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DATA TO THE RECONSTRUCTION OF THE POPULATION OF AN ELEVENTH CENTURY CEMETERY: GÁVA - MARKET

/A Methodological Study/

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I

Introduction

Our study intends to furnish more numerous, better verified and more detailed data than usual to the reconstruction of the physico-anthropological, ethnical, social and economic status /1/.

We have chosen the anthropological and archaeological series of the eleventh century cemetery at Gáva-Market consciously; it should serve as an example of a partial opening up in order to show, which degree of validity may be ascribed to the results and conclusions of the anthropological and archaeological data taken down from and the phenomena observed on an incomplete series of a very fragmentary and not too carefully collected material.

Research followed in the established way investigated the anthropological and archaeological material of the unearthed series as a unit generally, irrespective of its complete or partial character,drawing conclusions generalized to the whole population from the results obtained in this manner. But if we want to observe and to reconstruct the biological and social structure of the population, nay the laws determining them, we have to make the conditions of research more objective and its frames more extensive /2/.Accordingly we have to determine the biological and archaeological material of the investigated series exactly, in a manner that the statements verified by it should reflect the real measure of the conclusions drawn from the same.

According to our working hypothesis we defined all circumstances, phenomena and data in our publication by reducing them to their basic components. In principle we established grades of valuation as regards the site /topography/ and date /chronology/ of the investigated series, the measure of its uncovering and its anthropological characteristics,each expressing the representative value of the named component. At variance with earlier practice, generalizing its results and expressing them in words only,we give the representative values used

in this study numerically, in order to make their objective valuation and comparison possible.

To extend our survey to all details of the definable representative values would pass beyond the limits of the present study; we enumerate therefore all the phenomena characterized by us through representative values in the following items:

1/ Topography

2/ Degree of exploration /excavation, rescue excavation etc./

3/ The quantitative and qualitative condition of the anthropological sample:

a/ estimation of sex,

b/ estimation of the degree of sexualisation,

c/ estimation of age,

d/ metrical, morphological and typological determination,

e/ observation of pathological changes.

4/ Chronology /for the entire sample and its components/

We have worked out the representative values contained in item 3 individually and summarized them for the whole sample too. These summaries and the values mentioned in items 1, 2 and 4 are furnishing the basis of the conclusions which may be drawn from the published data.

According to the named considerations we are publishing the archaeological and anthropological description of the partial excavation grave by grave in the second chapter of our study. /3, 4/ To attain unity and perspicuity we give the archaeological data and the biological data of the skeletal finds in a division classified under the letters A to I.In the following we summarize the determining factors contained in the classification used in this study, their system and the key to the applied abbreviations, together with the representative values.

A/ <u>The general data of the grave.</u> In the course of the excavations only a few data were taken down and even these in an unsatisfactory degree, as circumstances permitted. Our publication gives the available data as regards the depth and orientation of the grave, the length of the skeleton, the situation of the forearms,the measure of the disturbance, if any,and the degree of uncovering /1.0 = full unearthing/.

B/ <u>The general data of the skeleton.</u> The textual formulation together with the quantitative and qualitative representative values informe the reader on the complete, partial or defective character of the skeleton and the state of its preservation. Quantitatively 1.0 = complete skeleton; qualitatively 1.0 = whole and unhurt skeleton. Quantitative and qualitative values less than 1.0 supply information as regards the number of the rescued skeletal remains and their unhurt or fragmentary condition at once.

C/ <u>Biological data.</u> The data of biological characteristics determining the individual most generally, i.e. sex and age. The estimation of sex is based on 21 elementary sexual criteria. The representative value of an estimation gained from the 21 elementary sexual criteria is 1.0. A representative value less than 1.0 shows the number of the available elementary sexual criteria. In the case of a representative value less than 0.5 sex is but conditionally defined.

Added to the estimation of sex, the value of sexualization gives the degree of sexual character for the whole skeleton expressed in a mean value, based on five degrees in each of the elementary sexual criteria /from hypermasculine: +2 to hyperfeminine: -2/. It is especially important in cases in which sexing is otherwise doubtful.

The estimation and presentation of age is given on the basis of four age

criteria. /5/ The representative value expressed in percentage is shaped by the number of criteria serving for the estimation of age /in the case of four age criteria the representative value is 1.0/.

In assessing age we publish the indices of the four age characteristics, marking the respective phases. The indices furnish the proofs for the estimation of age. Abbreviations used in connection with age indices are: E.c. = coefficient of endocranial ossification; H = structural changes in the diploe of the proximal epiphysis of humerus, expressed in phases /I - VI/; S = surface changes in the facies symphyseos in phases /I - V/; F = structural changes in the diploe of the proximal epiphysis of femur, expressed in phases /I - VI/.

D/ The characters of the cranium cerebrale et viscerale. Here the determining metrical and morphological factors of the calvaria and the facial skeleton are expressed in text and abbreviations. In the nomenclature of forms and the graded categories of the various characters we have followed the well-known systems of Sergi /6/, Broca /7/, Hrdlička /8/ and Martin /9/.

The status of the teeth is given in a dental formula; the formula contains teeth lost in life /- = a tooth lost in life/ and those got astray in course of the excavation /0 = a tooth lost during excavation/. As customary in stomatology, in the dental formula we used Roman numerals for milk teeth and Arabic ones for permanent teeth.

At the same time the dental formula contains the dental abnormalities /crowding, impaction, congenital absence, supernumeraries, etc./ and caries' important from the point of view of pathological evaluation. Caries on the crown is marked by ● on the numeral = central caries; that on the neck, medial side ● = medial caries; that on the neck, lateral side ● = buccal caries; further „c" = cysta; „a" = atrophia processus alveolaris, „r" = radix.

We expressed the wearing down of the teeth /abrasio/ and the condition of the one-time gums /paradentosis/ by grades from 0 to III, in a manner that the line drawn over the numeral standing for the grade /$\overline{\text{II}}$/ means the upper row of teeth, the line under the numeral /$\underline{\text{III}}$/ the lower one. These grades are given both for the frontal teeth and the molars in each case. We applied the same system of signs for paradentosis /10, 11/.

E/ The characters of the skeletal bones. The most important characteristics of the available skeletal bones /except the ossa cranii/ are expressed in the text with abbreviations. We have focussed our attention especially on the characteristics marking the constitution. The expressions for the cross-section of the long bones of the limbs were based on the types of Hrdlička, the abbreviations and numeral signs applied are also taken from him. The grades of the appearing morphological characteristics are marked by the following signs: + = weak, ++ = medium, +++ = strong.

For the diagnosis of the constitution we adopted the criteria of Schneider /12/ and his terminology. The representative value given in percentage depends on the quantity of the free limb /long/ bones /1.0 = all free limb long bones existent/. We calculated the numerical value of the stature according to the method Lee-Pearson /13/.

F/ Pathologic lesions. Textual description of pathologic lesions, developmental ailments, conditions after fractures ascertainable on the skull and the skeletal bones. The description in text is completed by diagnosis. Considering that pathologic lesions occur the most frequently on the vertebral column quantitatively and qualitatively, we have introduced a representative value expressed in percentage in relation to the number of the vertebrae /1.0 = complete

vertebral column.We regard the estimation of this value as especially important, as no real picture may be gained by drawing either positive or negative conclusions from a couple of available vertebrae.

G/ Typological character. Textual formulation of the typological characteristics of the skeletal find. In the framework of typological characteristics the comprehensive valuation of sex and age is leading to the determination of the pattern. Then, starting from the larger circle of form, we give the cranio-typological unit /or units/ which may be identified with the find most probably. In view of the fact that our series is very scarce and the skeletal finds apt for typological evaluation are even less numerous in it, further the typological questions are not treated and solved adequately, our determinations are formulated conditionally in most cases.

H/ Other characteristics. Under this heading we mention the existence of symbolic trephining in the present instance, with its size and characteristics in textual formulation /14/.

I/ Archaeological material. The individual and textual description of the grave-goods uncovered beside the skeletal finds in the graves, together with the data of their sizes.

II

Gáva-Market. A Cemetery of the Eleventh Century

The site of the uncovering /topography/:

The village Gáva lies in the north-eastern part of the country in county Szabolcs, south of the Tisza in the Mezőség region. Geographically the landscape is characterized by the hollows carved by the wind and the residual ridges left from the sand-beds between them. The residual crests are situated in the direction north-south; they are sloping in the north and steep in the south; they have a longitudinally extended oval shape. The average height of these residual ridges is 15 - 25 m.

Among the twenty localities of the Mezőség, Gáva is a village settled on one of the residual ridges near the Tisza. The exact site of the eleventh century cemetery is the market-place, bordering on the village from the south. The] sand-hill extending from north to south crosses the market-place, the site] its boundaries may have offered a chance for the one-time settlement and On the testimony of historical data the ancient settlement was] course of the Mongol invasion /A. D. 1241-1242/ /15/.

In the sand-ridge the borders of the uncovered area are 110 m apart from north to south and 15 m apart from east to west /Pl. I/.

Topographical representative value: 1.0.

The time of uncovering:

The work on the mentioned site was led by the archaeologist N. Kalicz, commissioned by the Hungarian Historical Museum, on the 16th - 17th and 26th - 31st August 1957.

The degree of exploration:

The archaeological opening up of the site was not executed according to plan, but as a rescue excavation following earth-work at the same place. In 1954 storage bins were deepened on the site, resulting in the destruction of numerous graves and skeletons. Later sand was exploited near the storage bins, leading to the annihilation of further graves.On the basis of data furnished by the workmen N. Kalicz put the number of destructed graves to 15 approximately. The area uncovered by the archaeologist is no coherent surface, and the annihilation of several graves during previous earth-work together with the unfinished state of the rescue excavation induced us to give only an approximate extimation of the probable size of the cemetery. During the rescue excavation N. Kalicz uncovered 33 graves, saving their archaeological and anthropological finds for us.

The representative value of uncovering: between 0.4 - 0.7.

The allocation of the unearthed finds:

The anthropological finds gained from the site Gáva-Market are itemized and kept in evidence in the Anthropological Collection of the Hungarian National Museum, Museum of Natural History, under inv. nos 10.281 - 10.310. The archaeological material is preserved in the András Jósa Museum, Nyiregyháza; not itemized up to the date of this publication yet.

In the following we describe the anthropological and archaeological material uncovered in the eleventh century cemetery at Gáva-Market, under the headings detailed in the Introduction.

Note: For better use of space the descriptions of graves 17 and 18 are inverted.

A. Data of the grave:

Depth: 52 cm
Orientation: W - E
Recent disturbing. The part from the right upper arm and the left femur downwards is missing. Left forearm parallel with the skeleton.
Degree of exploration: 0.5

B. General data of the anthropological find:

Fragmentary skull with mandible, very defective and fragmentary skeletal bones.

Quantitative value: 0.50
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.7
Degree of sexualization: + 0.61
Age indices:
E.o.: 4.0 S: V.
Age: 76-80 years. Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Cranium short, high; Hypsikranic; N. vert.: Spheroides; N. occ.: Bomb shape; Front low, domed, very broad. Glabella: I.; Pterion region: „H".; Squama occipitalis steep. Lambdoid flattening. Protuberantia occ.: 3; Facial skeleton high, broad, medium flat. Profile orthognath. Brow-ridge arched, lateral. Orbit high, square. Palate wide, medium deep, hyperbolic; hyperleptostaphylinic; mesuranic. Mandible very broad, medium high. Chin medially situated. Angulus mandibulae splaying sidewards. Ramus broad, high, straight.

Teeth:

- 0 6 5 0 3 2 0	1 2 3 4 5 0 7 -
- 7 6 0 0 0 2 1	1 0 3 4 5 6 7 -

Mesodont.
Abrasio: $\overline{II}$ $\overline{II}$; III III.
Paradentosis: $\overline{I}$ $\overline{II}$; II II.

E. Characters of the skeletal bones:

Clavicula: strong, diaph. shape: angular; Fossa subclavia deep; tuberositas coracoidea: +++; Humerus: Diaph.: 4/c. Tuberositas deltoidea well bordered, scabrous; Radius: diaph.: 3. Tuberositas radii high, volar; Ulna: diaph.: 3; crista interossea: +++.; Os coxae; incisura ischiadica wide, „U"-shaped;

Constitution: pykno-athletic. Representative value: 0.5

Stature: ∅

F. Pathologic lesions:

On the front upper and lower borders of the body of cervical vertebrae I-VI a coherent indented lipping, 2-4 mm high. On the lower margin of cervical vertebra V a bent, 7-8 mm high and 6-7 mm wide process, bending over to the body of cervical vertebra VI, bridging the spatium intervertebrale. On the articular processes of the cervical vertebrae an uneven coherent, 1-1.5 mm high lipping. A Schmorl-pearl on the facies terminalis of the cervical vertebrae. On lumbar vertebrae II and V an osteophyte development, reaching backwards on the body of lumbar vertebra V attains the foramen intervertebrale. On the body of lumbar vertebra V a prolongation, 25 mm high and 15 mm wide. As judged by the lesions of the cervical and lumbar vertebrae similar ones might have been on the dorsal vertebrae too. The bones of the skeleton show osteoporosis generally.

Representative value of vertebral column: 0.2

Diagnosis: Osteoporosis grav. Spondylosis et spondylarthrosis et lumbalis.

G. **Typological character:**

The fragmentary condition of the skeletal bones and the skull allows the only inference that the individual may be connected with the eury-brachymorphic variety of the European Major group.

H. **Other characteristics:**

On the calvaria at the meeting of the coronal and sagittal sutures, at the bregma /zone I/ a carved /1/2/ circular symbolic trepanation, size 13 x 11 mm, depth 0.5 mm. The symbolic trephining was made probably some years before death / /, as proved by the measure of callus development visible on the surface of the bone.
On the left side of the cranium, towards the pterion region an injured surface of 35 x 25 mm width is visible; the lesion is ending in a point and has probably a traumatic origin.
On the calvaria at the sagittal suture /II/a/ a supposedly carved /I/2/ place of symbolic trephining, diameter 10 x 12 mm, depth 0.3 mm, of irregular shape. The surface is completely smoothed, so trephining might have been made a long time before death /γ/.

I. **Archaeological material:**

1/ At the left upper border of the calvaria a bone of a pig. - 2/ Near the right and the left mamillae one ring each; they are open, made of bronze wire of round section. Sizes: 23 x 21 mm, 23 x 21 mm. - 3/ On the left ribs a ring; closed, made of bronze wire of round section. Size: 22 x 22 mm. - 4/ At the lower border of the right ribs four mounts horizontally beside one another. Cast bronze, leaf-shaped. Bordered by rows of pearls, in the centre an ivy-leaf shaped space. On the back three rivets. Size: 19 x 17 mm. - 5/ At the lower border of the right ribs a knife. Iron, strongly corroded, fragmentary. Not measurable. - 6/ Between the left ribs and the left ilium a strike-a-light for producing fire. Iron, strongly corroded. Somewhat curved. Size: 88 x 16 mm. - 7/ At the outer side of the upper arm and forearm a skull and leg bones of a horse. - 8/ On the horse skull a buckle. Consists of the parts, cast bronze, with a tiny bronze tongue. The frame of the buckle is oblong with rounded-off corners, the body has angular corners. Size: 24,5 x 19.5 mm. - 9/ At the outer side of the horse skull four arrowheads beside one another. Iron, corroded. Three pieces have deltoid shapes, with shightly fragmentary edges. Sizes: 64 x 21 mm, 64 x 23 mm, 67 x 23 mm. The fourth has a lozenge shape, broken into two. Size: 68 x 19 mm. - 10/ At the same place plates belonging to a quiver. Iron, very fragmentary and corroded, with curved and riveted portions. Not measurable. - 11/ At the outer side of the left femur two bow hilt plates. Bone, longish, curved, with rounded-off corners. Fragmentary pieces. Sizes: 127 x 27 mm, 130 x 26 mm. - 12/ At the outer side of the left femur, beside the bow hilt plates two stirrups. Iron, corroded, damaged. Their sides have a flattened oval profile. At the ear of one the hammered sides are crossing each other diagonally, they are hammered together. The ear has an oblong shape. The ear of the other has a similar shape, it was formed together with the side. The sole is curved, broad, strengthened by a rib. Sizes: 147 x 136 mm, 160 x 136 mm. - 13/ At the outer side of the left femur, beside the stirrups a ring holding a quiver. Iron, strongly corroded. Size: 45 x 45 mm, 5 mm thick. - Finds derived from the disturbed portion of the skeleton: two mounts similar to those described above in item 4. A strap-end bronze, cast, longish, with a rounden-off ending. Bordered in a circle, in its middle an almond-shaped bordered space. At the back three rivets. Size: 40 x 17 mm. /Pl. VII-IX/

GRAVE 2

Inv.no.: 10.282

A. Data of the grave:

Depth: 62 cm
Orientation: W - E
Recent disturbing. The left pelvis and the part of the skeleton downwards from it are missing. Left forearm parallel with the skeleton, right forearm laid on the pelvis.
Degree of exploration: 0.5

B. General data of the anthropological find:

Fragmentary skull with mandible, very defective, fragmentary skeletal bones.

Quantitative value: 0.60
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.7
Degree of sexualization: + 0.70
Age indices:
E.o.: 3.6 H.: III.
Age: 56-60 years;
Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Cranium very short, thin; Hyperbrachycranic; N.vert.: sphaeroides; N. occ.: bomb shape; Forehead medium broad, low, slightly running backwards; Glabella: II.; eurymetopic; Lambdoid flattening expressed; Protuberancia occ. ext.: 1.; Occiput slightly convex; Arcus superciliaris highly arched, medially situated; Orbit square; low, chamaekonchal; Mandible very broad, high; chin medial; angulus mandibulae moderately splaying.

Teeth:

0 7 6 5 4 3 2 1	1 0 3 4 5 6 7 0
- 7 6 5 0 3 2 0	0 2 3 0 5 6 7 -

Mikrodont. Abrasio: $\overline{II}$ $\overline{III}$; $\underline{II}$ $\underline{III}$.
Paradentosis: $\overline{II}$ $\overline{II}$; $\underline{II}$ $\underline{III}$.

E. Characters of the skeletal bones:

Scapula: very large; incisura scapulae deep; margo axillaris thickened in the manner of a lip; lineae musculares decided; Humerus: diaph. shape: 4.; tuberositas deltoides: +++.; robusticity index: 24.4; Ulna: diaph. shape: 3.; Crista interossea: +++.; Radius: diaph. shape: 1.; Tuberculum radii flat, situation volaris; Os coxae: high, steep; acetabulum shallow; sacroiliacal joint closed; incisura ischiadica maior closed, deep „U"-shaped;

Constitution: pykno-athletic. Representative value: 0.5

Stature: 163.4 cm.

F. Pathologic lesions:

On the thoracic vertebrae III-IX, further on the frontal and lower margin of the body of lumbar vertebrae III-V a smaller lipping. The body of lumbar vertebra V moderately flattened. At the acromial end of the left clavicula, at the border of the epi- and diaphysis a 20 mm long and 10 mm thick callus. On the skeletal bones moderate osteoporosis.

Representative value of vertebral column: 0.3

Diagnosis: Osteoporosis min. Spondylosis thoracalis et lumbalis. Status post fracturam claviculae l. s.

G. Typological character:

From the small medium stature, from the brachycranic character of the skull and from the lambdoid flattening the conclusion can be drawn that the individual, similarly to that of grave 1, is connected with the eury-brachymorphic variety of the European Major group.

H. Other characteristics:

ø

I. Archaeological material:

No grave-goods.

G R A V E 3

Inv.no.: 10.283

A. Data of the grave:

Depth: 25 cm
Orientation: W - E
Recent disturbing, skull devastated by the plough.
Right forearm on the ilium, left forearm parallel with the skeleton.
Degree of exploration: 0.9

B. General data of the anthropological find:

Mandible and defective, very fragmentary skeletal bones.

Quantitative value: 0.50
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.7
Degree of sexualization: + 1.08
Age indices:
H.: III.; S.: III.; F.: II.
Age: 48-52 years.
Representative value: 0.9

D. The characters of the cranium cerebrale et viscerale:

Mandible broad, high, massive; chin medially situated; angulus mandibulae splaying sidewards; ramus broad, high, straight; very strong linea mylohyoidea; tuberositas masseterica massive, coarse;

Teeth:

a n n i h i	l a t e d
8 a a 5 0 3 0 0	0 2 3 4•5 a a•8
c	

Abrasio: III III.
Paradentosis: III IV.

E. Characters of the skeletal bones:

Clavicula: long, strong; diaph. shape: oval; fossa subclavia deep; tuberositas coracoidea: +++; tuberositas costalis: +++.; Scapula: large,massive,foramen scapulae; margo axillaris straight, thickened; Humerus: diaph. shape: 4/b; tuberositas deltoidea long extended, coarse; robusticity index: 21.8; Radius: diaph. shape: 5; tuberculum radii flat, blurred, situation volar; Ulna: diaph. shape: 4; crista interossea: +++.; Os coxae: large,massive; ilia high,straight; small pelvis, shaped like a heart in cards; acetabulum shallow; incisura ischiadica maior closed, deep; Sacrum: hypobasal; having five segments, bent at vertebra III.; facies articularis flat; dolichohier; Femur: diaph. shape: 4; tuberositas glutae: ++; linea aspera: +++, trochanter tertius longish. Klastomorphic.R.:eurymery,L.: platymery.Tibia: diaph. shape: 4.; slight bend, mesocnemy; Fibula: diaph. shape: 3/b.

Constitution: pykno-athletic. Representative value: 1.0

Stature: 171.1 cm

F. Pathologic lesions:

On the left intervertebral articular surfaces of the cervical vertebrae an osteophyte development. On the front upper and lower margins of thoracal vertebrae IV-IX moderate osteophyte lipping.At the front edges of the body of lumbar vertebrae I-V granular lipping. In the humeral joints of both sides osteophyte apposition at the margins of the cavitas glenoidalis, having a height of 2-3 mm, forming a coherent lipping. At the circumference of the caput humeri also an adequate lipping. At the ala scapulae a 20 mm large fenestration, the edges rounded-off. At the edge of the left acetabulum a bone accession, 5 mm high, coherent.

Representative value of vertebral column: 0.5

Diagnosis: Spondylarthrosis cervicalis l.s. Spondylosis thoracalis et lumbalis. Arthrosis def. art. humeri l. u., et coxae l.s.

G. Typological character: ∅

H. Other characteristics: ∅

I. Archaeological material:

1/ Under the left ilium a „Bela Dux" coin. CNH: Variety 15 /A.D. 1046-1060/. /Pl. X, no. 1/

Inv.no.: 10.284

GRAVE 4

A. Data of the grave:

Depth: 28 cm
Orientation: W - E
Recent disturbing. Facial skeleton and the part of the skeleton from the pelvis downwards are missing.
Degree of exploration: 0.2

B. General data of the anthropological find:

Fragmentary calvaria and very defective, fragmentary skeletal bones.

