

# THE ANTHROPOLOGICAL STUDY OF THE SKELETAL REMAINS FROM THE GONUR-DEPE 1 GRAVEYARD

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We present here the preliminary results of the anthropological study of the skeletal remains belonging to Gonur, Oasis of Mary, Turkmenistan.

The study was performed prevalently *in situ*, for the bones were very brittle and fragmented to permit the study in the laboratory. The individuals were inhumated, the graves were partly intact, partly disturbed, and some intrusive elements were found. The type of the soil seriously limited the anatomical study of the bones.

We have studied 10 individuals, 6 subadult and 4 adult. The limited number of the individuals and the poor conditions of the bones do not permit a comparison with other specimens of the same area; moreover, the anthropological literature on this subject is very scarce. Nevertheless, we can say we have at Gonur a dolichomorphic-caucasoid population, which physical characteristics are quite similar to the sample described by Kijatkina (1985). The skeletons of Gonur are quite gracile, but the stature (measured only in four adults) is high. No clear mongoloid traits are present, only one individual showing, for example, the shovel-shaped incisors. No pathological bones were found. More data of the same site will permit in the future to describe with more details this interesting people.

Here we provide the general description of the skeletal material, with some information about preservation, bones conditions, completeness, position, sex, age, and stature when available. The studies related to the metric and morphometric analysis, bone diagenesis and micro-morphology are still in progress.

## Grave 10

Preservation:	poor
Conditions:	fragmented
Completeness:	0.25
Position:	unknown
Sex:	indeterminate

Age:	preadult?
Stature:	n.d.

Only few bone fragments very thin (immature individual?) and indeterminate.

## Grave 11

Preservation:	fair
Conditions:	partially fragmented
Completeness:	0.90
Position:	right side, semiflexed, head to N
Sex:	female (?)
Age:	juvenile (13-15 years)
Stature:	cm 163.21

There is an almost complete skeleton, in anatomical connexion, in right side position, with the head to the north and lower extremities to the south. The skull is fragmented, damaged post-mortem especially in the left parietal region. The upper extremities are flexed (around 35°), the hands toward the head; the lower extremities are flexed (around 45°) and superimposed. The scapula, clavicle and the ribs are badly damaged, and also the left forearm and the left tibia, and the hands and the feet bones. The vertebrae are very friable. The mandible is damaged, but it is possible to note the obtuseness and the lack of the roughness of the angle, typical of the female. The lower left M3 is not erupted. There is a dental wear of some degree: 3 for the incisors and the lower molars, 2 the remainder teeth. The ossification of the skeleton was not complete: the iliac crest and the left femoral epiphysis are not fused. The vertebrae show some immaturity and the fusion of the three elements of the coxal bone seems to be recent: from there, the age of the individual could be between 13 and 15 years. The femur is eurymeric with a pilaster on average; the tibia is eurycnemic.

The stature based on the long bones of the lower limb is 163.21 cm (high).

## Grave 21

Preservation: poor  
 Conditions: fragmented  
 Completeness: 0.60  
 Position: disturbed  
 Sex: male  
 Age: adult  
 Stature: cm 177.18

Badly preserved and friable skeleton, only partially in anatomical connexion (right femur and tibia). The burial was probably disturbed, with the presence of scattered bones. The cranial vault is thin. We found two tibiae and, below them, a right (?) adult femur. There are also a fragment of the upper maxilla with some teeth, which include a premolar and a molar badly worn (degree 5), two cervical vertebrae including the atlas, a fragment of a clavicle, a vertebral arch, a left mastoid process, a fragment of a right fibula with a well pronounced diaphyseal groove, fragments of the humeral diaphyses. The general robusticity of the bones indicate a masculine individual.

## Morphometric characters:

- *dolichocrany*
- *metriometopy*

## Grave 34

Preservation: poor  
 Conditions: fragmented  
 Completeness: 0.10  
 Position: unknown  
 Sex: indeterminate  
 Age: young  
 Stature: indeterminate

This grave contains only the tibiae and the bones of the left foot: bones are fragmented and in poor conditions. There are also a left patella and a calcaneus, quite small, two thoracic vertebrae bodies, one fragment of the scapula (acromion), and one fragment of the femoral mid-shaft. The skeleton appears to be gracile, probably of a young individual; the sex is indeterminate.

## Morphometric characters:

- *platycnemic*

## Grave 35

Preservation: poor  
 Conditions: fragmented  
 Completeness: 0.40  
 Position: right side, semiflexed  
 Sex: female?  
 Age: adult  
 Stature: cm 160.22

Probably adult female skeleton in bad conditions, partially in anatomical connexion, on the right side, with the legs and the arms semiflexed. Only few skull fragments and some teeth are preserved. The femur is 430 mm and the tibia 340 mm long. The feet bones are fragmented.

The stature is 160.22 cm.

## Grave 36

Preservation: fair  
 Conditions: fragmented  
 Completeness: 0.50  
 Position: disturbed  
 Sex: male  
 Age: adult (21-31 years)  
 Stature: cm 170.54

Incomplete skeleton of an adult male, in fair conditions. The skull and the mandible are fragmented, with few teeth. The postcranial skeleton is represented by the femurs, incomplete, the tibiae, some carpal bones, fragments of the hip bone, one clavicle and one spine of the scapula. The mastoid and the petrous parts of the temporal bone are particularly robust, the external auditory meati are wide and the styloid processes are broken. On the left temporal bone, toward the midline of the apex of the mastoid process and to the side of the left occipital condyle, there is a tubercle (precondylar tubercle?) 19.73 cm long. The temporo-mandibular fossa is wide and contains a mandibular condyle quite large (20.16 mm wide). The axis of the mastoid is oblique. The mastoid length is 32.35 mm on the right and 34.01 on the left. The skull, only partially restored, is quite low, with the frontal bone slightly receding, and the frontal and the parietal bosses not much prominent. The supra-orbital ridges are very pronounced and massive;

the orbital roofs and the nasal bones are damaged. The glabella is prominent, and the external occipital protuberance is protruding, the eminentia cruciformis is thick and massive.

