heavily pathological
- V very heavy pathological
- VI destroyed joint
- VII missing

Appendix 8

Curriculum Vitae

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1999 - 2004	Beginn des Diplomstudiums Biologie, 1. Diplomprüfung
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1986 - 1990	VS Angath

Berufliche Erfahrungen

2008-2011	Tutorium „Projektpraktikum Hominidenevolution: 3D-Messmethoden“, Universität Wien
August 2010	18 th European meeting of the Paleopathological Association: Posterpräsentation zum Thema „Social structure of the early Bronze Age population Gemeinlebarn F (Lower Austria) reconsidered: pathological and degenerative conditions“

August 2010	Voluntärin bei der PPA-Tagung "18 th European meeting of the Paleopathological Association" in Wien
März 2009	Tagung "Grenzen und Grenzräume" in Greifswald, AG Neolithikum und AG Bronzezeit: Posterpräsentation zum Thema „Unspezifische Stressbelastung in der frühbronzezeitlichen Population von Gemeinlebarn F, Niederösterreich“.
Juli 2007	Teilnahme an der Lehrgrabung der paläolithischen Fundstelle Krems Wachtberg unter der Leitung von Prof. Herwig Friesinger am Institut für Ur- und Frühgeschichte der Universität Wien.
Juli, August 2006	Teilnahme an der Grabung der keltischen Fundstelle Dürrenberg bei Hallein unter der Leitung von Mag. Stefan Moser im Auftrag des Keltenmuseums Hallein.

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