Quantitative value: 0.20
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.20
Degree of sexualization: + 0.75
Age indices:
E.o.: 0.0
Age: 23 - x years.
Representative value: 0.4

D. The characters of the cranium cerebrale et viscerale:

The calvaria being fragmentary, the characters cannot be described.

E. Characters of the skeletal bones:

Clavicula: strong; diaph. shape oval; tuberositas coracoidea: +.; fossa subclavia shallow; Humerus: diaph. shape: 4.; tuberositas deltoidea: +++, and of a large surface; Radius: diaph. shape: 5.; tuberculum radii flat, situation volar; Ulna: diaph. shape: 4.; Crista interossea: ++.

Constitution: pyknic. Representative value: 0.2

Stature: ∅

F. Pathological lesions:

∅

Representative value of vertebral column: 0.3

G. Typological character:

∅

H. Other characteristics:

∅

I. Archaeological material:

1/ Beside the right upper arm a buckle. Iron, fragmentary, much corroded. The inner side straight, the outer side ovally curve Its tongue is iron. Size: 32 x 23 mm. /Pl. X, no.2/

GRAVE 5

Inv.no.: 10.285

A. Data of the grave:

Depth: 50 cm
Orientation: W - E
Length of the skeleton: 150 cm
Right forearm on the ilium, left forearm parallel with the skeleton.
Degree of exploration: 1.0

B. General data of the anthropological find:

Skull with mandible and defective, very fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.25

C. Biological data:

Sex: female. Representative value: 0.7
Degree of sexualization: + 0.28
Age indices:
E.o.: 1.3; F.: IV.
Age: 41-45 years.
Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Cranium short, very narrow, medium high; dolichocranic, hypsicranic, acrocranic; N. vert.: ellipsoides; N. occ.: bomb shape; Forehead medium high, convex, very broad; eurymetopic; Glabella: II.; Protub. occ. ex.: 0 - 1.; Occiput slightly convex; Porus acusticus externus: circular; Facial skull medium high, broad; Mesognath; Orbit round, medium high, mesokonchal; Nasal orifice narrow, leptorrhiny; Fossa canina very deep; Mandible medium broad, high; chin medial; angulus mandibulae straight, tuberositas masseterica has a smooth surface; Ramus mandibulae broad, narrow, leaning backwards.

Teeth:

8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
● 0 0 0 4 3 2 1	1 2 3 4 5 o c c

Abrasio: $\overline{I}$ $\overline{III}$; $\underline{I}$ $\underline{p}$.

Paradentosis: $\overline{II}$ $\overline{III}$; $\underline{I}$ $\underline{I}$.

E. Characters of the skeletal bones:

Cannot be described owing to their fragmentary condition.

Constitution: leptosome. Representative value: 1.0

Stature: ∅

F. Pathological lesions:

On the buccal surface of the first right molar a bean-sized /15 x 10 mm/ bulging apposition, probably a tartar development /?/

Representative value of vertebral column: 0.2

G. Typological character:

On account of the gracility of the skeletal bone fragments, the narrowness of the cerebral skull, the medium width of the facial skeleton, it is probable that the individual belonged to the dolichomorphic varieties of the European Major group.

H. Other characteristics:

∅

I. Archaeological material:

1/ Under the right clavicle a ring. Open; made of bronze wire with a round section, its ends are cut straight. Size: 65 x 64 mm. - 2/ Over the left clavicle the fragment of a ring. Made of bronze wire with a round section. Length: 17 mm. - 3/ On the right and left forearm one bracelet each. They are open, made of bronze wire with a round section, their ends are tapering. On one of them the remnant of a piece of linen. Sizes: 65 x 64 mm, 69 x 69 mm. /Pl. X, no. 3-6/

Inv.no.: 10.266

G R A V E 6

A. Data of the grave:

Depth: 52 cm
Orientation: W - E
Recent disturbing.
The forearms and the skeleton from the pelvis downwards are missing.
Degree of exploration: 0.2

B. General data of the anthropological find:

Skull with mandible and defective, very fragmentary skeletal bones.

Quantitative value: 0.30
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.7
Degree of sexualization: + 1.07
Age indices:
E.o.: 2.7
Age: round 50 years.
Representative value: 0.4

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale short, narrow, high; mesocranic, orthocranic, metriocranic. Forehead medium broad, medium high, running backwards, eurymetopic; Glabella: III.; Lambdoid flattening very decided; Protub. occ. ex.: 3.; Moderate torus occipitalis; Processus mastoideus large, especially on the right side; On the surface of the cranium the roughnesses and lineae are well expressed; Facial skeleton medium high, narrow, mesoprosopy, mesen; orthognath; Transversal craniofacial index: 92.14; medium broad facial skeleton-medium narrow cranium; Orbit square, medium high, mesokonchal; Zygomatic region broken in the angle, its surface articulate; Fossa canina shallow; Nasal apertura wide, high, mesorrhiny; Palate parabolic; hyperbrachystaphylinic; Mandible narrow, low, chin medialis; tuberositas masseterics has lineae on the surface; ramus mandibulae straight, wide, high.

Teeth:

8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1	1 2 3 4 5 6 r 8

Mesodont. Abrasio: $\overline{\text{II}}$ $\overline{\text{II}}$ $\underline{\text{II}}$ $\underline{\text{II}}$.

Paradentosis: unhurt $\overline{\text{II}}$ $\underline{\text{I}}$ $\underline{\text{I}}$.

E. Characters of the skeletal bones:

Owing to their fragmentary condition the skeletal bones cannot be described.

Constitution: pykno-athletic. Representative value: 0.2
Stature: ∅

F. Pathologic lesions:

On the right side of the squama occipitalis, immediately under the linea nuchae superior a 20 x 15 mm sized and cca four mm deep hollow, on the medial border of which a larger bulging of the bone; the surface of the bone is five mm higher. A status derived from a blow or some other mechanical injury.

Representative value of vertebral column: 0.0
Diagnosis: Status post fracturam ossis occipitalis.

G. Typological character:

Owing to the bad preservation of the skeletal bones we have to fall back on the skull. The absolute measures and indices of the cerebral skull make the identification with the European Major group doubtless: within it the formation of the forehead, the lambdoid flattening allude to the brachymorphic variety; the flatness of the facial skeleton, the short bony nasal ridge with a rather concave bent show the Uralic /?/ variety /Pl. II/

H. Other characteristics:

∅

I. Archaeological material:

No grave-furniture.

G R A V E 7 Inv.no.: 10.287

A. Data of the grave:

Depth: 20 cm
Orientation: W - E
Length of skeleton: 150 cm
Recent disturbing, the bones of the left forearm, right pelvis and femur are missing. Right forearm is parallel with the skeleton.
Degree of exploration: 0.6

B. General data of the anthropological find:

Fragment of a skull and very defective, fragmentary skeletal bones.

Quantitative value: 0.40
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.0
Degree of sexualization: +-0.0
Age indices:
E.o.: 4.0; F.: II.
Age: 52-56 years.
Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Fragments, unsuitable for determinations of measures and characters.

E. Characters of the skeletal bones:

Owing to their fragmentary condition unsuitable for determination of characters.

Constitution: leptosome. Representative value: 1.0

Stature: Ø

F. Pathological lesions:

On the bodies of thoracic vertebrae osteophyte development on the frontal upper and lower margins. A moderate prolongation of the vertebral bodies to the front is noticeable. The left sacroiliacal joint is almost entirely ossified.

Representative value of vertebral column: 0.6

Diagnosis: Spondylosis thoracalis.

G. Typological character:

Ø

H. Other characteristics:

Ø

I. Archaeological material:

1/ On the fourth finger of the right hand a ring, Closed, made of bronze wire with a round section. On the ring an ornament imitating a twisting in a circle. The outer and the inner sides of the ring are worn at two spots each. Size: 25 x 25 mm. /Pl. X, no.7/

GRAVE 8 Inv.no.: 10.288

A. Data of the grave:

Depth: 32 cm
Orientation: W - E
Length of skeleton: 160 cm
Forearms parallel with the skeleton.
Degree of exploration: 1.0

B. General data of the anthropological find:

Cranium with mandible and defective, fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.7
Degree of sexualization: + 0.69
Age indices: E.o.: 3.6; H.: I.; F.: I.
Age: 30-34 years.
Representative value: 0.9

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale medium long, narrow, medium high; dolichocranic, chamaecranic, metriocranic; N. vert.: eury-ellipsoides; N. occ.: house-shaped; Forehead low, broad, running backwards; eurymetopic; Glabella: III.; lambdoid flattening well visible, occiput bulging; Protub.occ.ex.: 2; the surface of the squama occipitalis articulate, coarse; Pterion: „H"; Processus mastoideus very small; Facial skeleton medium broad, medium high, downwards narrowing; mesoprosopic, lepten; Profile: orthognath; Index transversalis craniofacialis: 100.00; very broad facial skeleton - narrow cranium; Bony superciliary ridge, laterally highly arched; Orbital cavity medium high, mesokonchal, round; Margo supraorbitalis with a sharp brim; Zygomatic region arched, rather laterally situated; Fossa canina shallow; Root of the nose narrow, deep; Nasal bridge highly prominent, straight /?/ mesorrhiny; Apertura piriformis: anthropin; Palate broad, medium deep, hyperbolic; hyperbrachystaphylinic; Mandible chin broad, medium high; chin medially situated; ramus mandibulae running backwards, low, broad; at the border of the corpus and the ramus a very deep impression; expressed tuberositas masseterica; strong linea mylohyoidea;

Teeth:

8 7 6 5 4 3 0 1	1 0 3 4 0 6 7 0
8 7 6 5 4 3 2 1	1 2 0 4 ● 6 7 8

Makrodont. Abrasio: $\overline{I}$ $\overline{I}$; $\underline{I}$ $\underline{I}$

Paradentosis: $\overline{III}$ $\overline{II}$; $\underline{I}$ $\underline{I}$

E. Characters of the skeletal bones:

The lumbal part of the vertebral column orthoarchic; Clavicula: long, strong; diaph.: round, fossa subclavia shallow; tuberositas coracoidea: +++; tub. costalis: ++; Scapula: shape: 1; incisura deep, wide; margo axill.: thick; pr. teres: +; Humerus: diaph.: 4; tub. deltoidea: +++; robusticity index: 22.0; Radius: diaph.: 5; tub.radii: bumpy, volar; Ulna: diaph.: 3; crista interossea: +++; Sacrum: hypobasal; Os coxae: high, narrow; small pelvis shaped like a heart in cards, sacroiliacal articulation high and slanting; Femur diaph.: 4; tub.glutae: ++; linea aspera: +; orthomorphic; r.: eurymery, l.: platymery; Tibia: diaph.: 2; curvature: +; tuberositas tibiae: +++; condylus lat. deep; mesocnem; Fibula: diaph.: 1.

Constitution: pykno-athletic. Representativ value: 1.0

Stature: 162.5 cm

F. Pathologic lesions:

Impressiones gyrorum and juga cerebralia more expressed than usual.

Representative value of vertebral column: 0.9

Diagnosis: A sign of moderate chronic increase of pressure in the cerebral cavity.

G. Typological character:

The small medium stature, the dolicho-mesocranial character of the skull, the meso-leptoprosopial character of the facial skeleton, the lambdoid flattening and especially the characteristics of the nasal region are alluding to the simultaneous presence of the eurybrachymorphic and dolichomorphic varieties in the framework of the European Major group.

H. Other characteristics:

ø

I. Archaeological material:

1/ On the phalanges of the right hand a green trace of oxidation.

Inv.no.: 10.289

G R A V E 9

A. Data of the grave:

Depth: 45 cm
Orientation: W - E
Length of skeleton: 155 cm
Forearms parallel with the skeleton.
Degree of exploration: 1.0

B. General data of the anthropological find:

Fragmentary skull with mandible and very defective, fragmentary skeletal bones.

Quantitative value: 0.60
Qualitative value: 0.25

C. Biological data:

Sex: female. Representative value: 0.7
Degree of sexualization: + 0.61
Age indices: E.o.: 3.4; F.: IV.
Age: 66-70 years.
Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale medium long, narrow, mesocranic; N. vert.: ellipsoides; N. occ.: tent-shaped; Forehead: low, convex, broad; blurred tubera frontalia, eurymetopic; Glabella: 0.; Expressed lambdoid flattening; squama occipitalis convex; Protub.occ.ex.: 0-1.; Processus mastoideus low, small; the surface of planum nuchale smooth; Porus acusticus ex.: elliptic; Facial skeleton: quadrangular /?/, flat; Arcus superciliaris flatly curved, medially situated; Orbital cavity low, lozenge-shaped, chamaekonchal type; Zygomatic region low, frontal, with a smooth surface; Mandible low, narrow; T-shaped chin; processus alveolaris atrophic; tub. masseterica rather coarse; ramus mandibulae low, broad, running backwards;

Teeth:

a n n i h i	l a t e d
p p p p 4 3 2 0	0 0 3 4 p p p p

Abrasio: III p
Paradentosis: II p.

E. Characters of the skeletal bones:

Clavicula diaph.: medium strong, round, flat, with a strong bend; fossa subclavia: very deep; tub. coracoidea: +; tub.costalis: +.; Humerus: diaph.: 6; tub. deltoidea: ++; Radius: diaph.: 3; tub. radii: large, scarcely prominent, volar; Ulna: diaph.: 4; crista interossea: ++.; Femur: diaph.: round; tub. glutea: +; linea aspera: +; orthomorphic; r. stenomery; l. eurymery; Tibia: diaph.: 2; the curve of the diaphysis medium; mesocnemy; Fibula: diaph.: 3/a;

Constitution: pykno-athletic. Representative value: 1.0

Stature: 152.3 cm

F. Pathologic lesions:

ø

Representative value of vertebral column: 0.0

G. Typological character:

The small medium stature, the mesocranial character of the cranium cerebrale and the flat facial skeleton, together with the fragmentary condition of the find bear out the conclusion that the individual has been the nearest to the South Sibirian variety /?/ developed on the boundary of the European and Mongoloid Major groups.

H. Other characteristics:

On the calvaria, on the coronal suture, to the left and right from the medium line /zones IV/a, IV/b/, one carved, circular scar each of symbolic trephining, 12x12 mm and 10x9 mm large respectively, 0.3 mm deep. The symbolic trephining on the right may have been executed years before death /β/, that on the left much earlier /γ/.

I. Archaeological material:

1/ At the right temporal squama a ring. Open, made of bronze wire inside straight, outside convex, its ends are cut straight. Size: 10x10 mm. - 2/ At the left temporal squama a ring. Iron, very fragmentary and corroded. Made of wire with a round section. It has a pendant. Not measurable. - 3/ On the left forearm a bracelet. Open; made of bronze wire with a round section, its ends are tapering. Size: 67x60 mm. - 4/ On the right forearm a bracelet. Made of iron wire with a half-oval section. Fragmentary, very much corroded. Size: 74x74 mm. /Pl. X, no. 8-11/

G R A V E 10

Inv.no.: 10.290

A. Data of the grave:

Depth: 39 cm
Orientation: W - E
Length of skeleton: 150 cm
Forearms parallel with the skeleton.
Degree of exploration: 1.0

B. General data of the anthropological find:

Skull with mandible and very fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.9
Degree of sexualization: + 1.05
Age indices: E.o.: 3.9; F.: II.
Age: 50-54 years
Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale long, narrow, medium high; mesocranic, chamaecranic, tapeinocranic. N. vert.: romboides; N. occ.: tent-bomb shape; Forehead: medium high, broad, receding, eurymetopic; Glabella: II.; Calvaria flatly curved, occiput convex; Protub.occ.ex.: 1.; Planum nuchale has a coarse surface, crista occ. ex.: ++.; Porus acusticus ext.: elliptic; Index transversalis craniofacialis: 96.53; broad facial skeleton - narrow cerebral cranium; Facial skeleton medium broad, high; lepton; orthognath, moderate alveolar prognathy; the shape square, flat; Orbital cavity round, high, hypsikonchal type, margo infraorbitalis sharp; Root of the nose high, narrow; leptorrhiny; Zygomatic region frontal; tuber malare; Fossa canina shallow; Palate shallow, long, „U"-shaped; mesostaphylinic; dolichouranic; Mandible very broad, low, angulus mandibulae medial, weak; ramus mandibulae broad, low, straight; tuberositas masseterica smooth;

Teeth:

0 0 0 - 0 - - -	- - - - - 6 0 0
- 7 6 5 4 - - -	- 2 3 - - 0 0 0

Abrasio: - $\overline{II}$ II II

Paradentosis: - - II III

E. Characters of the skeletal bones:

Clavicula: strong, diaph.: elliptic, flat; fossa subclavia shallow; tub. coracoidea: +; tub. costalis: +.; Scapula: shape: 1; inc. scapulae: deep; margo axillaris et vertebralis thick; pr. teres: +++.; Humerus: diaph.: 4; tub. deltoidea: +++.; Radius: diaph.: 5; tub. radii: flat, volar; Ulna: diaph.: 3; crista interossea: +++.; Os coxae: ilium high, articulatio sacroiliacalis closed; small pelvis: shaped like a heart in cards; acetabulum deep; Femur: diaph.: elliptic; tub. glutae: ++; linea aspera: +++; sampilomorphic, hyperplatymery; Tibia: diaph.: 5.; tub. tibiae: ++; the curve of tibia diaph. weak, condylus lateralis very deep; euryenemy; Fibula: diaph.: 3/b; diaph. bent;

Constitution: pykno-athletic. Representative value: 1.0

Stature: 159.0 cm.

F. Pathologic lesions:

The right ala scapulae is more uneven than normally, from the third of the facies dorsalis an irregular bone ridge of an uneven facet draws upwards and laterally towards the margo axillaris. Forming an arched bridge at places, the ridge reaches under the cavitas glenoidalis as far as the tuberositas infraarticularis. Also the tuberositas infraarticularis is larger and stronger than usual. The margo axillaris does not proceed downwards at the usual 40-45° angles to the rectangular plane laid across the cavitas glenoidalis, but at 20-25° angles to it. On the ala scapulae, above the mentioned bone ridge a rounded-off fenestration, having the size of a few grains of wheat. On the right side of the frontal squama, 10 mm in front of the coronal suture, 20 mm in front of the temporal squama a bone deepening, 15 mm large; the tabula interna has sunk 3-4 mm deep towards the cranial cavity.

Representative value of vertebral column: 0.3

Diagnosis: Status post fracturam scapulae l.d.? Status post osteomyelitidem et periostitidem chron. Status post fracturam ossis frontalis cum impressione.

G. Typological character:

The low stature, the mesocranic character of the cerebral cranium, also the narrower, flat, high facial skeleton make the simultaneous appearance of the dolichomorphic variety with the South-Sibirian /?/ one probable. /Pl. III/

H. Other characteristics:

ø

I. Archaeological material:

1/ Above the left ilium two fragmentary coins of Andrew I /A.D. 1046-1061/. CNH 11, CNH 12. /Pl. XI, nos. 1-2/

G R A V E 11 Inv.no.: 10.291

A. Data of the grave:

Depth: 33 cm
Orientation: W - E
Length of skeleton: 157 cm
Right forearm bent rectangularly, left forearm laid on the margin of the ilium.
Degree of exploration: 1.0

B. General data of the anthropological find:

A fragmentary skull with mandible and very fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 0.7
Degree of sexualization: + 0.35
Age indices:
E.o.: 3.6; F.: II.
Age: 50-54 years
Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale short, very narrow, medium high; dolichocranic, hypsicranic, acrocranic; N. vert.: steno-ellipsoides; N. occ.: „Hausform"; Forehead high, broad, steep, slightly receding; eurymetopic; Glabella: 0. Calvaria flat, occiput convex; Protub. occ. ex.: 0.; slight torus occipitalis; Porus acusticus ex.: elliptic; Mandible very low, narrow, pointed, row of teeth „V"-shaped; chin; ramus mandibulae divided low, broad; tuberositas masseterica has a smooth surface;

Teeth:

annihi	lated
- 7 0 5 4 - - -	- - 3 - - - 7 8

Abrasio: II II

Paradentosis: I I

E. Characters of the skeletal bones:

Clavicula: medium strong; diaph.: flat, elliptic, with a definite curvature; Humerus: diaph.: 4.; tuberositas deltoidea: ++.; Radius: diaph.: 5.; tub. radii large, high, volar; Ulna: diaph.: 3.; crista interossea: +++.; Os coxae: foramen obturatum triangular, incisura ischiadica wide and deep; articulatio sacroiliaca: closed, medium high; Femur: diaph.: 4.; tub. glutae: +.; linea aspera: ++.; trochanter tertius: +.; campilomorphic; platymery; Tibia: diaph.: 2; tub. tibiae: +.; diaph. straight, condylus lateralis shallow; platycnemy; Fibula: diaph.: 3.;

Constitution: leptosome. Representative value: 1.0

Stature: 161.5 cm

F. Pathologic lesions:

On the very fragmentary vertebrae, representing all parts of the vertebral column, more exactly on the anterior upper and lower margins of their bodies an osteophyte lipping. The bodies of the vertebrae are moderately flattened. Moderate osteophyte formation also corresponding to the facies articulares of the vertebrae. The epistropheus and cervical vertebra III coalesced to a mass according to the intervertebral articulations. The severest lesions may be observed on the lumbar portion. At the lower margin of the anterior facet of the bodies of lumbar vertebrae III and IV a 10 mm large hooked process has been formed. On the facies term. sup. of lumbar vertebra IV a deepening of the size of a half bean, a Schmorl-pearl. Corresponding to the right femur fossa intercondyloidea a slight osteophyte formation at the margin of the articular facet.

Representative value of vertebral column: 0.5

Diagnosis: Spondylosis et spondylarthrosis col. vert. Spondylarthrosis ankylopoetica cerv. Arthrosis gen. l. d.

G. Typological character:

The small medium stature, the dolichocranic character of the cerebral cranium, further the strikingly narrow appearance of the mandible allude to a narrow facial skeleton; all these together with the gracility of the skeletal bones tend to show that the individual belonged to the small dolichomorphic variety of the European Major group.

H. Other characteristics:

ø

I. Archaeological material:

1/ Under the right temporal squama a ring. Open; made of bronze wire with a round section, its ends are cut straight. Fragmentary. Size: cca 21x21 mm. - 2/ At the lower exterior margin of the left ribs a knife. Iron, very strongly corroded. Single-edged, straight, having slight remnants of wood on the hilt and the back of the blade. Size: cca 95x11 mm. /Pl. XI, nos. 3-4/

G R A V E 12

Inv.no.: 10.292

A. Data of the grave:

Depth: 27 cm
Orientation: NW - SE
In course of a recent disturbance the skull was annihilated. Right forearm parallel with the skeleton, left forearm laid on the ilium.
Degree of exploration: 0.8

B. General data of the anthropological find:

Very fragmentary, defective skeletal bones.