Endocranial sutures: coronal suture is open on the whole; the sagittal is obliterated on the anterior 2/3; the lambdoidal is open on the whole.

The mandible is fragmented, very robust, with a broad and square chin (inverted T-shaped), the condyles are big; the spinae mandibulae are not much protruding. There are on the right side 7 mandibular teeth in situ: I<sub>2</sub>, C, P<sub>1</sub> (damaged), P<sub>2</sub> (damaged), M<sub>1</sub>, M<sub>2</sub> and M<sub>3</sub>.

Dental wear degree: incisors and canines 6, molars 4.

There are also 15 isolated teeth, incomplete and in poor conditions: 5 anterior teeth, wear degree 7; 5 premolars, wear degree 7; 5 molars, wear degree 6. The molar wear is mostly mesiodistal, only one molar showing a bucco-lingual wear. One upper molar show 5 roots, one of which is hypoplastic. No caries. There are also one fragment of a cervical vertebra, one fragment of a humeral shaft with part of the head and a well pronounced deltoid tuberosity, one fragmented right femur with a third trochanter, two fragmented tibiae and a fragmented fibula, with a deep groove, 360 mm long.

Morphometric characters:

- *dolichocrany*
- *metriometopic*

#### Grave 37

Preservation: fair  
 Conditions: fragmented  
 Completeness: 0.90  
 Position: right side, semi-flexed  
 Sex: female  
 Age: adult (25-35 years)  
 Stature: cm 159.49

There is an almost complete skeleton, in quite good conditions, with the skull laying on the right side, and with arms and legs semi-flexed. The palatine is parabolic, caucasoid-like. The mandible is small, fractured post-mortem, with a well developed ponticulus; the mental protuberance is small and the angle not much rough. All teeth are present but 4, lost post-mortem;

there are no caries and dental wear is as follows: upper incisors, canines and M<sup>1</sup> degree 3, M<sup>2</sup> and M<sup>3</sup> degree 2; lower premolars and M<sub>1</sub> degree 3, the other teeth degree 2. Dental age based on dental wear is about 25-35 years. The stature from the long bones is about 156.42 to 161.52 (average: 159.49).

Morphometric characters:

- *dolichocrany*
- *ortocrany*
- *metriocrany*
- *platicefaly*
- *metriometopic*
- *orthognathic*
- *mesuranic*
- *leptostafiliny*
- *mesorriny*
- *sacrum wide*
- *euribrachy*

#### Grave 40

Preservation: poor  
 Conditions: very fragmented  
 Completeness: 0.05  
 Position: indeterminate  
 Sex: indeterminate  
 Age: infant (3-4 years)

In this infant grave there are only 19 teeth badly damaged and some fragmented bones difficult to determine. The dentition is of a 3-4 years old infant. There are the germs of the permanent teeth (incisors, canines, first molar).

#### Grave 101

Preservation: poor  
 Conditions: very fragmented  
 Completeness: 0.35  
 Position: indeterminate  
 Sex: indeterminate  
 Age: young  
 Stature: indeterminate

There is a skeleton of a young individual of sex indetermined, quite fragmented and incomplete, only partially in anatomical connexion. There are only few skull fragments and a damaged tooth, maybe a quite small premolar. The postcranial skeleton shows one right incom-

plete femur, 390 mm long, with a well pronounced linea aspera. The femur is platymeric, the cortical thickness is high (ranging from 4.37 to 8.44 mm). There are also two tibial fragments, one of which shows the nutrient foramen, one humeral diaphysis with a well developed deltoid tuberosity, the fragmented left femur, one fragment of the left ulna with a prominent supinator crest, fragments of the cervical vertebrae, of the clavicles, of the ribs, of the hip bones and the sacrum.

#### Grave 300

Preservation: fair  
 Conditions: almost intact  
 Completeness: 0.90  
 Position: lateral, right side  
 Sex: female  
 Age: young (15-20 years)  
 Stature: cm 161.34

There is an almost complete skeleton in anatomical connexion, laying on the right side. The skeleton is quite intact but on the same time it is fragile and friable. The skull is damaged on the left parietal, the long bones are damaged on the articular facets, the spongy bones are brittle. Also the hip bone and the hands and feet bones are damaged. The skull is female-like, with a rounded occipital, the mastoid is small and the zygomatic is low; the frontal bone is damaged, but the frontal and the parietal eminences are prominent. The cranial sutures are all open. The mandible is quite gracile and with an obtuse angle. The dental wear is not marked: the upper and lower incisors and M1 reach the third degree, the other teeth do not exceed the degree 2. Upper and lower M3 are not erupted. Neither caries nor enamel defects are present. The central upper incisor are shovel-shaped.

#### Morphometric characters:

- *iperdolichocrany*
- *ipsicrany*
- *acrocrany*
- *ipsicefaly*
- *orthognathic*
- *cryptozigby*
- *hipereuriprosopic*

- *iperlepteny*
- *mesuranic*
- *brachystafilinic*
- *mesorrhinic*

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