Quantitative value: 0.30
Qualitative value: 0.25

C. Biological data:

Sex: female. Representative value: 0.2
Degree of sexualization: - 0.75
Age indices:
F.: III.
Age: 50-54 years
Representative value: 0.4

D. The characters of the cranium cerebrale et viscerale:

ø

E. Characters of the skeletal bones:

Clavicula: strong; diaph.: flat, elliptic, with a very decided curve; Scapula: 1. type; incisura scapulae narrow, deep; Humerus: diaph.: 4.; tuberositas deltoidea: +++.; Radius: diaph.: 3-5.; Tuberculum radii scarcely surpasses the surface, large, blurred; Ulna: diaph.: 3.; crista interossea: +++.; Sacrum: homobasal; five segments, slight curve, begins at vertebra III; foramina sacralia very large, oval; Os coxae: incisura ischiadica maior wide, broad, deep; articulatio sacroiliaca closed, high; Femur: diaph.: round; tuberositas glutae: ++.; linea aspera: +.; trochanter tertius: ++.; orthomorphic, platymery; Tibia: diaph.: 1.; diaphysis straight; mesocnemy; Fibula: diaph.: 3/a.;

Constitution: leptosome. Representative value: 1.0

Stature: 155.0 cm

F. Pathologic lesions:

Over the epiphysis distalis the right radius has thickened in a slanting direction. Corresponding to the thickening a fistula-like hollow is visible. A slight turn of the axis is also observed. The shortening is 15 mm as compared with the left radius.

Representative value of the vertebral column: 0.2

Diagnosis: Status post fracturam radii l. d. in loco typico.

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

1/ Over the left clavicle a ring. Open, made of bronze wire with a round section. One end is broken, the other cut straight. Size: 21x19 mm. - 2/ On the right ribs the fragment of a ring. Made of bronze wire with a round section. Size: 9 mm. /Pl. XI, nos. 5-6/

G R A V E 13

Inv.no.: 10.293

A. Data of the grave:

Depth: 36 cm
Orientation: NW - SE
Length of skeleton: 145 cm
Recent disturbing.
Right forearm extended, left forearm on the proximal epiphysis of the ilium.
Degree of exploration: 0.9

B. General data of the anthropological find:

Fragmentary skull with mandible and fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.50

C. Biological data:

Juvenis.
A third of the epi- and diaphyses is ossified.
Age: 16-17 years

D. The characters of the cranium cerebrale et viscerale:

The find is unfit for metrical measurements. According to morphological assessment the cranium cerebrale is short, broad and high; N. occ. rounded house-shaped; Protub. occ. ex.: 0.; squama occipitalis high, convex, the nuchal surface articulated, crista occ. ex. ill defined; Foramen magnum oval, its margin is lipped; Processus mastoideus low, small; Zygomatic region high, frontal, surface smooth, orthognath /?/; Fossa canina shallow; Apertura piriformis sharp, spina nasalis anterior: 4.; Palate shallow, medium broad, hyperbolic; Mandible low, medium broad, curved; chin weak, medially situated, tuberositas masseterica smooth; ramus mandibulae low, broad, straight;

Teeth:

8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8

Makrodont
Abrasio: $\bar{0}$ $\bar{0}$ 0 0
Paradentosis:
unhurt unhurt unhurt unhurt

E. Characters of the skeletal bones:

Unsuitable for metrical and morphological measurements.

F. Pathologic lesions:

ø

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

1/ Under the right forearm a knife, its point towards the head, iron, corroded. Single-edged, straight. On the hilt traces of wood-fibre. Total length: 130 mm, the blade only: 88 mm. Width of the blade: 12 mm. - 2/ Under the left ilium a strike-a-light for producing fire. Iron, fragmentary, corroded. Lute-shaped. Size: 70x30 mm. - 3/ At the same place flint with traces of iron oxide. Size: 27x19 mm. /Pl. XI, nos. 7-9/

G R A V E 14

Inv.no.: 10.294

A. Data of the grave:	B. General data of the anthropological find:	C. Biological data:
Depth: ∅ Orientation: ∅ Disturbed, entirely ravaged and annihilated. Degree of exploration: 0.2	A fragment of the calvaria and some fragments of the skeletal bones. Quantitative value: 0.20 Qualitative value: 0.00	Sex: male. Representative value: 0.2 Degree of sexualization: + 1.33 Age indices: E.o.: 4.0 Age: 63-67 /?/ years Representative value: 0.4

D. The characters of the cranium cerebrale et viscerale:

Unsuitable for metrical and morphological measurements.

E. Characters of the skeletal bones:

Unsuitable for metrical and morphological measurements.

Constitution: leptosome /?/. Representative value: 0.2

Stature: ∅

F. Pathologic lesions:

∅

Representative value of vertebral column: ∅

G. Typological character:	H. Other characteristics:
∅	∅

I. Archaeological material:

No grave-furniture.

G R A V E 15

Inv.no.: 10.295

A. Data of the grave:

Depth: 37 cm
Orientation: W - E
Length of skeleton: 143 cm
Recent disturbing has annihilated the skull. Both forearms are bent back on the ribs.
Degree of exploration: 0.9

B. General data of the anthropological find:

Fragment of a mandible and very defective, fragmentary skeletal bones.

Quantitative value: 0.50
Qualitative value: 0.00

C. Biological data:

Sex: female. Representative value: 0.2
Degree of sexualization: - 1.00
Age indices:
F.: IV.
Age: 56-60 years
Representative value: 0.4

D. The characters of the cranium cerebrale et viscerale:

From the fragment of the mandible we may deduce that it has been very low and narrow; the molars were lost in life and the processus alveolaris became entirely wasted; chin weak, medially situated;

Teeth:

a n n i h i	l a t e d
o p p p o o o o	o o o p o p p p

E. Characters of the skeletal bones:

Clavicula: medium strong; diaph. shape elliptic; fossa subclavia shallow; inner end of epiphysis flat; Humerus: diaph.: 2.; fossa olecranon deep; tuberositas deltoidea: +.; Radius: diaph.: 5.; tuberositas radii large, with blurred boundaries, flat, in a transitional situation; Ulna: diaph.: 4.; crista interossea: ++.; Os coxae: only a fragment, the incisura ischiadica wide and deep; Femur: diaph.: 4.; tuberositas glutae: +.; linea aspera: +.; campilomorphic; platymery; Tibia: diaph.: 4.; diaphysis slightly bent; tuberositas tibiae: +.; mesocnemy; Fibula: diaph.: 3/b.;

Constitution: leptosome. Representative value: 1.0

Stature: 160.0 cm

F. Pathologic lesions:

ø

Representative value of vertebral column: 0.0

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

No grave-furniture.

G R A V E 16 Inv.no.: 10.296

A. Data of the grave:	B. General data of the anthropological find:	C. Biological data:
Depth: 50 cm Orientation: W - E Length of skeleton: 162 cm The bones of the right forearm on the femur, those of the left forearm laid on the vertebral column rectangularly. Degree of exploration: 1.0	Fragmentary skull with mandible and defective, fragmentary skeletal bones. Quantitative value: 0.70 Qualitative value: 0.25	Juvenis. The ossification of the epi- and diaphyses has not begun yet. Age: 15-16 years

D. The characters of the cranium cerebrale et viscerale:

The skull is buckled post-mortem and it is very fragmentary. It is unsuitable for the definition of characters;
Diam. antero-posterior maxim.: 195 mm
Diam. lateral maxim.: 130 mm
Metopic suture.

E. Characters of the skeletal bones:	F. Pathologic lesions:
Unsuitable for the definition of characters.	Scaphokephaly /?/
G. Typological character:	**H. Other characteristics:**
ø	ø

I. Archaeological material:

Beside the upper exterior end of the right femur a knife. Iron, corroded, single-edged, straight. Fragmentary. Size: 95x11 mm. /Pl. XI, no. 10/

G R A V E 18 Inv.no.: 10.298

A. Data of the grave:

Depth: 65 cm
Orientation: ?
Contemporary disturbing, caused by digging grave 19. Only the left upper arm, forearm, pelvis and left femur are undisturbed. Left forearm parallel with the skeleton.
Degree of exploration: 0.3

B. General data of the anthropological find:

Fragment of the skull and defective, very fragmentary skeletal bones.

Quantitative value: 0.0
Qualitative value: 0.25

C. Biological data:

Child

II I	I II
II I	I II

Age: 0.6 - 0.7 years

D. The characters of the cranium cerebrale et viscerale:

ø

E. Characters of the skeletal bones:

ø

F. Pathologic lesions:

ø

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

1/ Beside the left upper arm two rings in a secondary position. Open rings, made of bronze wire with a round section, their ends are cut straight. One of them shows the oxidized trace of a textile of plaited work. Sizes: 22x22 mm, 23x21 mm. - 2/ Above the left clavicle three beads in a secondary position. Brownish paste, decorated with white incrustation. Diameters: 15 mm, 12.5 mm, 12 mm. - 3/ At the left exterior side of the skull a vessel. Moderately refined; its brownish-grey texture very sandy partly wheeled, with an everted rim, shouldered. A cluster of ten lines running round the upper two thirds of its body. On the bottom a projecting stamp: cross-shaped marks in a circular frame. The vessel is worn out. Height: 86 mm, diameter of the bulge: 93 mm, diameter of the bottom: 51 mm, diameter of the stamp: 33 mm. The rim is chippy, the side cracked. /Pl. XII, nos. 1-6/

GRAVE 17

Inv.no.: 10.297

A. Data of the grave:

Depth: 66 cm
Orientation: W - E
Length of skeleton: 157 cm
The bones of the right forearm beside the femur, those of the left forearm on the femur.
Degree of exploration: 1.0

B. General data of the anthropological find:

Fragmentary skull with mandible and defective skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.50

C. Biological data:

Sex: male. Representative value: 1.0
Degree of sexualization: + 0.65
Age indices:
E.c.: 4.0; S.: IV; F.: II.
Age: 63-67 years
Representative value: 0.9

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale medium long, very narrow, medium high; dolichocranic, orthocranic, metriocranic; N. vert.: steno-ellipsoides; N. occ.: „Hausform"; Glabella: III.; Forehead broad, high, strongly receding; eurymetopic; Pterion narrow, „H"-shaped; Occiput steep in the upper third, then convex; Porus acusticus notch-like; Processus mastoideus low; Foramen magnum oval, medium large; Cranium viscerale low, narrowing downwards, oval, orthognath; Arcus superciliaris strong, well extended laterally; Zygomatic region in parietal situation; Orbital cavity low, square, mesokonchal type; Fossa canina shallow; Root of the nose deep, narrow; nasal bridge highly prominent, somewhat convex, sulcus praenasalis; chamaerrhiny; Palate short, shallow, hyperbrachyuranic, „U"-shaped; brachystaphylinic; Mandible low, narrow, chin divided; ramus mandibulae low, broad, tuberositas masseterica slightly articulated; linea mylohyoidea very strong;

Teeth:

0 0 0 0 0 0 0 0	0 0 0 4 c c 7 0
0 - 6 - - - 2 1	0 0 0 - 5 0 0 0

Mesodont. Abrasio: $\overline{I}$ $\overline{III}$; $\underline{I}$ $\underline{III}$

Paradentosis: $\overline{II}$ $\overline{III}$; $\underline{II}$ $\underline{III}$

E. Characters of the skeletal bones:

Clavicula: medium strong; diaph.: flat, elliptic; fossa subclavia: shallow; tuberositas coracoidea: +.; tub. costalis: +.; Scapula: shape: 1.; incisura scapulae almost a foramen; Humerus: diaph.: 4-6.; tuberositas deltoidea: ++.; Radius: diaph.: 5.; tuberculum radii large, blurred, in a semivolar situation; Ulna: diaph.: 3.; crista interossea: ++.; Sacrum: homobasal; segmentum, curve slight, from vertebra III; dolichohieric; Os coxae: angulus pubis at sharp angles; ramus ischio-pubicus strongly diverging; foramen obturatum triangular, ilia high, steep, small pelvis like a heart in cards; Femur: diaph.: 4.; tub. glutae: +.; linea aspera: ++.; campilomorphic; platymery; Tibia: diaph.: 4.; tub. tibiae: +.; diaphysis straight; condylus lateralis shallow; eurycnemy; Fibula: diaph.: 3/b.;

Constitution: lepto-athletic. Representative value: 1.0

Stature: 164.3 cm

F. Pathologic lesions:

On the bodies of the thoracic and lumbar vertebrae osteophyte development. On the lumbar vertebrae from vertebra III on a 10 mm large process is developed. At the margin of the fossae articulares of both scapulae a slight osteophyte development. On the bones we ry observe an atrophy of moderate degree.

Representative value of vertebral column: 0.3

Diagnosis: Osteoporosis sen. min. grad. Spondylosis thoracalis et lumbalis. Arthrosis def. art. humeri l. u.

G. Typological character:

The small medium stature, the long, dolichocranic skull, the narrow, oval facial skeleton and the gracility of the skeletal bones allude to the small dolichomorphic variety of the European Major group.

H. Other characteristics:

ø

I. Archaeological material:

1/ At the lower margin of the left ribs a loop applied to a sabretache. Bronze wire with a curved back, both ends widening and rounded-off, one hole each in both ends. Size: 27.5 mm long, 12 mm high. - 2/ Above the right ilium, towards the ribs a knife. Much corroded. Iron, single-edged, straight. The end of the hilt is missing. Size: 81x16 mm. - 3/ Under the left ilium a bracing strut for a sabretache. Iron, with a quadrangular section, much corroded. At the exterior surface remnants of leather. Length: 81 mm, width: 12 mm, height: 12 mm. - 4/ Under the left ilium beside the bracing strut a strike-a-light. Iron, much corroded, fragmentary. Lute-shaped. Size: 82x30 mm. - 5/ At the same place two pieces of flint. /Pl. XIII, nos. 6-10/

G R A V E 19 Inv.no.: 10.299

A. Data of the grave:

Depth: 65 cm
Orientation: W - E
Length of skeleton: 156 cm
Degree of exploration: 1.0

B. General data of the anthropological find:

Skull with mandible and fragmentary skeletal bones.

Quantitative value: 0.60
Qualitative value: 0.25

C. Biological data:

Sex: female. Representative value: 0.7
Degree of sexualization: - 0.25
Age indices:
E.o.: 0.3; H: III; S: IV; F: II.
Age: 54-58 years
Representative value: 1.0

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale medium long, narrow, medium high; dolichocranic, orthocranic, acrocranic; N. vert.: ellipsoides; N.occ.: round; Forehead: medium high, broad, receding; eurymetopic; tuber frontale weak; tuber parietalis stronger; Glabella: 0; Prot. occ.ex.: 0.; Squama occ. convex; Foramen magnum oval, small; Processus mastoideus: low, pointed; tuber pharyngeum; Index transversalis craniofacialis: 92.30; medium broad facial skeleton - medium narrow cranium; Facial skeleton low, narrow, flat, narrowing downwards, orthognath; mesoprosopic, mesen; Arcus superciliaris scarcely visible, blurred; Orbital cavity; medium high, rounded quadrangular, mesokonchal type; Nasal root narrow, high; nasal bridge /rump/ straight; chamaerrhiny; aperture piriformis: weak fossa praenasalis; Zygomatic region has a parietal character; Fossa canina: shallow; Palate wide, shallow, „U"-shaped; mesuran; brachystaphylinic; Mandible very low, narrow, pointed; chin medial; ramus mandibulae slanting backwards, broad, low; on the surface of tuberositas masseterica sharp lineae; angulus mandibulae somewhat splaying sidewards; linea mylochyoidea torus-like;

Teeth:

- 7 6 0 0 3 0 0	0 0 0 4 0 6 0 -
8 0 6 0 4 0 2 0	0 0 0 4 0 6 7 8

Abrasio: $\overline{II}$ $\overline{II}$; $\underline{II}$ $\underline{II}$

Paradentosis: $\overline{I}$ $\overline{I}$; $\underline{I}$ $\underline{I}$

E. Characters of the skeletal bones:

Clavicula: short, medium strong; diaph.: flat, elliptic; tuberositas coracoidea: +++.; tuberositas costalis: ++.; Humerus: diaph.: 4-6.; tuberositas deltoidea: +++.; robusticity index: 20.7; Radius: diaph.: 5.; tub. radii: boundaries blurred, in a semivolar situation; Ulna: diaph.: 3.; crista interossea: ++.; Os coxae: ramus ischio-pubis: medially divergent; foramen obturatum: oval; incisura ischiadica maior: wide, deep; entire pelvis gracile; small pelvis oval; Femur: diaph.: 4.; tuberositas glutae: +.; linea aspera: +.; orthomorphic; platymery; Tibia: diaph.: 2.; tub. tibiae: +.; diaphysis straight; mesocnemy; Fibula: diaph.: 3/b.;

Constitution: leptosome. Representative value: 1.0

Stature: 156.0 cm

F. Pathologic lesions:

Thoracic vertebrae VII and VIII in ossification p. fracturam. /Pl. V/

Representative value of vertebral column: 0.1

Diagnosis: Status post fracturam vert. th. VII-VIII. Gibbus. Spondylitis tbc. vert. th. VII-VIII.

G. Typological character:

The medium stature, the narrow, dolichocranic skull and the narrow, low facial skeleton, together with the considerable flatness indicate the simultaneous appearance of the dolichomorphic variety of the European Major group and the South-Sibirian /?/ variety of the same. /Pl. IV/

H. Other characteristics:

ø

I. Archaeological material:

1/ At the right and left side of the skull one ring each, ending in S. Open, made of bronze wire with a round section. The S-end is flattened, by hammering the plain end cut straight. Sizes: 19x14 mm, 18x16 mm. /Pl. XIII, nos. 4-5/

G R A V E 20

Inv.no.: 10.300

A. Data of the grave:

Depth: 30 cm
Orientation: W-NW - E-SE
Length of skeleton: 70 cm
Recent disturbing.
The skull has been destructed by the plough.
Degree of exploration: 0.9

B. General data of the anthropological find:

Fragmentary skull and very defective, fragmentary skeletal bones.

Quantitative value: 0.30
Qualitative value: 0.00

C. Biological data:

Child

② ①	① ②
② ①	① ②

Age: 6 years

D. The characters of the cranium cerebrale et viscerale:

ø

E. Characters of the skeletal bones:

ø

F. Pathologic lesions:

ø

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

No grave-furniture.

G R A V E 21

Inv.no.: 10.301

A. Data of the grave:

Depth: 38 cm
Orientation: NW - SE
Length of skeleton: 74 cm
Disturbed.
The bones of the upper arms lay somewhat outside, those of the forearms somewhat inside in relation to the skeleton.
Degree of exploration: 0.9

B. General data of the anthropological find:

Fragmentary skull with mandible and defective, fragmentary skeletal bones.

Quantitative value: 0.50
Qualitative value: 0.25

C. Biological data:

Child

①	①
①	①

Age: 6 years

D. The characters of the cranium cerebrale et viscerale:

ø

E. Characters of the skeletal bones:

ø

F. Pathologic lesions:

ø

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

At the right and left side of the skull one ring each. Open, made of silver wire with a round section, the wires are bent irregularly. One end is pointed, the other cut straight in both cases. Sizes: 13x12 mm, 14x13 mm. /Pl. XIII, nos.2-3/

G R A V E 22

Inv.no.: ---

A. Data of the grave:	B. General data of the anthropological find:	C. Biological data:
Depth: 56 cm Orientation: W - E Degree of exploration: 0.2	As the anthropological find has not been rescued, the data are given on the basis of observations on the site.	Child Age: 0.6 years

D. The characters of the cranium cerebrale et viscerale:	E. Characters of the skeletal bones:
ø	ø
F. Pathologic lesions:	**G. Typological character:**
ø	ø
H. Other characteristics:	**I. Archaeological material:**
ø	No grave-furniture.

G R A V E 23

Inv.no.: ---

A. Data of the grave:	B. General data of the anthropological find:	C. Biological data:
Depth: 60 cm Orientation: W - E Degree of exploration: 0.2	As the anthropological find has not been rescued, the data are given on the basis of observations on the site.	Child Age: 0.6 years

D. The characters of the cranium cerebrale et viscerale:	E. Characters of the skeletal bones:
ø	ø
F. Pathologic lesions:	**G. Typological character:**
ø	ø
H. Other characteristics:	**I. Archaeological material:**
ø	No grave-furniture.

G R A V E 24

Inv.no.: 10.302

A. Data of the grave:

Depth: 46 cm
Orientation: W-NW - E-SE
Length of skeleton: 58 cm
A part of the skeleton: the right upper arm and forearm, the pelvis, the left femur and tibia have crumbled to dust.
Degree of exploration: 0.4

B. General data of the anthropological find:

Very fragmentary skull and very defective, fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.25

C. Biological data:

Child.

Age: 0.2 years

D. The characters of the cranium cerebrale et viscerale:

ø

E. Characters of the skeletal bones:

ø

F. Pathologic lesions:

ø

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

1/ On the cervical vertebrae three beads. Two pieces of cylindrical white paste, length: 7.7 mm. One piece of blue glass, cylindrical, broken. Size: 14x10 mm. /Pl. XIII,no.1/

GRAVE 25

Inv.no.: 10.303

A. Data of the grave:

Depth: 55 cm
Orientation: W - E
Length of skeleton: 155 cm
The left side of the skeleton lies deeper. The knees are touching each other.
Degree of exploration: 1.0

B. General data of the anthropological find:

Skull with mandible and fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.25

C. Biological data:

Sex: male. Representative value: 1.0
Degree of sexualization: + 0.20
Age indices:
E.o.: 0.0; H: I; S: I; F: I.
Age: 23-27 years
Representative value: 1.0

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale medium long, very high; hypsicranic; N. vert.: eury-romboides; N. occ.: high-house-shaped; Forehead:high, steep, domed; Glabella: 0.; moderate tuber frontale et tuber parietale; Protub. occ. ex.: 3.; moderate torus occipitalis; occiput curved; the surface of planum nuchale domed and articulated; Foramen magnum oval, medium large; Processus mastoideus very low,small; Facial skeleton low, broad, flat; Arcus superciliaris blurred, medially situated; Zygomatic region low,frontal,tuber malare strong; Fossa canina shallow;Apertura piriformis:fossa praenasalis shallow; Palate long,broad,deep, „U"-shaped; weak torus palatinus sagittalis; Mandible very high, narrow, „V"-shaped; chin straight, medial; Ramus mandibulae straight, wide, low; tuberositas masseterica smooth; angulus mandibulae almost rectangular;

Teeth:

0 7 6 5 4 3 0 1	0 2 3 4 5 6 7 8
8 7 6 0 4 3 2 1	1 0 3 4 5 6 7 8

Abrasio: $\bar{0}$ $\bar{I}$ I 0

Paradentosis:
unhurt unhurt unhurt unhurt

E. Characters of the skeletal bones:

The skeletal bones are not measurable, nor can they be described owing to their fragmentary condition.

Constitution: pyknic. Representative value: 1.0

Stature: ø

F. Pathologic lesions:

ø

Representative value of vertebral column: 1.0

G. Typological character:

Lacking the datum of stature we may only approach a typological definition. The medium long cerebral skull,its striking height, together with the low, flat facial skeleton allow the inference that it belongs possibly to the eury-dolichomorphic variety of the European Major group, mixed with one of its brachymorphic varieties.

H. Other characteristics:

ø

I. Archaeological material:

No grave-furniture.

G R A V E 26

Inv.no.: ---

A. Data of the grave:	B. General data of the anthropological find:	C. Biological data:
Depth: 35 cm Orientation: W - E Degree of exploration: 0.2	As the anthropological find has not been rescued, the data are given on the basis of observations on the site.	Child. Age: 0.6 years

D. The characters of the cranium cerebrale et viscerale:	E. Characters of the skeletal bones:
ø	ø
F. Pathologic lesions:	**G. Typological character:**
ø	ø
H. Other characteristics:	**I. Archaeological material:**
ø	No grave-furniture.

G R A V E 27

Inv.no.: 10.304

A. Data of the grave:	B. General data of the anthropological find:	C. Biological data:
Depth: 43 cm Orientation: W - E Length of skeleton: 122 cm Forearms parallel with the skeleton. Degree of exploration: 1.0	Fragmentary skull with mandible and fragmentary skeletal bones. Quantitative value: 0.70 Qualitative value: 0.25	Child. (2) (2) (2) (2) Age: 7.5 years

D. The characters of the cranium cerebrale et viscerale:	E. Characters of the skeletal bones:
ø	ø

F. Pathologic lesions:	G. Typological character:	H. Other characteristics:
ø	ø	ø

I. Archaeological material:

1/ Near the left proc. mastoideus an ear-ring. Cast bronze, decorated with one pearl-string on both sides each and below a pendant pseudo-granulated cluster. The lower half of the ring has the profile of a square standing on a point, with a prominent ridge at all edges. The upper curve of the ring has a round section, with an end cut straight. - 2/ On the pars symphyseos the fragments of an egg-shell. Some fragments show brown /painted?/ colouring. Size: 38x20 mm. /Pl. XIV, no. 12/

G R A V E 28 Inv.no.: 10.305

A. Data of the grave:

Depth: ?
Orientation: W - E
Length of skeleton: 160 cm
The skeleton has been disturbed, nay devastated by ploughing.
Left facial bones missing.
Degree of exploration: 0.7

B. General data of the anthropological find:

Fragmentary skull with mandible and defective, fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.50

C. Biological data:

Juvenis.
The ossification of the epi- and diaphyses has not begun yet.
Age: 15-16 years

D. The characters of the cranium cerebrale et viscerale:

ø

E. Characters of the skeletal bones:

ø

F. Pathologic lesions:

ø

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

1/ At the left side of the skull, stuck to it an ear-ring in a secondary position. Its ring made of bronze wire with a round section has an extended oval shape. It is narrow, having a protruding solid knob on its upper curve. On its lower curve a long bronze wire is suspended with a round section, holding four hollow silver knobs, each of them consisting of two parts. On the free portion of the bronze wire a thin bronze fibre is visible, twisted round the wire. Immediately beside the juncture of the suspended part some remnants of textile are visible. The last member of the pendant is broken, the ring itself is broken into halves. Total length: 87 mm /the length of the pendant: 53 mm/, the diameter of the ring: 8 mm. - 2/ On the right ribs four dress mounts horizontally beside one another. Pressed of gilt bronze plate,in lozenge shapes.The margins are ribbed all around, in the centres there are slightly projecting lozenge-shaped gilt surfaces. All the four mounts are very fragmentary. At some places the holes are visible, serving for fastening. Sizes: cca 20x12 mm. - 3/ Between the right upper arm and the displaced forearm a bracelet. Made of bronze band, its both ends are overlapping and widened, with rounded-off corners. The ends are flattened by hammering. On the inner surface the imprint of some very finely woven textile is visible. Size: 60x53 mm.The width of the band: 11 mm, at the ends: 15 mm. - 4/ At the junction of the thoracic and lumbal vertebrae five buttons of different sizes, lying one under the other along the vertebral column. The first one is a cast bronze rattle, hollow. It has hung on a loop, made of bronze wire with a round section. On the lower globular part there is a cross-shaped groove, the ends of which are widened to small round holes. Inside the rattle a small bronze sphere. Size: 26x19 mm. The second and third pieces are hollow cast bronze buttons with ears. Each of them is made of two hemispheres. Size: 18x13 mm. The fourth one is solid bronze, cast together with the loop. It has a flat head, showing a groove consisting of five radii. Size: 11x9 mm. The fifth piece is solid bronze, cast together with the loop. Its head is a flattened sphere, divided into eight curved parts. Size: 14x9 mm. /Pl. XIV, nos. 1-11/

GRAVE 29

Inv.no.: 10.306

A. Data of the grave:

Depth: ?
Orientation: W - E
Length of skeleton: 70 cm
Forearms parallel with the skeleton.
Degree of exploration: 1.0

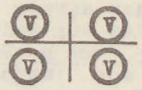
B. General data of the anthropological find:

Fragmentary skull with mandible and defective, fragmentary skeletal bones.

Quantitative value: 0.50
Qualitative value: 0.25

C. Biological data:

Child.



Age: 1.5 years

D. The characters of the cranium cerebrale et viscerale:

ø

E. Characters of the skeletal bones:

ø

F. Pathologic lesions:

ø

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

1/ Under the left side of the skull the fragment of a ring. Made of bronze wire with a round section. Size: 19 mm. - 2/ On the cervical vertebrae three beads. Paste, their original colour is not visible any more, but they are decorated with coloured /brown?/ incrustation. Sizes: 12, 14, 14 mm. /Pl. XIV, nos. 13-16/

G R A V E 30 Inv.no.: 10.307

A. Data of the grave:

Depth: 53 cm
Orientation: W - E
Length of skeleton: 88 cm
The lower extremities are contracted, somewhat to the left.
Degree of exploration: 1.0

B. General data of the anthropological find:

Fragmentary skull with mandible and defective, fragmentary skeletal bones.

Quantitative value: 0.50
Qualitative value: 0.25

C. Biological data:

Child.

6	6
6	6

Age: 4.5 - 5 years

D. The characters of the cranium cerebrale et viscerale:

ø

E. Characters of the skeletal bones:

ø

F. Pathologic lesions:

ø

G. Typological character:

ø

H. Other characteristics:

ø

I. Archaeological material:

1/ At the distal end the right clavicle a bead. Light blue glass, originally may have been double. Beside it a dark blue, double, flattened glass bead. Sizes: 10 mm, 5 mm. - 2/ Beside them a part of the rim of a clay vessel. Light grey, wheeled, slightly everted. Size: 20x17 mm. /Pl. XIV, nos. 17-18/

G R A V E 31 Inv.no.: 10.308

A. Data of the grave:

Depth: 58 cm
Orientation: W - E
Length of skeleton: 150 cm
The right upper arm tends somewhat away from, the right forearm somewhat towards the skeleton.
The left forearm is in a disturbed condition.
Degree of exploration: 1.0

B. General data of the anthropological find:

Fragmentary skull with mandible and fragmentary skeletal bones.

Quantitative value: 0.60
Qualitative value: 0.25

C. Biological data:

Sex: female. Representative value: 0.7
Degree of sexualization: - 0.27
Age indices:
E.o.: 0.0; F: I.
Age: 25-29 years
Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale medium broad, medium high; dolichomorphic /?/; N.vert.: eury-ellipsoides; Forehead high, broad, domed; blurred tuber frontale; glabella: 0.; Pterion: „H"-shaped; stenometopic; Index transversalis craniofacialis: 89,65; medium broad facial skeleton-medium narrow cranium; Facial skeleton low, broad, very flat; euryprosopic, euryen; Arcus superciliaris flat, medial; Orbital cavity rounded quadrangular, medium high, mesokonchal type, with a slanted axis; Nasal root flat, high, broad, interorbital width expressed; hyperchamaerrhiny; margin of apert. sharp; Zygomatic region broad, with a frontal character; Fossa canina medium deep; Palate short, broad, „U"-shaped; hyperbrachyuranic; hyperbrachystaphylinic; Mandible fragment medium high, chin medially situated;

Teeth:

r c 6 5 4 0 0 0	0 0 0 0 0 6 7 8
- - c 5 4 3 2 0	0 2 3 4 5 - - -

Abrasio: - II I II

Paradentosis: I II I unhurt

E. Characters of the skeletal bones:

Clavicula strong; diaph.: elliptic; tub. coracoidea: +++.; tub. costalis: ++.; Radius: diaph.: 5.; tuberculum radii scarcely prominent above the facet of the bone, semivolar; Ulna: diaph.: 3.; crista interossea: +.; Femur: diaph.: round; tub. glutae: +.; linea aspera: +.; campilomorphic; eurymery; Tibia: diaph.: 1.; tub.tibiae: +.; diaphysis moderately bent; condylus lateralis shallow; eurycnemy; Fibula: diaph. 4.;

Constitution: lepto-athletic. Representative value: 1.0

Stature: 154.1 cm

F. Pathologic lesions:

ø

Representative value of the vertebral column: 0.0

G. Typological character:

The medium stature, the characters of the cerebral skull, together with the flat, broad euryprosopic facial skeleton show that the eastern dolichomorphic and the South-Sibirian /?/ varieties are appearing simultaneously.

H. Other characteristics:

ø

I. Archaeological material:

No grave-furniture.

G R A V E 32

Inv.no.: 10.309

A. Data of the grave:

Depth: 52 cm
Orientation: W-NW - E-SE
Length of skeleton: 177 cm
Left forearm on the edge of the left ilium, right forearm parallel with the skeleton.
Degree of exploration: 1.0

B. General data of the anthropological find:

Skull with mandible and fragmentary,defective skeletal bones.

Quantitative value: 0.80
Qualitative value: 0.40

C. Biological data:

Sex: male. Representative value: 0.8
Degree of sexualization: + 1.46
Age indices:
E.o.: 1.9; F: I.
Age: 28-32 years
Representative value: 0.6

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale short, broad, high, hyperbrachycranic, hypsicranic, metriocranic; N. vert.: spheroides; N. occ.: house-shaped; Forehead high, narrow, receding, stenometopic; Glabella: 0-I.; Lambdoid flattening considerable; occiput slightly arched,the surface well articulated; protub. occ. ex.: 2-3.; os epiptericum on the left side; Processus mastoideus large, high; Foramen magnum oval, large; Index transversalis craniofacialis: 88.02; medium broad facial skeleton - medium narrow cranium; Facial skeleton medium broad, medium high, flat, mesoprosopic, mesen; Arcus superciliaris highly arched; Orbital cavity medium high, quadrangular, mesokonchal type; Nasal root high, narrow; bony nasal bridge /rump/ high, straight; apertura piriformis has a sharp edge; mesorrhiny; Zygomatic region high,frontal, os malare bipartitum; sutura transversalis in the course of ossification; Fossa canina deep; Palate long, narrow, medium deep, dental arch „U"-shaped; Mandible very broad, low; chin broadly rounded, slightly divided, ramus low, narrow, receding;

Teeth:

- - - r 4 3 2 1	1 2 3 4 5 - - -
8 7 6 5 4 3 2 1	1 2 3 4 r c 7 8

Abrasio: $\overline{I}$ $\overline{-}$ I II

Paradentosis:

$\overline{\text{unhurt}}$ $\overline{II}$ unhurt II

E. Characters of the skeletal bones:

The lumbar portion of the vertabral column curtoarchic; Clavicula: strong; diaph.: round; Fossa subclavia deep, tub.coracoidea: +++.; tub. cost.: ++.; Humerus: diaph.: 4.; tub. deltoidea: +++.; Radius: diaph.: 5.; tuberculum radii has an elliptic profile, volar; Ulna: diaph.: 5.; crista interossea: ++.; Os coxae: angulus pubis pointed; ramus ischi-pubicum: ++.; foramen obturatum: oval; acetabulum large, deep; incisura ischiadica maior: wide and „U"-shaped; though the entire pelvis is fragmentary, it may be defined as massive; Femur: diaph.: 4.; tub. glutae: +++.; linea aspera: +++.; trochanter tertius: ++.; campilomorphic; eurymery; Tibia: diaph.: 1.; tub. tibiae: +++.; the curve of the diaphysis slight; condylus lateralis shallow; eurycnemy; Fibula: diaph.: 4.; robust;

Constitution: pykno-athletic. Representative value: 1.0

Stature: 170.7 cm

F. Pathologic lesions:

On the anterior upper and lower margin of the bodies of the thoracic vertebrae an osteophyte development. The acetabula of both sides have changed morphologically. The left acetabulum is flat, facies articularis widened. The right one is moderately flattened. The width of acetabulum: on the right: 25 mm, on the left: 34 mm. The depth of acetabulum: on the right: 21 mm, on the left: 14 mm. /Pl. VI/

Representative value of the vertebral column: 0.9

Diagnosis: Spondylosis thoracalis - min. grad. Coxa vara adolescentium.

G. Typological character:

The stature is tall, the cerebral skull brachycranic, hypsicranic; the facial skeleton flat, medium broad and the zygomatic region flat. All these allude to a characteristic Europid-brachycranic /?/ typological variety.

H. Other characteristics:

ø

I. Archaeological material:

1/ At the lower end of the sternum a mount. Round, cast bronze, in the centre a small circular gilt hollow. On the back two loops. Size: 14 mm. - 2/ Under the left ilium a strike-a-light for producing fire. Iron, corroded. Lute-shaped, its two ends are broken. Size: 65x24 mm. At the same place a piece of flint. Size: 28x27 mm. - 3/ Beside the left ilium an arrow-head. Iron, deltoid, much corroded. Size: 71x20 mm. - 4/ Between the two femora a part of a chisel. Iron, corroded, with tapering end. Size: 67x27 mm. Thickness: 19-11 mm. - 5/ At the exterior of the left tibia an arrow-head. Iron, corroded, deltoid. Fragmentary. Size: 57x21 mm. - 6/ To the outside of the left tibia a chisel. Iron, the body is quadrangular, the head hammered flat, widening. Its end is forming a ridge. Length: 245 mm, width: 16 mm. - 7/ At the exterior of the left tibia fragments of bracing struts from a quiver. Curved and riveted portions of a much corroded iron piece. Not measurable. - 8/ At the exterior of the right calcaneus a knife. Iron, one-edged, straight, with a bent hilt. Length: 116 mm, width of the blade: 11 mm. /Pl. XV/

G R A V E 33

Inv.no.: 10.310

A. Data of the grave:

Depth: 55 cm
Orientation: W - E
Length of skeleton: 156 cm
Right forearm laid on the chest, left forearm laid on the left femur.
Degree of exploration: 1.0

B. General data of the anthropological find:

Fragmentary skull with mandible and defective, fragmentary skeletal bones.

Quantitative value: 0.70
Qualitative value: 0.75

C. Biological data:

Sex: female. Representative value:1.0
Degree of sexualization: - 0.80
Age indices:
E.o.: 0.0; H: I; F: I;
Age: 23-25 years
Representative value: 0.9

D. The characters of the cranium cerebrale et viscerale:

Cranium cerebrale medium long, very narrow; mesocranic; N. vert.: ellipsoides; N. occ.: bomb-shaped; Forehead low, narrow, domed, stenometopic; tubera frontale strong, tub. parietale blurred; glabella: 0.; Lambdoid region slanting; Occiput convex; protub. occ. ex.: 1,; Linea nuchae sup.: strong; Os epiptericum on the right side; Processus mastoideus low; Facial skeleton medium high, flat, broad; Arcus superciliaris weak, medial; Orbital cavity round, high, hypsikonchal type; Nasal root high,narrow; apertura piriformis narrow, with sharp edges; Zygomatic region frontal, low; Fossa canina medium deep; Palate deep, narrow, hyperbolic;

Teeth:

0 7 6 5 4 3 0 0	0 0 3 4 5 6 7 0
8 7 6 5 4 3 2 0	0 2 3 4 5 6 7 8

Abrasio: $\overline{I}$ $\overline{0}$ $\underline{I}$ $\underline{0}$

Paradentosis:

$\overline{\text{unhurt}}$ $\overline{\text{unhurt}}$ $\underline{\text{unhurt}}$ $\underline{\text{unhurt}}$

E. Characters of the skeletal bones:

The lumbar portion of the vertebral column is curtoarchic; Clavicula: gracile; diaph.: elliptic, tub.coracoidea: ++.; tub. costalis: ++.; Humerus: diaph.: 4-6.; foramen intercondyloideum; tub. deltoidea: +++.; Radius: diaph.: 5.; tuberculum radii scarcely visible, semivolar; Ulna: diaph.: 3.; crista interossea: +++.; Sacrum hypobasal, five segments, the curve begins at vertebra III, weak; facies articularis sacroiliacalis narrow; dolichohieric; Os coxae: symphisis high, foramen obturatum oval; incisura ischiadica maior wide, deep; the pelvis is gracile; Femur: diaph.: round, tub. glutae: +.; linea aspera: ++.; orthomorphic; hyperplatymery;Tibia: diaph.:3.; curve of diaphysis strong; tuberositas tibiae: +++.; eurycnemy; Fibula: diaph.: 3/a.;

Constitution: leptosome. Representative value: 1.0

Stature: 154.7 cm

F. Pathologic lesions:

ø

Representative value of the vertebral column: 0.8

G. Typological character:

The medium stature, the medium length of the cerebral skull and especially the broad,low, flat character of the facial skeleton allow the inference of the South Sibirian /7/ variety, in the sense that also a dolichomorphic component is present in a small degree.

H. Other characteristics:

ø

I. Archaeological material:

1/ Above and behind the skull a silver chain, with a heart-shaped pendant on it. - 2/ At the right side of the jaw, above the clavicle the fragment of a similar silver chain. - 3/ Beside the right clavicle an iron knife. Fragmentary. /Pl. XVI/

S U M M A R Y

In the summary we are following the order adopted in course of the analysis and the publication of data,in the conviction that the individual and collective reconstruction of man, his material culture, the biological structure of the community and its economic and social conditions, outlined in a close unity, might contribute to a later historical and ethnogenetical synthesis, based on regional comparison.

A. The general data of the partially uncovered cemetery:

a/ Degree of the cemetery uncovering; 0.3

b/ Degree of the unearthed graves: 0.7

c/ Number of the uncovered graves: 33.

d/ Orientation of the graves: W - E /the facial skeleton to the west/.

e/ The average depth of the graves is 20 to 70 cm.Their shallowness is due to the fact that the surface of the sandy soil was much abraded by the wind.

f/ Among the unearthed 33 graves 12 have been disturbed in course of the exploitation of sand, so a part or a larger part of the skeletons in them was destroyed.

g/ The skeletons were laid in an extended position: we distinguished seven varieties in the placing of the forearms /in detail see below in item I/.

h/ 23 of the 33 uncovered graves contained grave-furniture /69.7 per cent/; 10 graves lacked grave-goods /30.3 per cent/.

i/ The degree of furnishing with grave-goods is: 171.7

B. The general data of the anthropological sample of the partial excavation:

a/ The general quantitative representative value of the whole sample /33 skeletons/, gained by summarizing the quantitative representative values given in course of individual analysis, is 0.503. The low value of quantitative representation means that, owing to disturbing and insufficient uncovering, an average of 50 per cent of the skeletons were collected from the material in the graves. This datum itself indicates that the possibility of reconstruction is very limited, both as to the individuals and the entire sample.

b/ The chances of the evaluation of the anthropological sample are even more decidedly expressed by the average of the general qualitative representation: 0.250. The fragmentary, crumbling and decayed condition of the uncovered skeletons assumed such measures that anthropological analysis in a practical sense was possible in 25 per cent only.

c/ The average quantitative and qualitative values of representation, standing for the skeletons of the sample, are expressing the value of conclusions at the same time which may be gained from the analytical results /Table 4/.

C. **The united biological data of the partially uncovered anthropological sample:**

a/ **Sex and sexualization.** On the basis of the 21 elementary sexual criteria 13 males and 7 females may be found among the 33 individuals; the sex determination of the 3 juveniles and 10 children was not possible.

The average representative value of the estimation of sex is 0.620. Presenting the representative value, we have to remark that in the case of 7 individuals we were only able to estimate sex conditionally; this is due just to the quantitative and qualitative values of representation, being 0.0 to 0.2 in the sexing of these individuals.

In course of individual reconstruction we have expressed the sexualization of the individuals in five degrees.The average degree of sexualization of males is: +0.74, i. e. „masculine" men; the average degree of sexualization of females is: -0.30,i.e. „masculo-feminine" women. The average representative value of the degree of sexualization for both sexes is: +0.44 /Table 4/.

b/ **Age.** We have determined the age of children according to the dentition schemata of Gustafson-Simpson /16/; the age of juvenes on the basis of the schema of Schranz /17/, with regard to the dentition, the synchondrosis sphenooccipitalis and the ossification of the epi- and diaphyses of the long bones of the extremities. The age of the adults has been estimated on the basis of four age determinators /18/.

The representative value of the estimated age of children is: 0.76. Practically this number expresses the full value of the age determination of children. In the case of the three juvenes we have not given a representative value, but their age was estimated according to the criteria mentioned above,possessing a satisfactory validity.

The average representative value of the age of adults is:0.60. So the validity of adult age values is 60 per cent. This is to say that in the case of eight individuals the age values are of complete validity /in our present knowledge/, with a ± 2.5 years' margin of error; in the case of six individuals, as age estimation was possible only on the testimony of one or two age criteria, they possess a validity of 25 per cent; whereas in the case of six further adult individuals the age data are of a validity of 50 per cent /Table 4/.

Paleodemographical evaluation: We may regard the sample of 33 individuals, uncovered at the site of Gáva-Market as a „small sample" in a demographical sense. Considering the representative value of the degrees of exploration with those of the estimation of sex and age, we may make only a statement of limited validity as to the structure and populational conditions of the one-time people of the sample or the cemetery respectively. /We give in the brackets the sexes determined on the basis of the grave-goods./ /Table 1/

Table 1

The division of individuals according to age

Years	Male	Female	Total
	n	n	
0.0 - 0.9	- /3?/	- /2/	5
1 - 3	-	- /1/	1
4 - 6	- /1?/	- /2/	3
7 - 10	-	- /1/	1
11 - 14	-	-	-
15 - 22	- /2/	- /1/	3
23 - 30	1	2	3
31 - 40	2	-	2
41 - 50	2	1	3
51 - 60	4	3	7
61 - 70	2	1	3
71 - x	1	-	1
23 - x	1	-	1
Total	13 /19/	7 /14/	33

The division of individuals according to age /Table 1/ reveals some regularities converging with the division of populations found in other cemeteries of the same period, therefore we found our data suitable, with due reservation, to furnish some values of the summary mortality table in spite of their relatively small number. In the calculations we have applied the direct method followed in our former studies /19, 20/. The starting-point of the reconstruction calculations is the division of the deceased persons according to age /D_x/, presented in Fig. 1. The figure shows the division of the deceased according to their actual age and the graphically equalized data. We have reckoned on the basis of the division of the deceased according to actual age. /We are much indebted to Mrs.M.Nozdrovitzky for the demographical calculations./ /Fig. 1./

Table 2

Abridged-mortality table

Years of age	Percental distribution of deaths	Number of survivors	Expectation of life
/x/	/d_x/	/l_x/	/e_x/
0	15.15	100	32.6
1	3.03	85	38.3
5	12.12	82	39.7
10	9.09	70	45.4
20	10.73	61	49.9
30	5.96	50	54.9
40	5.86	44	57.9
50	23.44	38	59.8
60	10.80	15	68.4
70	3.82	4	76.9
80	-	-	-

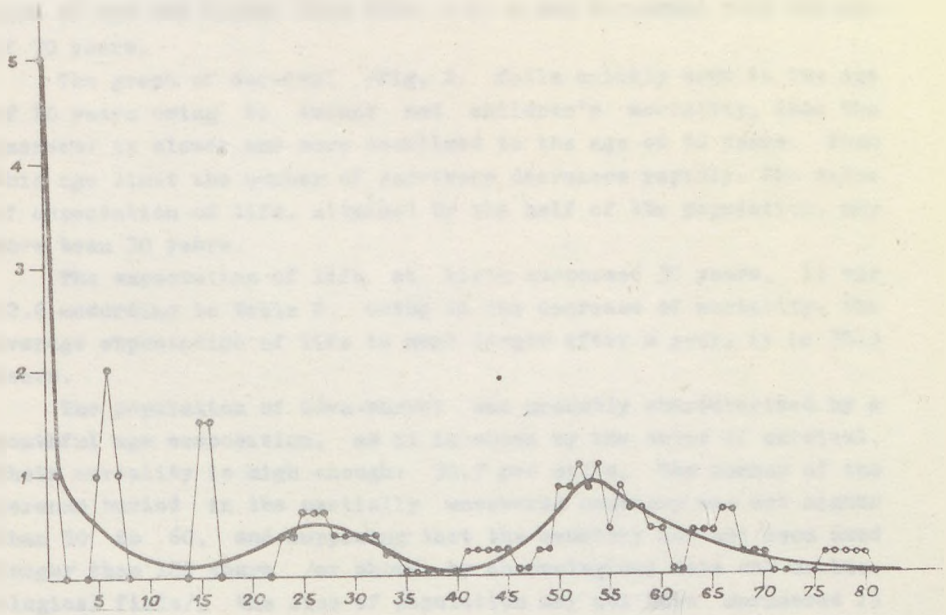


Figure 1: Deaths

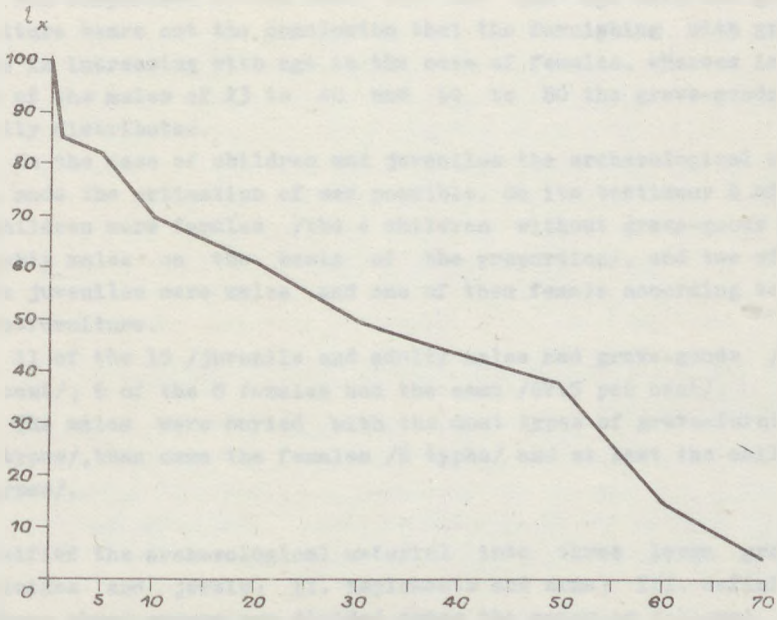


Figure 2: Survivors

The data of the mortality table /Table 2/ reveal that a considerable part of the deceased were children. Those under 10 years of age give 30 per cent of the total. Infant mortality /age 0-24 month/ is also high enough, giving the value of cca 152 per mille. The normal age ranges from 50 to 60 years, but the expectation of age was higher than this, e.g. a man surpassed even the age of 70 years.

The graph of survival /Fig. 2/ falls quickly down to the age of 10 years owing to infant and children's mortality, then the decrease is slower and more equalized to the age of 50 years. From this age limit the number of survivors decreases rapidly. The value of expectation of life, attained by the half of the population, may have been 30 years.

The expectation of life at birth surpassed 30 years, it was 32.6 according to Table 2. Owing to the decrease of mortality, the average expectation of life is much larger after a year, it is 38.3 years.

The population of Gáva-Market was probably characterized by a youthful age composition, as it is shown by the order of survival. Their mortality is high enough: 30.7 per mille. The number of the persons buried in the partially uncovered cemetery was not higher than 50 to 60, and supposing that the cemetery has not been used longer than 100 years /as shown by chronological data and archaeological finds/, the size of population may not have surpassed 15 to 20 persons or four to five biological unities /families/.

c/ The archaeological material in relation to sex and age. 23 of the 33 individuals have grave-furniture. Among then were 6 children /18.1 per cent/, 3 juvenes /9.0 per cent/, 9 men /27.2 per cent/ and 5 women /15.1 per cent/.

Among the 20 adults 14 were provided with grave-goods, belonging to all age groups.

The comparison of the data for sex and age with the grave-furniture bears out the conclusion that the furnishing with grave-goods is increasing with age in the case of females, whereas in the case of the males of 23 to 40 and 60 to 80 the grave-goods are equally distributed.

In the case of children and juveniles the archaeological material made the estimation of sex possible. On its testimony 6 of the 10 children were females /the 4 children without grave-goods were probably males on the basis of the proportion/, and two of the three juveniles were males and one of them female according to the grave-furniture.

11 of the 15 /juvenile and adult/ males had grave-goods /73.3 per cent/; 6 of the 8 females had the same /62.5 per cent/.

The males were buried with the most types of grave-furniture /18 types/,then came the females /8 types/ and at last the children /6 types/.

We have classified the archaeological material into three large groups: I. ornaments of clothes and jewels; II. implements and arms; III. definitely ritual objects. These three groups are divided among the sexes as follows:

Group I: males 31.5, females 83.3, children 50 per cent.

Group II: males 52.6, females 16.7, children 20 per cent.

Group III:[++] males 15.7, females 0.0, children 30 per cent.

The order of occurrence of grave-goods is the following: Children: bead, plain lock-ring, ear-ring, vessel, fragment of vessel and egg-shell. Males: iron knife, strike-a-light and flint, buckle of belt, plain lock-ring, ring, arrow, quiver, coin, rosette, a ring for fastening the dress,mounts of belt,sabretashe, bow, stirrup, trappings, chisel, horse /skull and bones of extremities/, animal bones. Females: bracelet, plain lock-ring, ear-ring, lock-ring ending in S, rosette, buttons of clothes, necklace, iron knife.

We observed 7 varieties in the placing of forearms: I. parallel with the body, II. right forearm parallel with the body, left forearm on the ilium, III. left forearm parallel with the body, right forearm on the ilium, IV. right forearm bent on the skeleton rectangularly, the left on the ilium, V. left forearm bent on the skeleton rectangularly, the right on the ilium, VI. both forearms bent on the sternum, VII. both forearms bent to the clavicles /Table 3/.

Table 3

The placing of forearms

Child+juv. per cent	Male per cent	Female per cent
I. 50.0	I. 37.5	I. 20.0
II. 16.6	II. 25.0	II. 20.0
III. -	III. 25.0	III. 20.0
IV. -	IV. 12.5	IV. 20.0
V. 16.6	V. -	V. -
VI. -	VI. -	VI. 20.0
VII. 16.6	VII. -	VII. -

The archaeological material as related to age allows us to draw the following conclusions of a limited validity, based on the data of the partially uncovered and therefore not wholly valuable graves: in the age group of children and juveniles the furnishing with grave-goods increased with the age; in the adult group no such proportion was observed; above 60 years of age the number of grave-goods is increasing in proportion with age again.

Comparing the number of types of grave-goods with age, we may determine that the most types were buried with those older than 60 years and those between 14 and 30 years respectively.

D. The characters of the cranium cerebrale and viscerale in the framework of the reconstruction:

In view of the quantitative and qualitative representative values given for the whole anthropological sample, the characterisation obtainable by summarising the data of the individual metrical and morphological analyses is scarcely equal to the minimum of a sketchy information,and it may be generalized as to the entire one-time population even less.

[++] The large majority of ornaments of clothes and jewels occurred with females,that of implements and arms with males, and finally ritual grave-goods occurred with children and males.

The characters of the cranium cerebrale and viscerale may be summarized as to 11 or 8 individuals of the 20 adults. As a trend we may recognise the frequency of dolicho-, meso-, brachy-, hypsi-ortho- and metrio-acrocranic. The fact that dolicho-mesocranic occurs with hypsi-orthocranic and metriocranic bears out the conclusion in the given instance that hybridization is pronounced in our portion of population. Naturally we are unable to draw any far-reaching, verified conclusions from the low number of cases. Pronounced brachycranic may be observed in the case of two men. It follows from the determining factors given in the main measures that the shape of the skull is mostly ellipsoides and in a lesser degree sphaeroides in the norma verticalis.

As to the characters of the cerebral cranium the index transversalis fronto-parietalis is relatively uniform, as eurymetopic is the most frequent with both sexes. Lambdoid flattening is to be observed in the cases of pronounced brachy-cranic and mesocranic.

We are able to say even less of the characters of the facial skeleton. In the case of 5 adult individuals we find the feature of meso-euryprosopic. As to form, the pars malars of the os zygomaticum, the considerable flatness of the face and the wider absolute measures are more decisive factors. The character of the orbital cavity is determined by mesokonchial type; formally the presence of medium high, rounded-off quadrangular orbital cavity is more frequent. In the cases of the examined male skulls delimitation appears towards mesorrhiny, in that of the female skulls towards chamaerrhiny. On male skulls the nasal root is medium high, the bony nasal bridge is high and straight; on female skulls the nasal root is wider, the nasal bridge short and slightly concave.

We have refrained from more detailed characterization intentionally, as eventualities may lead easily to erroneous information; the characters given on not more than one third of the facial skeletons do not allow us to generalize even as to the sample.

We were able to define the status of teeth in the case of 15 adult indi-viduals /in 2 cases only the lower row of teeth/, but we did not regard the analysis of measures and form as reasonable, owing to the small number of instances /Table 5, 6/.

E. Characters of the skeletal bones, constitution, stature:

In consequence of the very small representative values of the skeletons we were able to draw inferences only from the measures of the long bones of the extremities and the degree of appearance of their anatomic details. As regards the appearance of measures and forms we may observe a certain duality. On one hand in the case of some individuals the shortness of the long bones, their gracility, the weak and disappearing appearance of anatomic details are deter-mined; on the other hand the bones of the skeleton and the extremities are robust, the anatomic formulae are more pronounced and the long bones of the extremities are longer accordingly in the case of some individuals.

We were able to define the stature in the instance of 12 individuals /7 males, 5 females/. The data regarding stature show a slight tendency towards the „low - small medium" and the „tall - large medium" stature groups. Women had rather a small medium - medium stature.

The characteristics of constitution were determined in the case of all the 20 adult individuals. The duality mentioned as regards the whole sample and both sexes is pronouncedly expressed here. Leptosome and pykno-athletic constitution occurred in 8 instances each. 2 individuals each were lepto-athletic and pyknic.

The representative value of the constitution given for the whole sample is 0.80 /Tables 7-14/.

F. The evaluation of pathologic changes in the frame of biological reconstruction:

In the sample of 33 individuals 12 adults of the 20 /60 per cent/ showed pathologic changes. The number of pathologic lesions observed in the 12 cases is 25, that is to say that more individuals had several pathologic lesions simultaneously. The pathologic change of the vertebral column occurred the most frequently /10 cases/; among these we observed spondylosis deformans in five instances, and spondylarthrosis or arthrosis costovertebralis respectively in other five. The changes found on the vertebral column are all medially severe, nay severe ones. In one instance the change affected the full length of the vertebral column, in 3 cases the thoracic and lumbal vertabrae, in one case the cervical and lumbal vertebrae, in the rest on the latter only. In evaluating the pathologic changes of the vertebral column we have to consider that among the 20 adults only one has been unearthed with the full vertebral column; 10 skeletons had less vertebrae than the half of the spine, and in 5 cases the vertebrae have not been rescued at all.One of these 5 individuals was an adult, 2 belonged to the mature and 2 to the senile age group; we are justified therefore in supposing that we could have found a pathologic change in the latter 4 instances as well. The representative value given for the columna vertebralis is 0.30, marking the measure of drawing conclusions as to the spine and their limited validity.

In three instances we observed arthrosis of the peripherial joints. One of them is more severe /grave 10/, resulting in hindering the movement of the right humerus. The remaining cases were lighter.

In the following we present three individual cases, especially significant from the paleopathological point of view.

1/ On the skeleton of the female, aged 54 to 58 years, in grave 19 we found the ossification of the thoracic vertebrae VIII and IX, their bodies and the articular processes. In the longitudinal section of the block vertebra resulting thereby, the perfect structural coalescence of the diploe of both vertebrae was well definable. This proves that the process leading to the pathologic curvature of the vertebral column /gibbus/ was healed and came to a rest in the bone. This change might be the result either of the compressional fracture of the vertebra, or possibly of a chronic specific inflammatory process /tuberculosis/. The structure of the bone proves that the individual overcame the illness, although it might have been a long process demanding quiet rest for a considerable time.

2/ The coxa vara adolescentium observed on the bones forming the left hip-joint of a man, aged 28 to 32 years found in grave 32, is the result of a pathologic process during puberty, epiphyseolysis,involving the considerable shortening of the extremity.

3/ The definition of the premature ossification of sutures on the skull of the individual from grave 8, was made possible by the fact that there was a wide divergence between the age estimated on the basis of the ossification of the calvaria and the condition of the skeletal bones. Relying on the skeletal bones we were bound to estimate the age of the man between 25 and 29 years, whereas we ought to have regarded him as surpassing 50 years on the basis of the calvaria. In view of the fact that besides the ossification of the main sutures of the calvaria we have observed also pronounced impressions of the gyri, alluding to chronic increased of pressure in the cerebral cavity,we were able to state the early ossification of sutures.

Teeth could be investigated in the case of 15 adult individuals, in 2 instances the teeth of the lower row only. Among them we found 6 caries,5 cystae of the roots and 3 carious roots only. The wear of teeth, abrasio proved to be very pronounced as compared with age in all cases, joined by paradentosis as well. The latter reached degree III in the second half of the mature age group on the observed individuals.

a/ The large majority of the found changes /76.9 per cent/ may be judged as severe or moderately severe from the morphological point of view, involving evidently clinical complaints as well /5/ /Table 15/. In the present paper we refrain from analyzing the general significance for the population of the unusually large percentage and severe character of the pathological lesions. We must remark, however, at any rate that the pathological phenomena are revealing the possibility of hard living conditions, hygienically bad dwellings and continuous great physical strain.

b/ In connection with the pathologic changes and illnesses observed on the skeletons of both males and females we may state that the community held them in esteem during their illness and after death as well, since they were buried with grave-furniture too.

c/ In connection with the individual buried in grave 32 we want to make a specific observation. Since the implements of a smith were buried with the deceased, this may be valuated as a clue to his occupation.This would be the more justified as the connection between smithery and limp is generally known. However, there is another possibility, namely that the implements of a smith were added to the grave-furniture as the insignis of power.As the deceased person was provided with weapons as well /an arrow-head/, the inverse explanation is also possible. In view of the importance of this problem we intend to give the detailed biological and sociological reconstruction at another occasion only, alluding to the problem here.

G. <u>The possibilities of the typological reconstruction of the partial population:</u>

a/ Since the degree of exploration of the cemetery and the quantitative and qualitative representation of the uncovered graves decidedly demand moderation, we intend to allude to those typological tendencies only in the framework of typology which are resulting from the data and facts reviewed in course of the individual reconstruction immediately. The typological elements of the partial population are European major group; the dolicho-mesomorphic and brachymorphic components are almost equally represented among them. In view of stature, constitution and taxonomic characters, the former ones may be delimited mainly towards the Mediterranean /m/ and Nordic /n/ directions. A corresponding occurrence may be stated in the brachymorphic group, most probably identical with the Europid-brachycranic component /p/. Beside the mentioned types we have recognized South Sibirian features, accompanying the decided Europoid characters, in the case of three individuals, and the features of the Uralic type /u/ in one instance.

To sum up, nine individuals had a fundamentally Europoid character, and with other five individuals the Europoid features were linked by Mongoloid characters.Relying on regional comparison,

we shall be enabled to give a wider ethnogenetical analysis only, if numerous contemporary cemeteries will be dealt with in a similar sense, situated in the surroundings of the site.

b/ We have investigated whether there was a connection between typological structure and archaeological material generally. In the two large definable anthropological groups /dolichomorphic and brachymorphic/ individuals provided with grave-goods and lacking such are equally found. The archaeological material of the individuals belonging to the brachymorphic group is as follows: plain lock-ring, ear-ring, heart-shaped pendant, bracelet, belt with fittings, ring, knife, flint and steel, partial horse burial and coin. The grave-goods of the individuals belonging to the dolichomorphic group are: plain lock-ring and one ending in S, bracelet, knife, flint and steel. The anthropological typological difference, connected with the difference of the grave-goods in a degree, might allow the inference that there were chronological or ethnical differences in the background. The detailed analysis and justification of such connections, however, cannot be given here,at variance with the custom followed generally hitherto, as our material is defective and scanty, nor is it uncovered in a satisfactory degree.

c/ No causal connection can be established between the anthropological types and the situation of the forearms.

H. Other characteristics /symbolic trephining/:

In the case of two individuals /graves 1 and 9/ we were able to recognize a symbolic trephining. Both individuals belong to the senile age group, their typological character is brachyform type and South Sibirian /t/ respectively. The individual of grave 1 is male, that of grave 9 is female. The symbolic trepanation is circular in both cases, having been executed a long time before death, as it is born out by the reaction visible on the surface. In the case of the female two symbolic trephinings may be distinguished, executed at two different occasions.

I. Reconstruction attempted on the basis of the archaeological material:

a/ In the graves of the partially excavated cemetery the order of finds, established on the frequency of occurrence, is as follows: plain ring, knife, bead, flint, ear-ring, bracelet, buckle of belt, ornament of dresses, ring, arrow, quiver, coin, ring ending in S, necklace, button of clothes, hook, mount of belt, clasp of a sabretashe, bracing strut of a sabretashe, bow, stirrup, buckle of an implement, chisel, vessel, fragment of a vessel, bones of horses, animal bones, egg-shell.

b/ The classification of the archaeological material into three groups /I. ornaments of clothes and jewels, II. implements and arms, III. definitely ritual objects/ gives the following results: I: 42.8 per cent; II: 35.7 per cent; III: 21.4 per cent.

c/ In the graves with grave-furniture more or less types of objects are occurring. On the basis of the data gained from the single graves the frequency of the occurrence of the types of finds is as follows: /Type of find - per cent/: 13 - 3.0 per cent; 8 - 3.0 per cent; 4 - 6.1 per cent; 3 - 12.1 per cent; 2 - 18.1 per cent; 1 - 27.2 per cent; 0 - 30.3 per cent.

d/ Relying on the uncovered finds and the burial rites we may state that the part of the cemetery dealt with here has been used in the

first half of the eleventh century. In connection with this general observation we are able to make a few remarks as regards the chronology of the use of the cemetery and the persons buried therein.

Unfortunately the deficiencies of the excavation deprive us of many possible conclusions. However, we endeavour to fix the time limits between which the cemetery might have been used, relying on the vital statistic data of the interred persons.

1/ The date of the three coins, the years 1046-1060 /taking the mean 1050 A.D./ is the starting point of the question of chronology.

If the time of the coins coincides with the last burials, the beginning of the use of the cemetery may be dated to 980, since the uncovered part of the Gáva cemetery has contained two generations, covering 70 years on the basis of the span of 35 years reckoned for one generation. Supposing that the burials were begun in 1050 A.D. the time of the last burial may be put to 1120 for similar reasons. So presumably the maximum range of the use of the cemetery was from 980 to 1120. Since the archaeological material /burials with weapons and horses, metal implements assign to the tenth century/ seems to support the earlier dating to the lower limit as the real one.

2/ On the other hand, considering the age data of the individuals buried in the cemetery, it is most significant that the oldest person buried there was 80 years of age, because this fact gives us two possibilities. Presuming that he was the first interred there /980 A.D./ he must have been born in 900. If he was born at the time of the first burial in the cemetery, then on the basis of his age /80 years/ he was interred in 1060. But if he was born at the date of the coins in question, he must have been interred in 1130. So, the dating of the population of the cemetery may be put in the range of 230 years /900-1130 A.D./.

In the case of a complete excavation the time limit could be reconstructed more exactly, especially as regards the inner chronology of the cemetery, providing ample opportunity for a futher analysis.

Conclusion:

According to its aims, our methodological study has endeavoured to give an individual and a comprehensive reconstruction of the one-time community buried in the treated cemetery; it wanted to furnish data with a known representative value on this community, and to assess the validity of conclusions which may be drawn from them. The partial uncovering and the anthropological and archaeological material gained by it are focussing attention on the difficulties, resulting from inquiries made without the real valuation of the conditions. At the same time we wanted to reconstruct man and his material culture as a unity in our paper, in order to illustrate that the two cannot be separated and a simple parallel treatment does not correspond to reality.

Table 4

Comprehensive table of sex, age, constitution, stature, pathologic lesions defined for the anthropological finds, together with their representative values

No.	Grave no.	Inv. no.	Gen. repr. value		Sex	Sexualization	Repr. value	Age	Repr. value	Constitution	Repr. value	Stature	Pathology	Repr. value of vert. col.	Note
			Quant.	Qual.											
1	1	10281	0.5	0.25	M	+0.61	0.7	76-80	0.6	P-A	0.2	-	+++	0.2	Symb. trep.
2	2	10282	0.6	0.25	M	+0.70	0.7	56-60	0.6	P-A	0.2	163.4	++	0.3	
3	3	10283	0.5	0.25	M	+1.08	0.7	48-52	0.9	P-A	1.0	171.1	+++	0.5	
4	4	10284	0.4	0.25	M	+0.25	0.2	23-x	0.4	P	0.2	-	-	0.3	
5	5	10285	0.7	0.25	F	+0.28	0.7	41-45	0.6	L	1.0	-	+	0.2	
6	6	10286	0.3	0.25	M	+1.07	0.7	35-65	0.4	P-A	0.2	-	+	0.0	
7	7	10287	0.4	0.25	M	0.00	0.0	52-56	0.6	L	1.0	-	-	0.6	
8	8	10288	0.7	0.25	M	+0.69	0.7	30-34	0.9	P-A	1.0	162.5	-	0.9	
9	9	10289	0.6	0.25	F	+0.61	0.7	66-70	0.6	P-A	1.0	152.3	-	0.0	Symb. trep.
10	10	10290	0.7	0.25	M	+1.05	0.9	50-54	0.6	P-A	1.0	159.0	+	0.3	
11	11	10291	0.7	0.25	M	+0.35	0.7	50-54	0.6	L	1.0	161.5	+	0.3	
12	12	10292	0.3	0.25	F	-0.75	0.2	50-54	0.4	L	1.0	155.0	+	0.2	
13	13	10293	0.7	0.50	Ch	-	-	15-16	-	-	-	-	-	-	
14	14	10294	0.2	0.00	M	+1.33	0.2	63-67	0.4	L?	0.2	-	-	0.0	
15	15	10295	0.3	0.00	F	-1.00	0.2	56-60	0.4	L	1.0	160.0	-	0.0	
16	16	10296	0.7	0.25	Ch	-	-	15-16	-	-	-	-	-	-	
17	17	10297	0.7	0.50	M	+0.65	1.0	63-67	0.9	L-A	1.0	164.3	++	0.3	
18	18	10298	0.5	0.25	Ch	-	-	0.7	-	-	-	-	-	-	
19	19	10299	0.6	0.25	F	-0.23	0.7	54-58	1.0	L	1.0	156.0	++	0.1	
20	20	10300	0.3	0.00	Ch	-	-	6	-	-	-	-	-	-	
21	21	10301	0.5	0.25	Ch	-	-	6	-	-	-	-	-	-	
22	22	-	0.0	0.00	Ch	-	-	0.6	-	-	-	-	-	-	
23	23	-	0.0	0.00	Ch	-	-	0.6	-	-	-	-	-	-	Observ. at excav.
24	24	10302	0.7	0.25	Ch	-	-	0.2	-	-	-	-	-	-	
25	25	10303	0.7	0.25	M	+0.20	1.0	23-27	1.0	P	1.0	-	-	1.0	
26	26	-	0.0	0.00	Ch	-	-	0.6	-	-	-	-	-	-	Observ. at excav.
27	27	10304	0.7	0.25	Ch	-	-	7.5	-	-	-	-	-	-	
28	28	10305	0.7	0.50	Ch	-	-	15-16	-	-	-	-	-	-	
29	29	10306	0.5	0.25	Ch	-	-	1.5	-	-	-	-	-	-	
30	30	10307	0.5	0.25	Ch	-	-	5	-	-	-	-	-	-	
31	31	10308	0.6	0.50	F	-0.27	0.7	25-29	0.6	L-A	1.0	154.1	-	0.0	
32	32	10309	0.8	0.50	M	+1.46	0.8	28-32	0.6	L-A	1.0	170.7	+++	0.9	
33	33	10310	0.7	0.75	F	-0.80	1.0	23-27	0.9	L-A	1.0	154.7	-	0.8	

M = male F = female Ch = child

Table 5

Craniometric Series

Individual Measurements

	Grave No.:	1	2	5	6	8	9	10	11	17	19	31	32	33
	Inv. No.:	10281	10282	10285	10286	10288	10289	10290	10291	10297	10299	10308	10309	10310
	Age:	76-80	56-60	41-45	35-65	30-34	66-70	50-54	50-54	63-67	54-58	25-29	28-32	23-27
	Sex:	o	o	♀	o	o	♀	o	o	o	♀	♀	o	♀
1.	Glabella-occipital lenght	176	165	175	178	187	180	190	176	187	174	-	172	176
5.	Basion-nasion lenght	-	-	99	102	/105/	-	105	98	100	99	-	102	-
8.	Maximum breadth of cranium	-	148	130	140	/140/	136	144	129	136	130	145	152	/132/
9.	Minimum frontal diameter	101	100	94	97	100	96	100	90	97	92	95	97	85
10.	Maximum frontal diameter	/120/	129	106	119	115	117	119	106	115	100	115	125	111
17.	Basion-bregma height	/140/	-	133	133	129	-	131	132	133	130	-	142	-
20.	Porion-bregma height	110	107	109	107	112	117	113	109	111	105	116	110	111
26.	Frontal arc	126	124	120	114	112	125	129	114	130	116	120	118	114
27.	Parietal arc	113	133	119	116	140	130	118	118	136	129	142	122	121
28.	Occipital arc	100	84	111	113	107	-	123	93	113	101	-	110	118
29.	Frontal chord	110	108	107	104	107	109	114	104	119	107	111	107	105
30.	Parietal chord	101	111	104	105	129	114	113	108	122	110	119	108	114
31.	Occipital chord	89	93	92	90	87	-	94	93	90	90	-	89	96
32/1-a.	Frontal angle	49°	57°	47°	47°	49°	/43°/	52°	63°	49°	51°	55°	54°	/55°/
38.	Calculated cranial capacity	-	-	1290	1430	1420	-	1505	1260	1460	1230	-	1520	-
40.	Sup. facial lenght	-	-	89	94	103	-	102	-	83	95	-	88	-
44.	Biorbital breadth	-	-	96	96	103	99	97	-	99	91	100	97	93
45.	Bizygomatic breadth	-	-	-	129	/140/	-	/139/	-	-	120	130	/134/	-
46.	Maxillar breadth	-	-	91	90	/111/	/87/	/102/	-	/100/	93	93	96	93
47.	Total facial height	-	-	122	114	124	-	-	-	112	106	/108/	118	-
48.	Upper facial height	-	-	/72/	69	78	-	78	-	68	63	/62/	71	/68/
51.	Orbital breadth	-	41	42	40	44	42	41	-	43	38	42	40	41
52.	Orbital height	-	/31/	34	33	37	31	37	-	33	31	33	33	37
54.	Nasal breadth	-	-	24	24	27	-	26	-	26	26	28	25	-
55.	Nasal height	-	-	53	/51/	55	-	57	-	50	49	/47/	52	50
62.	Palatal lenght	48	-	-	/38/	43	-	44	-	36	43	38	-	-
63.	Palatal breadth	35	-	-	37	41	-	36	-	31	38	37	-	-
65.	Bicondylar-diameter	/132/	/117/	-	113	-	-	-	-	119	-	-	124	-
66.	Bigonial diameter	111	106	/101/	94	97	97	107	-	97	90	-	109	90
69.	Mental height	32	28	31	28	33	30	36	28	28	28	28	32	25
70.	Ramus height	64	63	58	76	64	-	-	62	58	55	-	57	64
71.	Ramus breadth	34	33	31	35	33	32	34	30	30	32	-	28	32
72.	Total facial angle	-	-	-	86°	/88°/	-	-	-	85°	87°	-	84°	-

Table 6

Craniometric Series. Individual Indices

Indices following Martin	Grave No.: / Indices	1.	2.	5.	6.	8.	9.	10.	11.	17.	19.	25.	31.	32.	33.
8:1	Length-breadth index	-	89.70	74.29	78.65	/74.87/	75.56	75.79	73.30	72.73	74.71	-	-	88.37	/75.00/
17:1	Length-height index	79.55	-	76.00	74.72	68.98	-	68.95	75.00	71.12	74.71	76.60	-	88.56	-
17:8	Breadth-height index	-	-	102.31	95.00	/92.14/	-	90.97	102.33	97.79	100.00	-	-	93.42	-
20:1	Length-OBH-index	62.50	64.85	62.29	60.11	59.89	65.00	59.47	61.93	59.36	60.64	59.04	-	63.95	63.07
9:8	Transv. fronto-parietal index	-	67.57	72.31	69.29	/71.40/	70.59	69.44	69.77	71.32	70.77	-	65.52	63.82	/64.32/
9:10	Transverse-frontal index	84.17	77.52	88.68	81.51	86.96	82.91	84.91	84.90	84.34	-	-	82.60	77.60	76.57
47:45	Facial index	-	-	-	88.37	88.57	-	-	-	-	88.33	-	/83.08/	88.06	-
48:45	Upper facial index	-	-	-	53.49	55.70	-	56.10	-	-	52.50	-	/47.69/	52.99	-
52:51	Orbital index	-	75.61	80.95	82.50	84.09	73.81	90.24	-	76.74	81.58	-	78.57	82.50	90.24
54:55	Nasal index	-	-	45.28	47.06	49.09	-	45.61	-	52.00	53.06	-	59.57	48.08	-
60:61	Maxillo-alv. index	112.96	-	-	-	-	-	105.26	-	128.80	112.96	-	128.57	-	-
63:62	Palatal index	72.92	-	-	97.37	95.35	-	81.82	-	86.11	88.37	-	97.37	-	-

Table 7

Skeletal Measurements and Indices

A/ Sacrum

Grave No.:	3.	8.	12.	17.	32.	33.
1. Arch length = = no of incorporated vertebrae	120	-	-	103	-	117
2. Anterior straight length	104	-	-	95	-	109
5. Anterior superior straight breadth	125	122	113	122	128	119
2:1 Arch-chord index	86.6	-	-	92.2	-	93.1
5:2 Length-breadth index	83.2	-	-	77.8	-	91.6

Table 8

Skeletal Measurements and Indices

B/ Clavicula

Grave No.:	1.		3.		4.		8.		9.	
	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1. Maximum length	-	-	147	145	-	-	151	156	-	-
2. Circumference at middle	42	40	38	40	38	35	41	42	35	36
1:2 Index robusticitas	-	-	25.9	27.5	-	-	27.1	27.1	-	-

Table 8 /contd./

	10.		11.		12.		15.		17.		19.		31.		32.		33.	
	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	-	-	-	-	-	-	-	-	-	-	130	132	-	-	-	-	-	-
2.	39	35	36	35	-	40	35	38	35	37	35	35	35	35	38	40	29	-
1:2	-	-	-	-	-	-	-	-	-	-	26.8	26.5	-	-	-	-	-	-

Table 9

Skeletal Measurements and Indices

C/ Humeri

Grave No.:		1.		2.		3.		4.		8.	
		r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	Maximum length	-	-	307	-	343	-	-	-	318	314
2.	Total length	-	-	305	-	339	-	-	-	314	310
4.	Breadth of distal epiphysis	-	-	46	47	47	-	-	-	44	-
5.	Max. diam. at middle	-	24	26	25	25	-	23	22	24	24
6.	Min. diam. at middle	-	18	23	22	18	-	18	18	20	21
7a.	Circumference at middle	-	75	75	70	75	-	65	62	70	68
9.	Max. breadth of caput	-	-	/40/	-	/43/	-	-	-	40	41
6:5	Transversal index of diaphysis	-	75.0	88.4	88.0	72.0	-	78.2	81.8	83.3	87.5
7:1	Length-thickness index	-	-	24.4	-	21.8	-	-	-	22.0	21.6

Table 9 /contd./

	9.		10.		11.		12.		15.		17.		19.		32.		33.	
	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	-	-	-	-	-	-	-	-	-	-	-	-	304	-	-	-	-	-
2.	-	-	-	-	-	-	-	-	-	-	-	-	300	-	-	-	-	-
4.	-	-	-	-	-	-	-	-	-	-	-	-	42	-	44	-	-	-
5.	19	18	24	24	21	22	24	22	22	22	23	22	23	18	25	-	15	18
6.	16	16	18	18	16	15	17	17	16	16	12	19	15	15	19	-	13	14
7a.	60	62	70	67	64	64	67	65	62	60	65	65	63	56	73	-	50	62
9.	-	-	-	-	-	-	-	-	-	-	-	-	42	42	-	-	-	-
6:5	84.2	88.8	75.0	75.0	76.1	68.1	70.8	77.2	72.7	72.7	52.1	86.3	65.2	83.0	76.0	-	86.6	77.7
7:1	-	-	-	-	-	-	-	-	-	-	-	-	20.7	-	-	-	-	-

Table 10

Skeletal Measurements and Indices

D/ Radii

	Grave No.:	1.		2.		3.		4.		8.	
		r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	Maximum length	-	-	246	245	-	-	-	-	-	237
4.	Transversal diameter of diaphysis	-	17	20	20	19	-	17	-	15	16
5.	Sagittal diameter of diaphysis	-	12	12	12	12	-	11	-	12	12
5:4	Transversal index of diaphysis	-	-	-	-	-	-	-	-	-	-

Table 10 /contd./

	9.		10.		11.		12.		15.		17.		19.	
	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	-	-	-	219	229	-	220	-	-	-	241	234	-	224
4.	16	16	18	18	16	15	15	16	15	15	14	15	16	15
5.	11	11	11	12	10	10	10	11	11	10	11	11	10	10
5:4	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 11

Skeletal Measurements and Indices

E/ Ulnae

	Grave No.:	1.		2.		3.		4.		8.	
		r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	Maximum length	-	-	-	-	-	-	-	-	-	-
13.	Upper transversal diameter of diaphysis	-	18	16	17	17	17	17	-	20	-
14.	Upper dorso-volar. diameter of diaphysis	-	14	15	15	17	16	13	-	14	-
13:14	Index of platolenia	-	128.5	106.6	113.3	100.0	106.2	130.7	-	142.8	-

Table 11 /contd./

	9.		10.		11.		12.		15.		17.		19.		31.		33.	
	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.	16	16	16	18	16	18	16	17	14	14	-	16	16	16	16	15	15	13
14.	11	11	12	13	12	13	10	11	10	11	-	14	13	10	12	12	11	11
13:14	145.4	145.4	133.3	138.4	133.3	138.4	160.0	154.5	140.0	127.2	-	114.2	123.0	160.0	133.3	125.0	136.3	118.1

Table 12

Skeletal Measurements and Indices

G/ Femora

	Grave No.:	3.		8.		9.		10.		11.	
		r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	Maximum length	467	465	427	433	-	406	415	416	-	428
2.	Length in natural position	457	458	424	427	-	402	412	410	-	423
6.	Sagittal diameter at middle of diaphysis	33	34	25	28	26	28	27	26	30	29
7.	Transversal diameter at middle of diaphysis	29	30	28	30	25	26	25	29	26	28
9.	Transversal diameter at upper flatting	30	34	27	34	26	28	34	35	30	31
10.	Sagittal diameter at upper flatting	26	28	26	26	26	26	24	24	24	25
19.	Sagittal diameter of caput	45	48	44	45	42	43	43	44	-	41
29.	Collo-diaphysis angle	127°	129°	132°	131°	130°	130°	128°	127°	120°	120°
6+7:2	Index pilastricus	13.5	13.9	12.5	13.5	-	13.4	13.1	13.4	-	13.4
10:9	Index platymericus	86.6	82.3	96.3	76.4	-	-	70.5	68.5	80.0	80.6

Table 12 /contd./

	12.		15.		17.		19.		31.		32.		33.	
	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	-	-	415	415	436	438	424	-	400	400	490	-	414	418
2.	-	-	410	410	434	436	421	-	396	395	483	-	409	414
6.	25	24	23	23	25	27	22	24	26	27	34	-	23	24
7.	25	24	27	27	30	31	26	26	23	24	28	-	23	23
9.	30	30	33	30	34	35	30	30	24	28	31	-	27	26
10.	21	23	22	23	25	25	22	24	23	24	30	-	20	20
19.	44	44	40	39	44	42	41	-	42	42	50	-	42	41
29.	135°	135°	125°	125°	125°	125°	136°	-	142°	145°	145°	-	140°	139°
7:2	-	-	12.1	12.1	12.6	13.3	11.3	-	12.2	12.5	12.8	-	11.2	11.3
10:9	70.0	76.6	66.6	76.6	73.5	71.4	73.3	80.0	95.8	85.7	86.7	-	74.0	76.9

Table 13

Skeletal Measurements and Indices

H/ Tibiae

	Grave No.:	3.		8.		9.		10.		11.	
		r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	Total length	397	394	343	343	-	-	-	-	-	-
1b.	Length /Mollison/	395	393	340	340	-	-	-	-	-	-
8a.	Sagittal diameter at foram. nutrit.	36	36	32	34	31	30	33	34	32	32
9a.	Transvers. diameter at foram. nutrit.	23	23	22	22	20	20	28	28	19	19
9a:8a	Index cnemicus	63.8	63.8	68.7	68.9	64.5	66.6	84.8	82.3	59.3	59.3

Table 13 /contd./

	12.		15.		17.		19.		31.		32.		33.	
	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.	r.	l.
1.	-	-	-	-	-	352	340	340	337	-	-	380	339	340
1b.	-	-	-	-	-	354	344	342	339	-	-	384	340	343
8a.	29	29	33	-	34	34	24	28	30	30	34	32	27	29
9a.	20	20	22	-	24	24	21	18	25	25	25	25	29	27
9a:8a	68.9	68.9	66.6	-	70.5	70.5	87.5	64.2	83.3	83.3	73.5	78.1	107.4	93.1

Table 14

Skeletal Measurements and Indices

F/ Pelvis

Grave No.:	8.		17.		33.	
	r.	l.	r.	l.	r.	l.
1. Height of pelvis	226	-	210	212	183	-
2. Intercristal diameter	274		291		-	
23. Sagittal diameter of pelvic inlet	109		91		-	
24. Transversal diameter of pelvic inlet	130		139		-	
1:2 Breadth height index	82.4		72.1		-	

Table 15

Age Distribution of Pathological Changes

Diagnosis	Adultus n = 5	Maturus n = 10	Senilis n = 4	Expressed in per cent. of total post-juvenil series	
a/ Spondylosis deformans	1	3	1	5	25
b/ Spondylarthrosis et Arthrosis costovertebralis	-	3	2	5	25
c/ Arthrosis deformans	-	2	1	3	15
d/ Osteoporosis symm. sen.	-	1	2	3	15
e/ Status post fracturam	-	3	-	3	15
f/ Status post osteomyelitidem	-	1	-	1	5
g/ Ankylosis vera	-	2	-	2	10
h/ Status post fracturam vert.,seu spondylitis specifica	-	1	-	1	5
i/ Coxa vara adol.	1	-	-	1	5
j/ Traces of increased chronic intracranial pressure	1	-	-	1	5
Total:	3	16	6	25	

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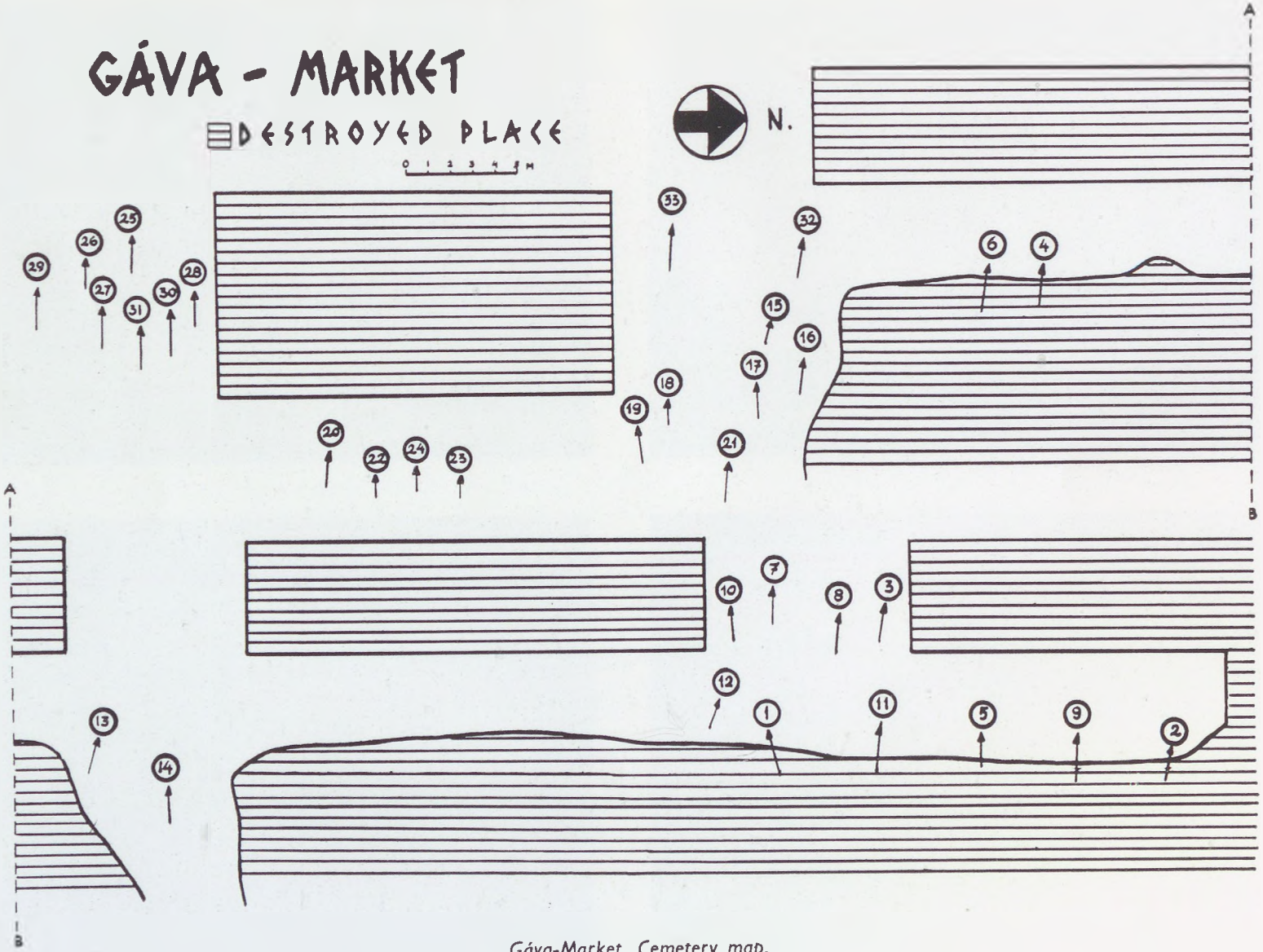
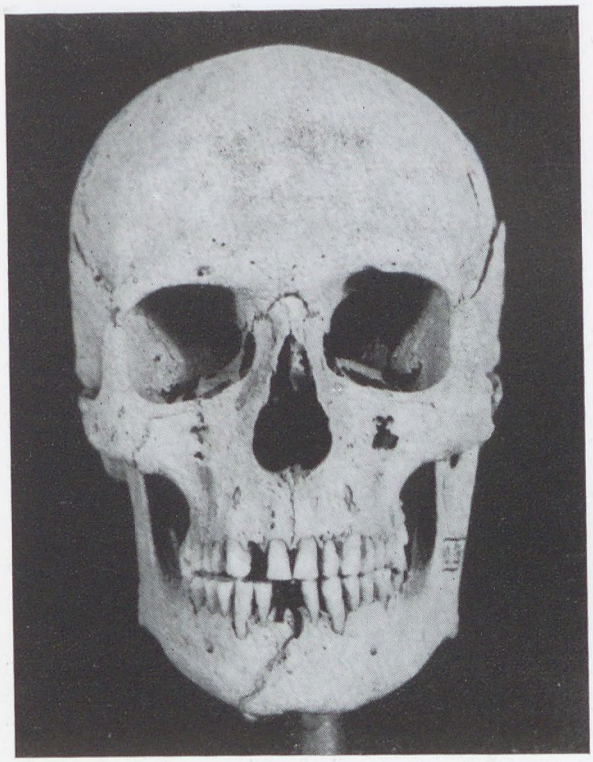
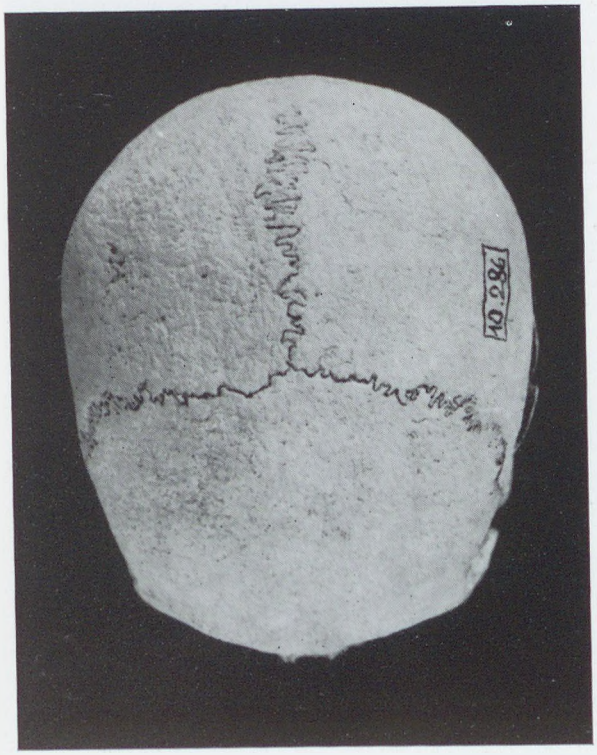
MTA Könyvtára

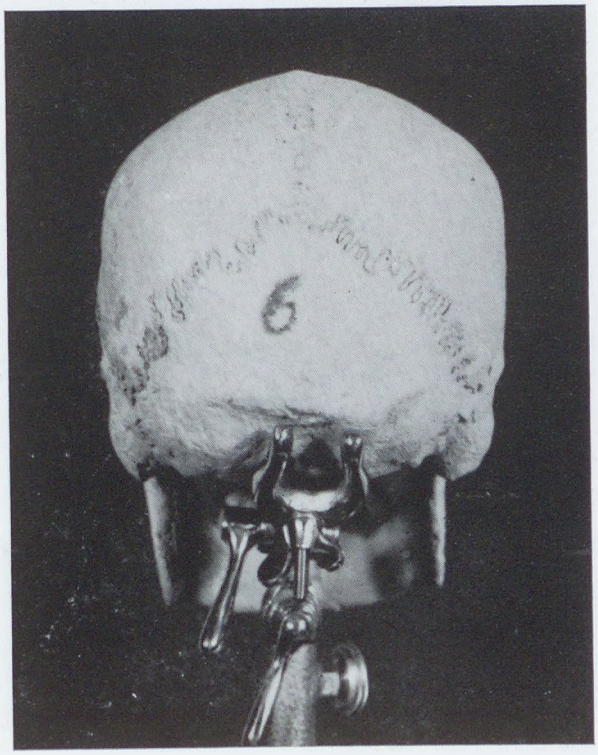


Gáva-Market. Cemetery map.

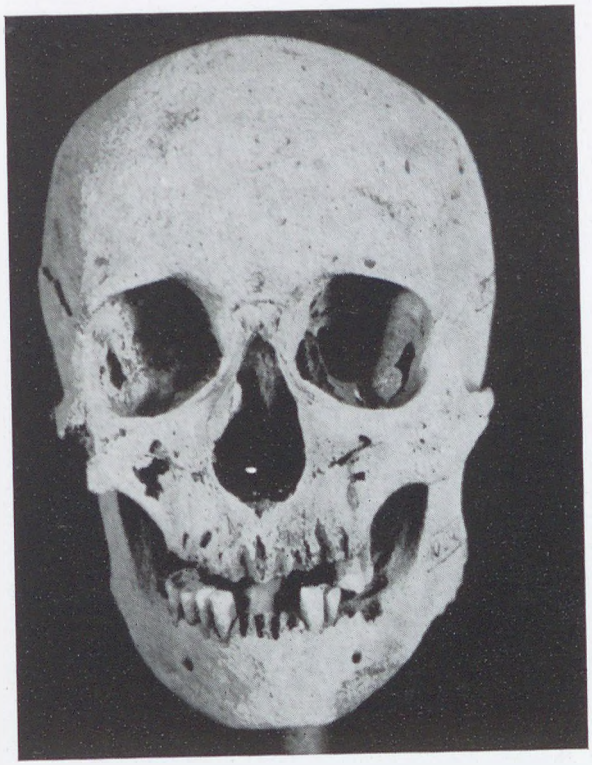
Plate I.

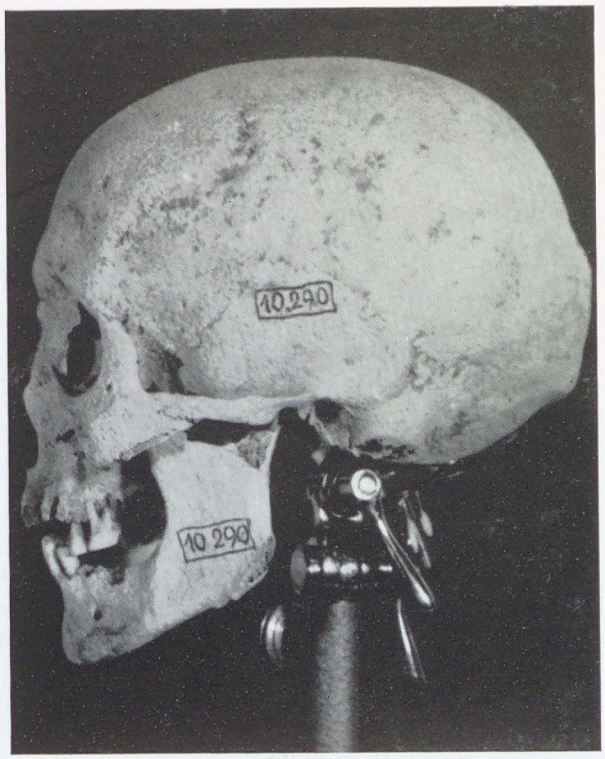






Gáva-Market. 1—4: Grave 6.





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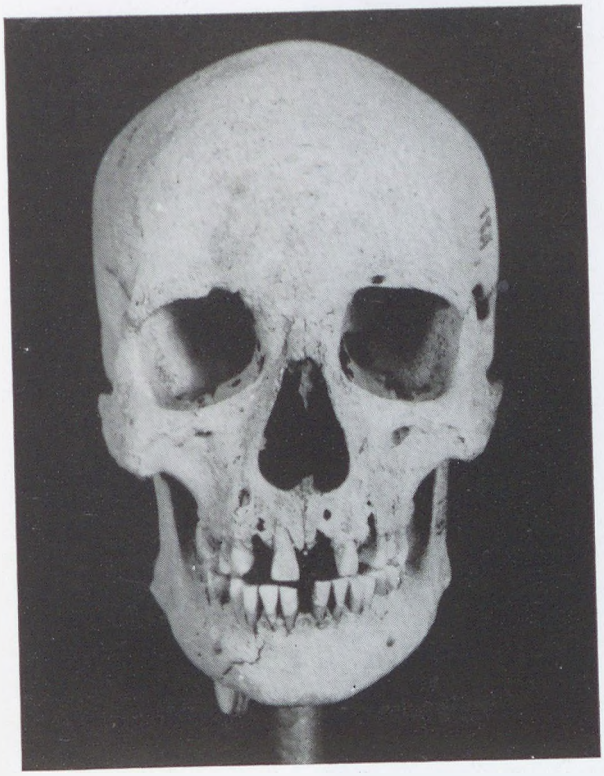

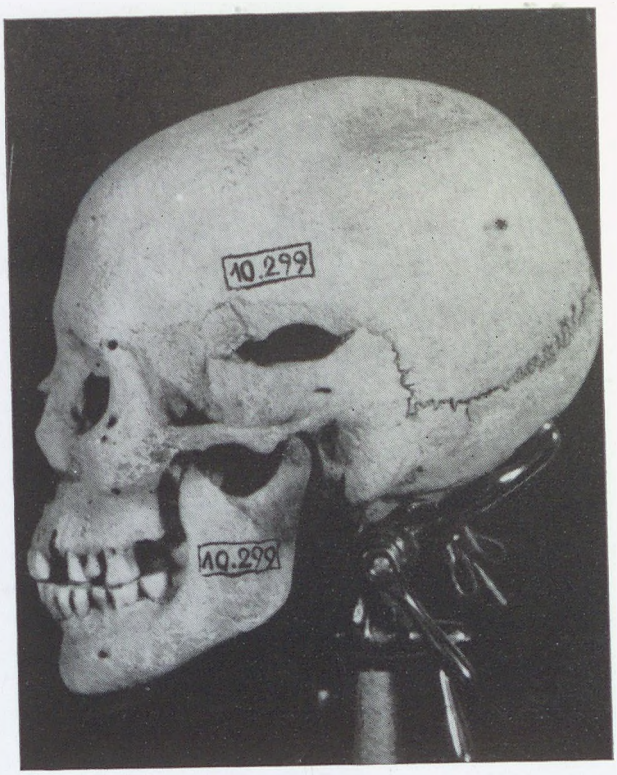

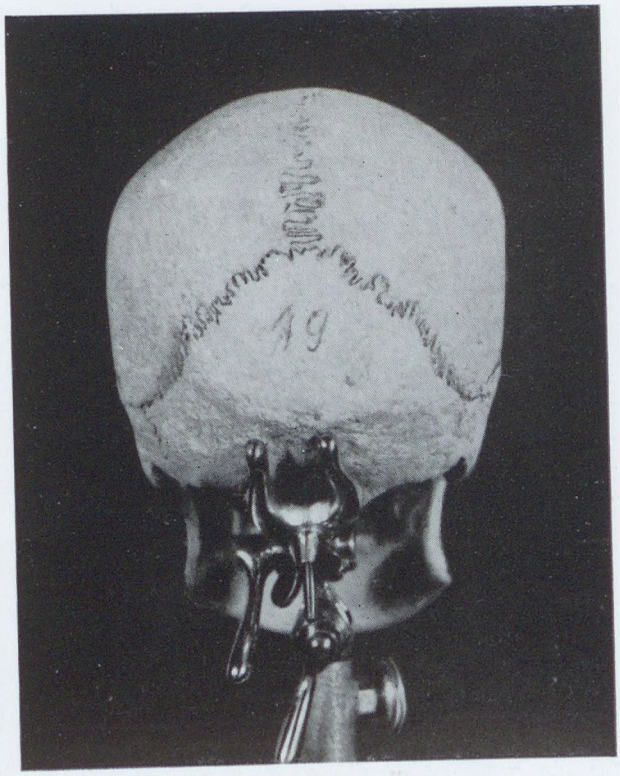

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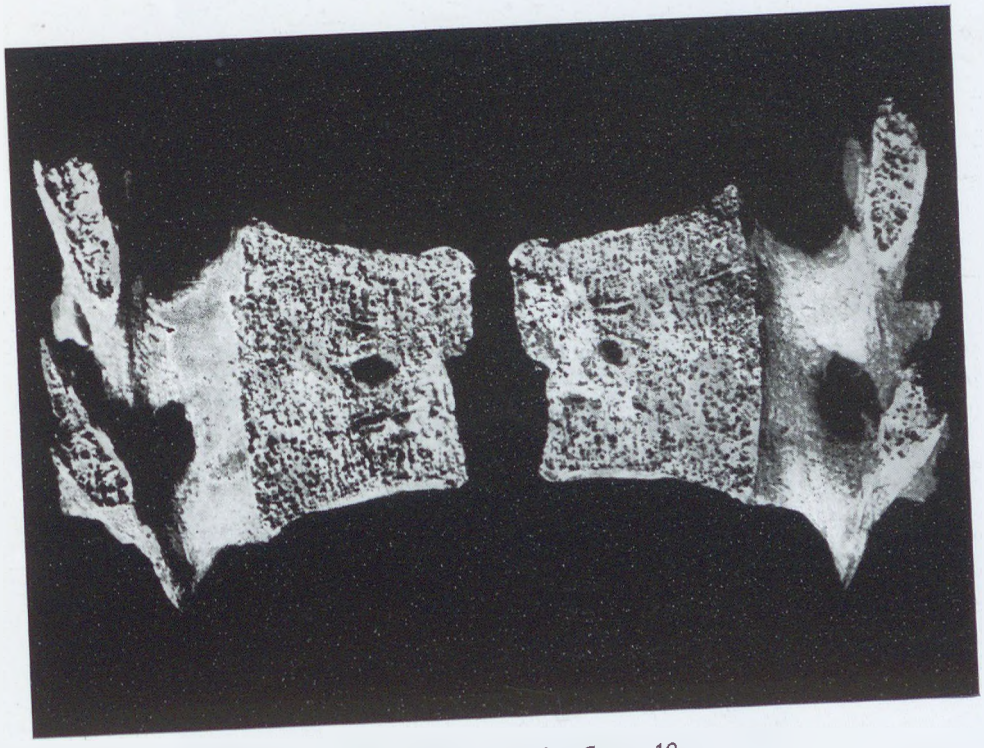
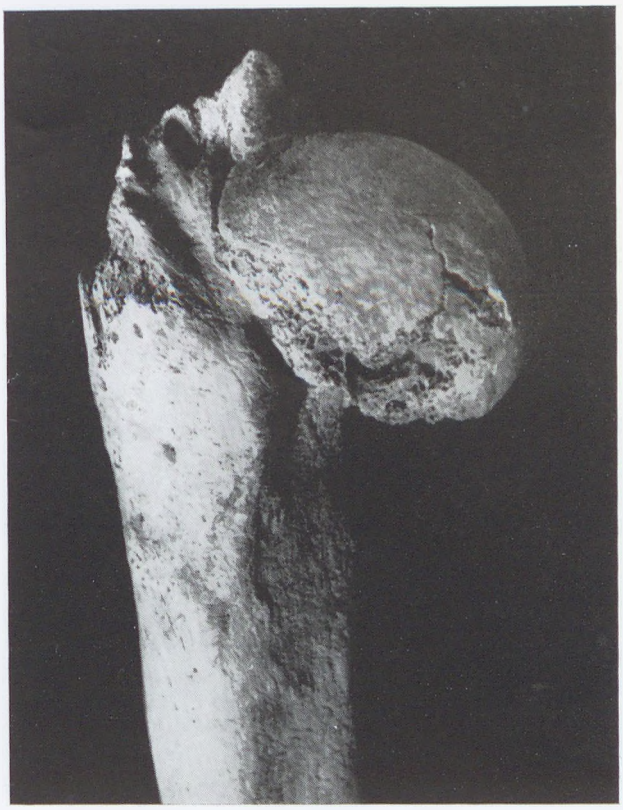


Gáva-Market. 1—2: Grave 19.



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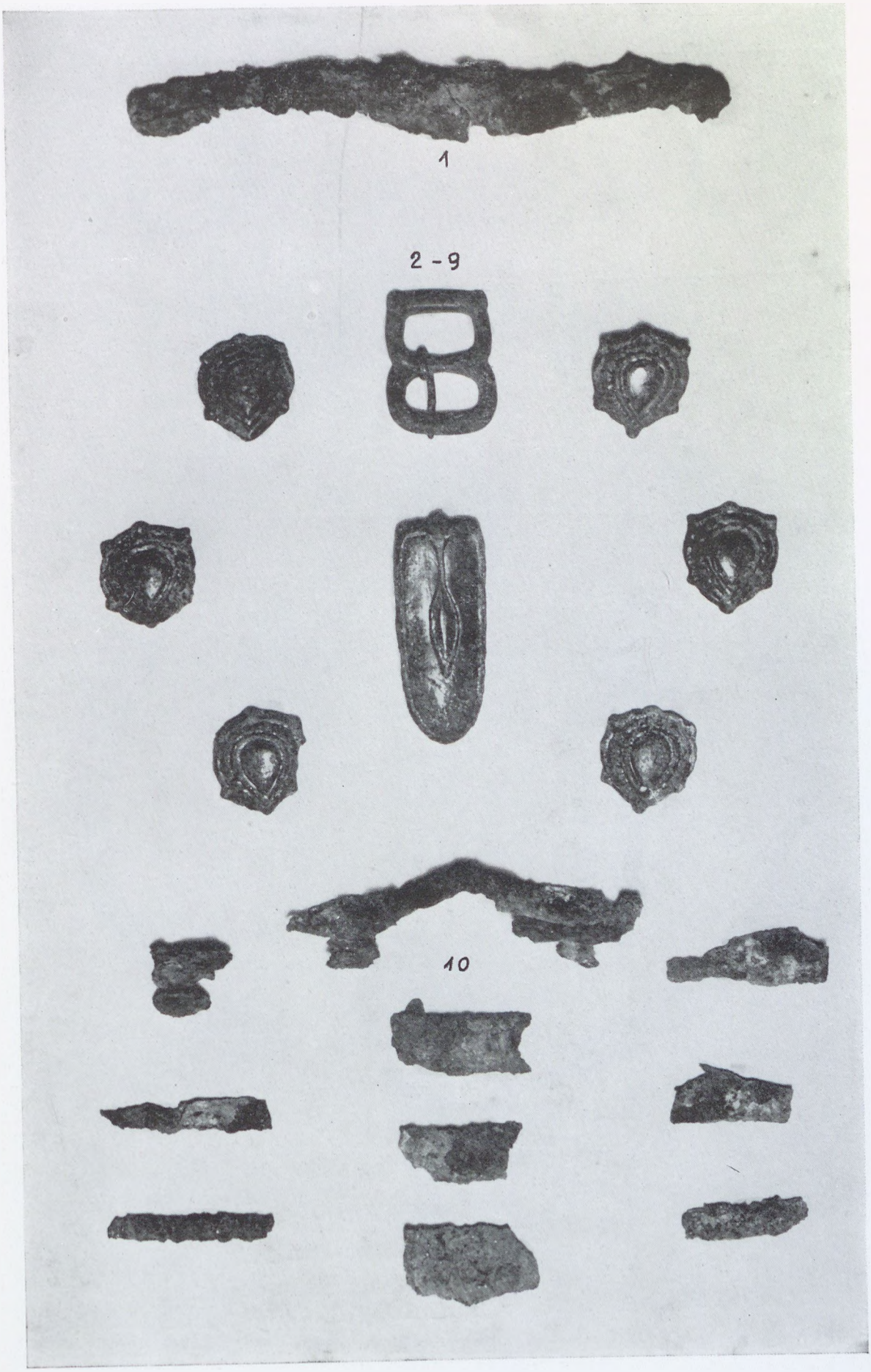

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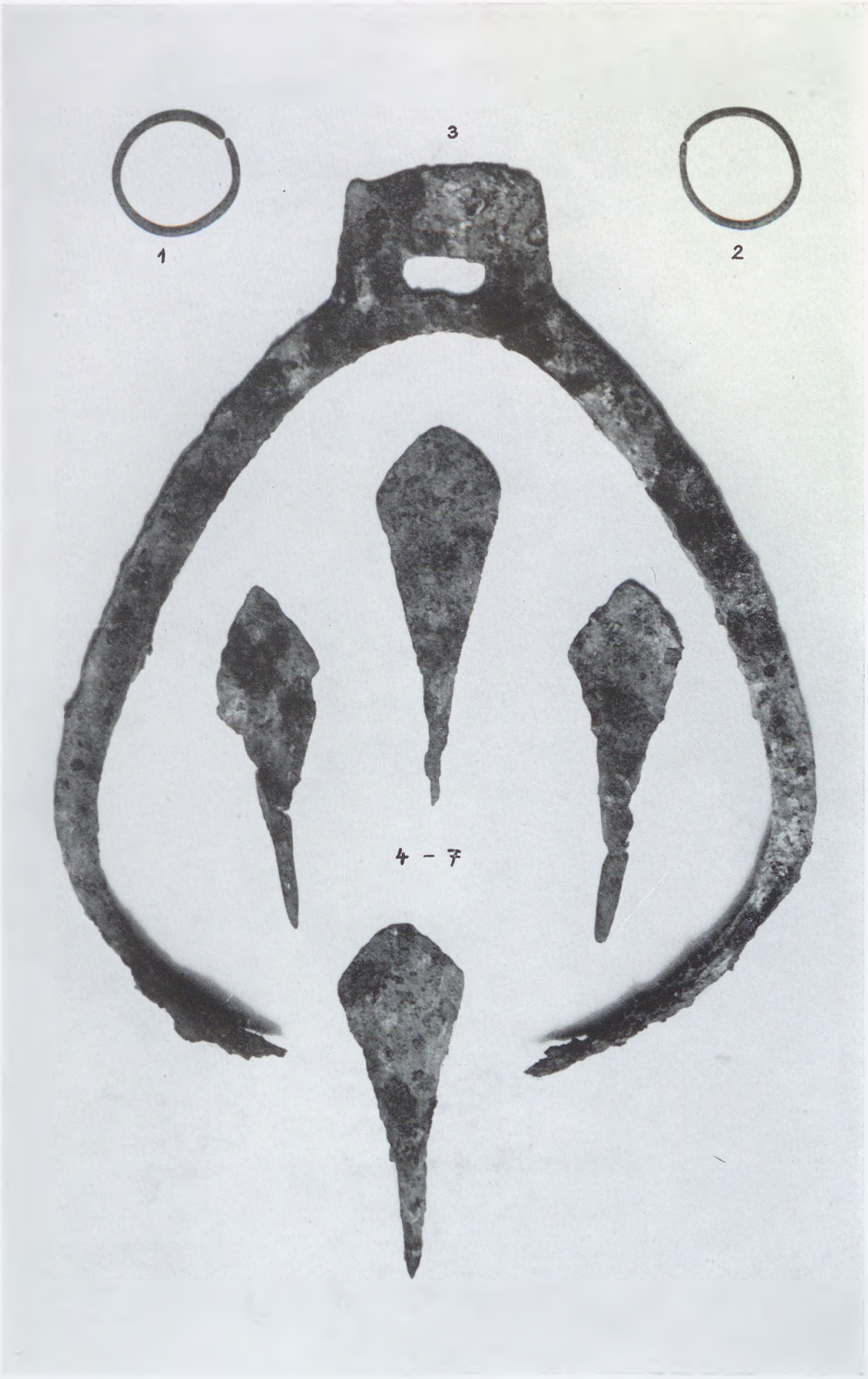

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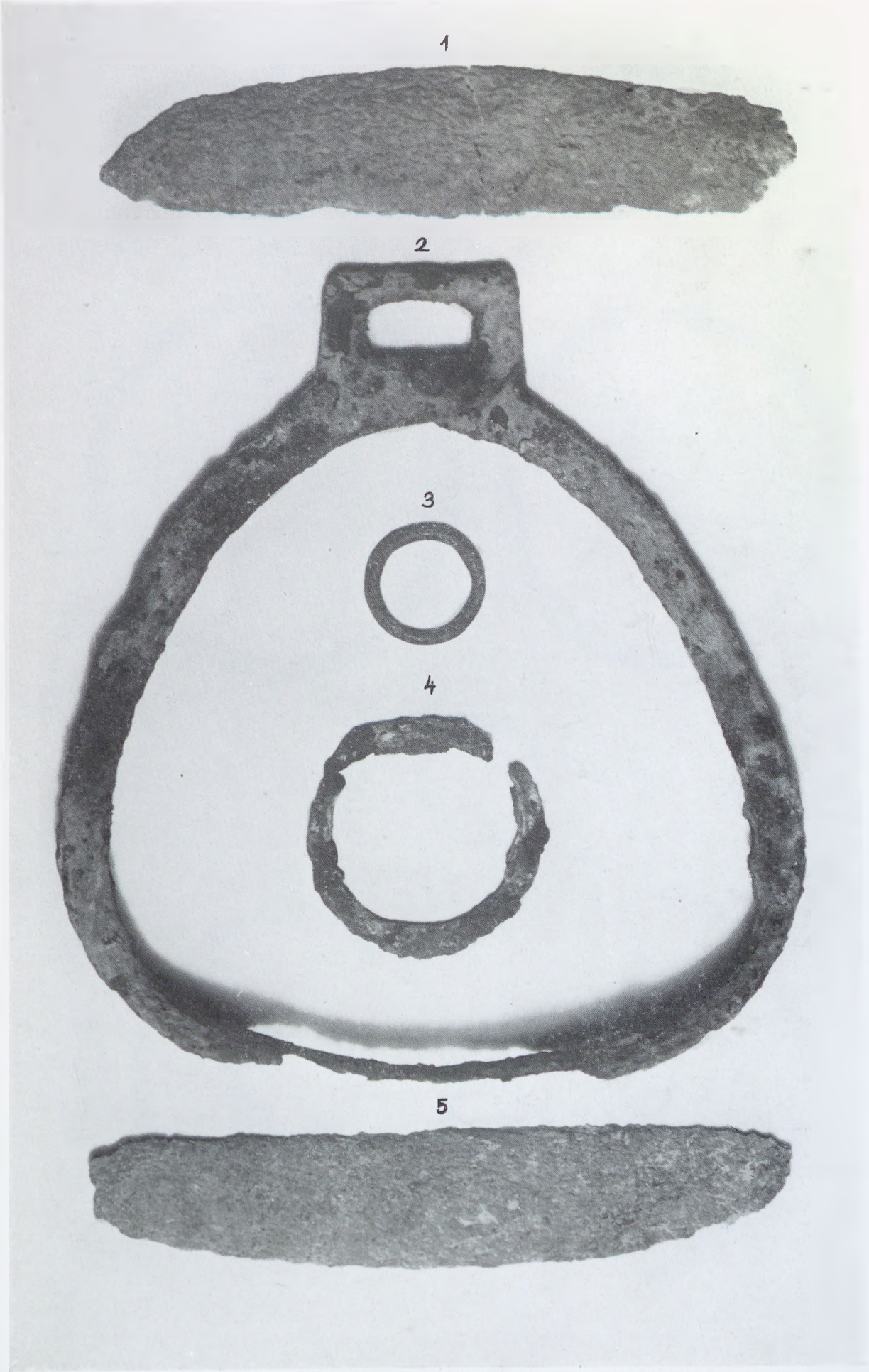

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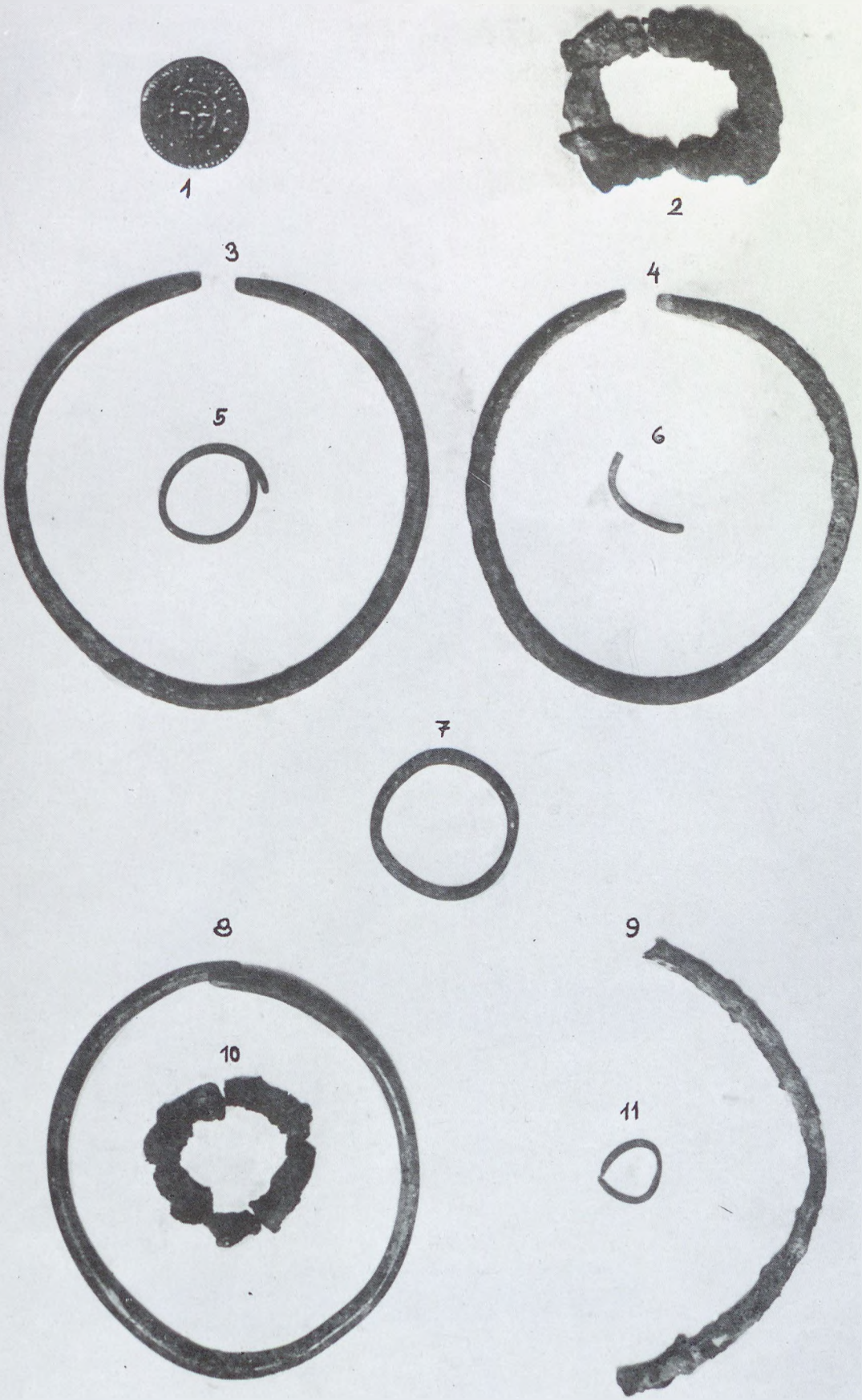
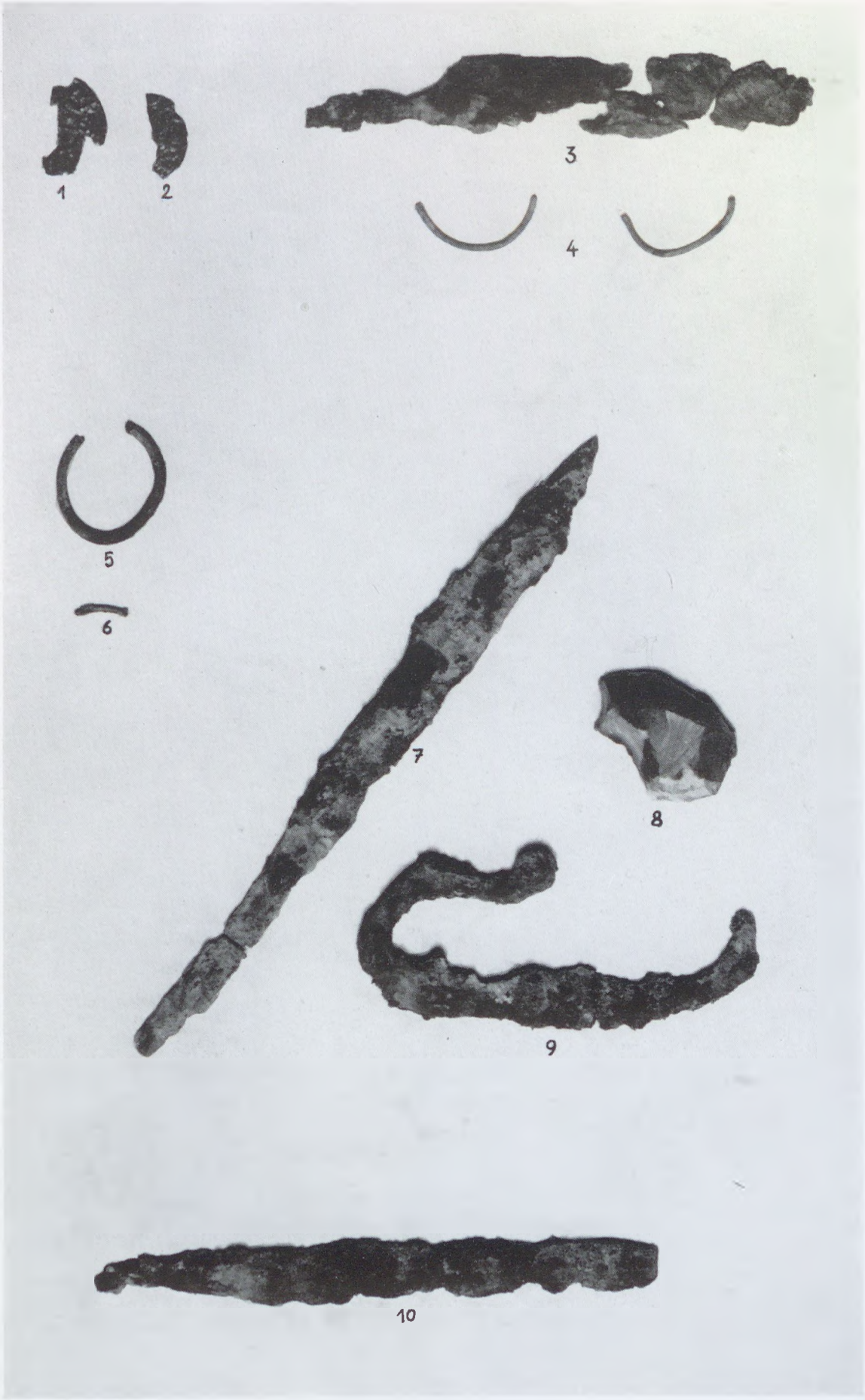
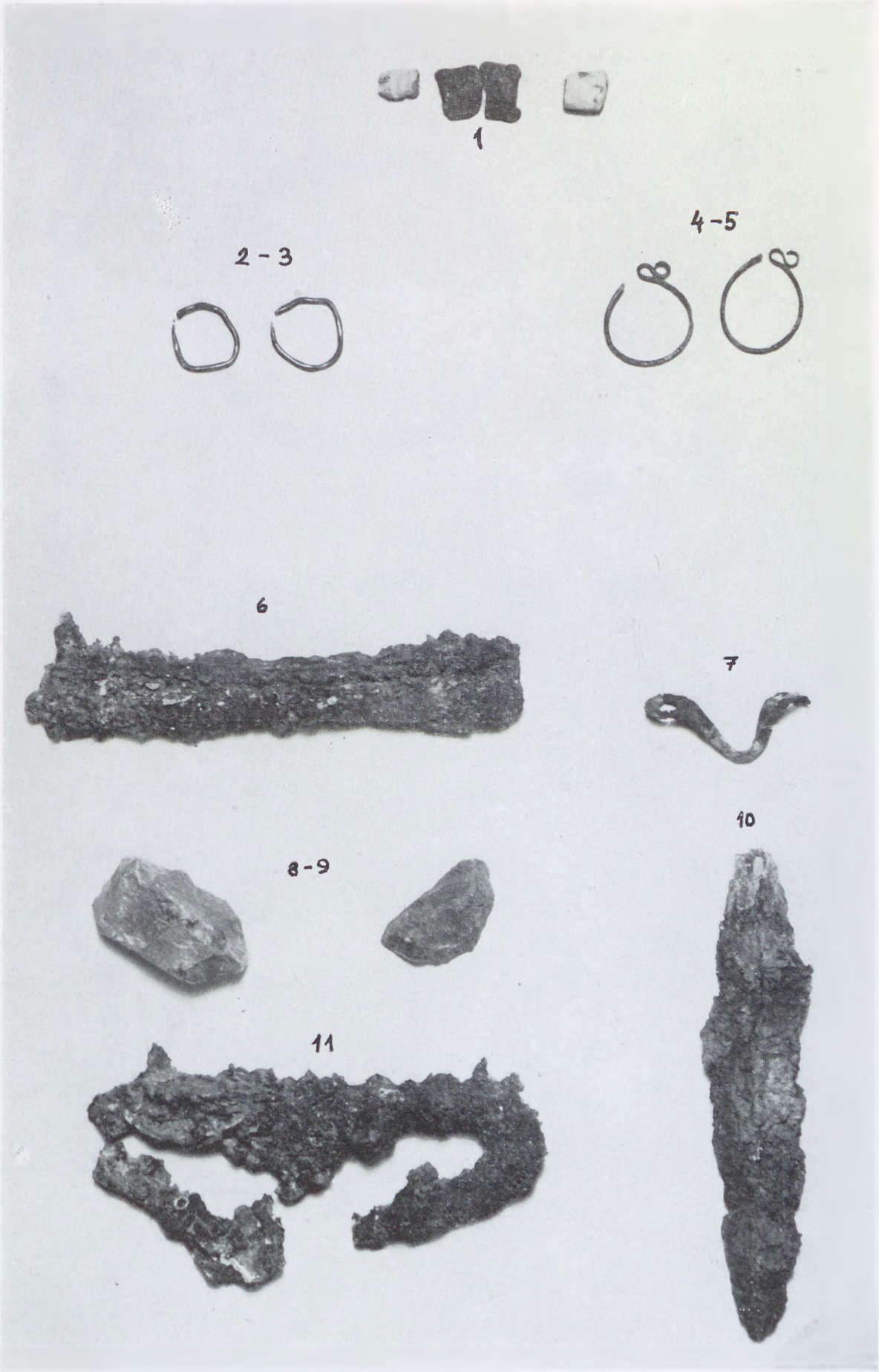


Gáva-Market. 1: Grave 3; 2: Grave 4; 3—6: Grave 5; 7: Grave 7; 8—11: Grave 9.

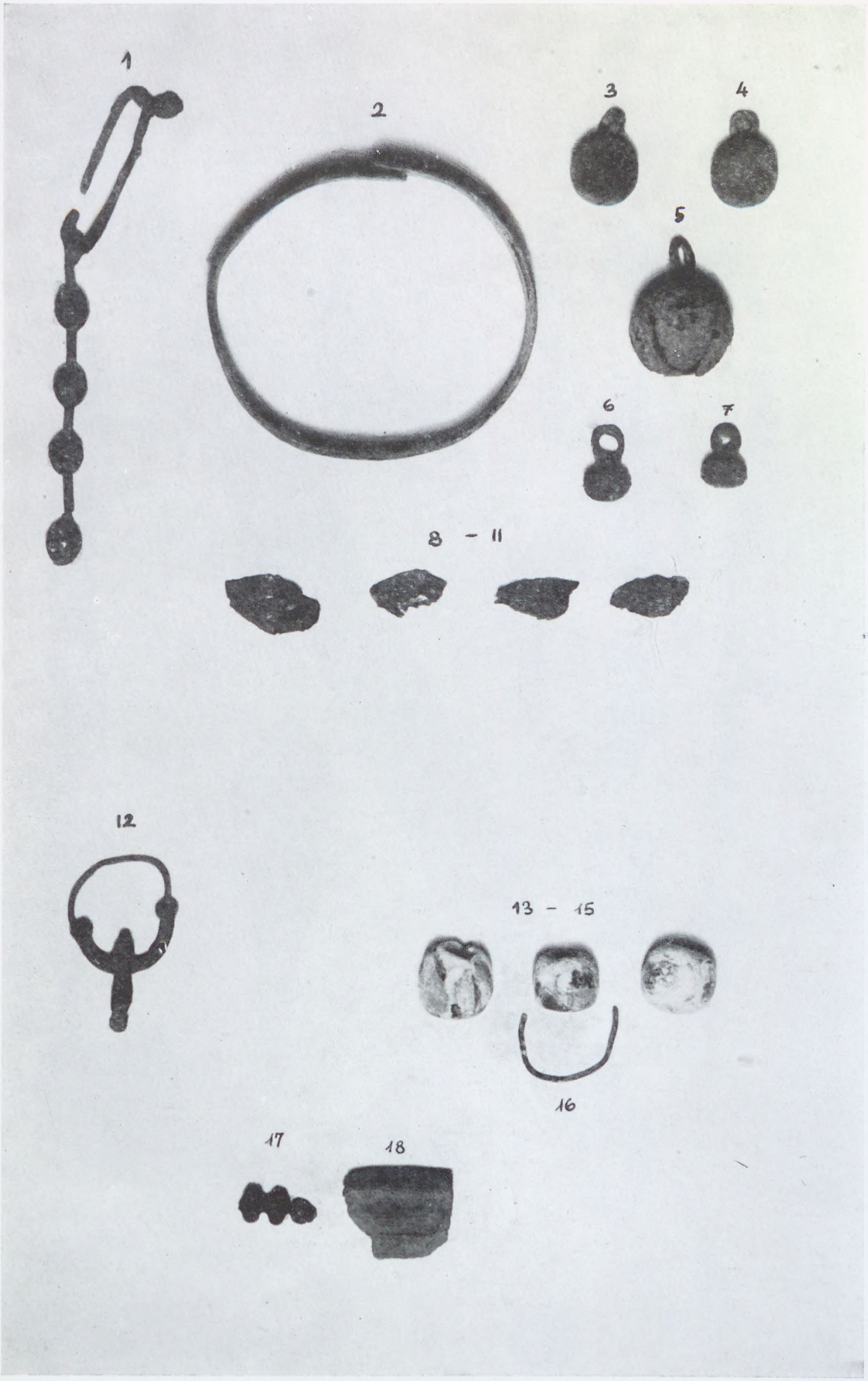


Gáva-Market. 1—2: Grave 10; 3—4: Grave 11; 5—6: Grave 12; 7—9: Grave 13; 10: Grave 16.

Gáva-Market. 1—6: Grave 18.



Gáva-Market. 1: Grave 24; 2—3: Grave 21; 4—5: Grave 19; 6—11: Grave 17.



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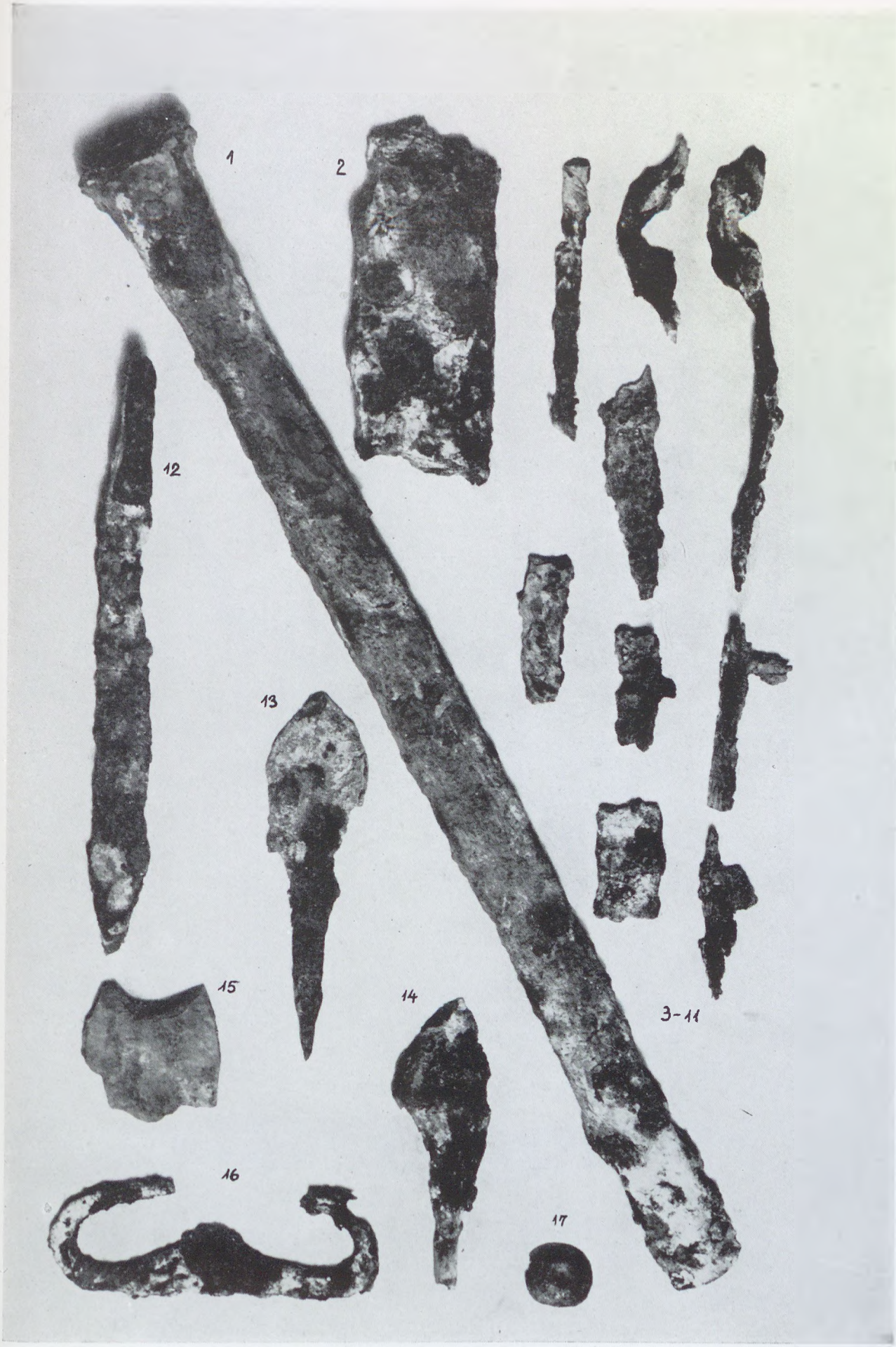

Gáva-Market. 1—17: Grave 32.

Gáva-Market. 1—2: Grave 33.

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