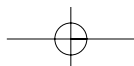
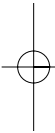
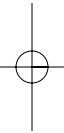
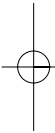
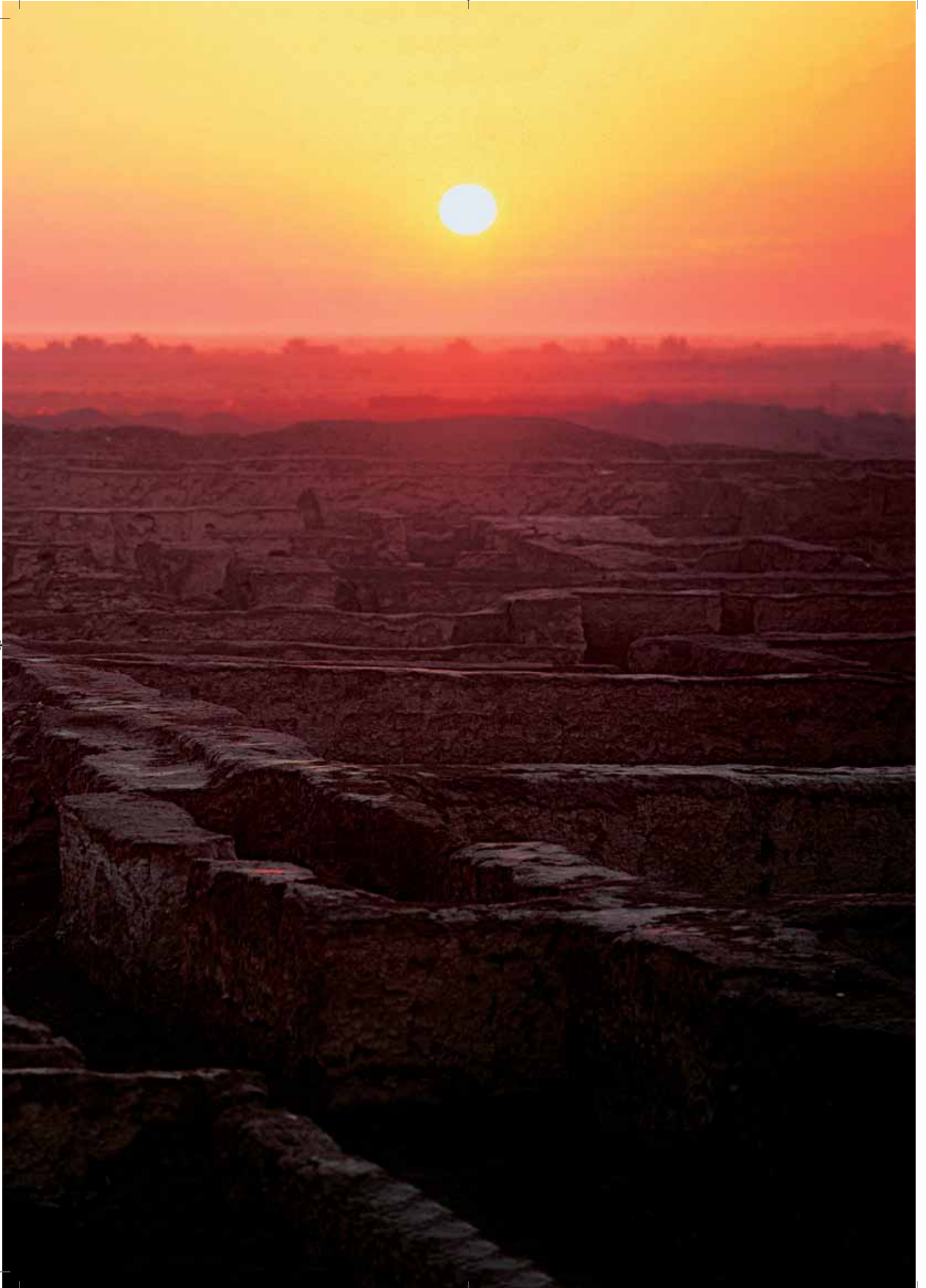
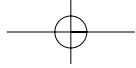


“My verses, like old vines, will come to their turn sometimes...”

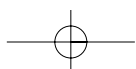
M. Tsvetaeva







NECROPOLIS of GONUR



NECROPOLIS

*Photography by Viacheslav Sarkisian,
Aleksandr Djus, Anna Rosa Cengia, Nadejda Dubova.
Some photos were kindly given by the President of Ligabue
Study and Research Centre Dr. Giancarlo Ligabue*

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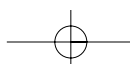
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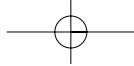
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of GONUR



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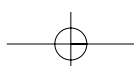
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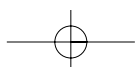
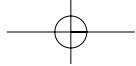
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First of all I would like cordially to thank Mr. Saparmurad Niazov, the President of Turkmenistan, who created a favourable atmosphere for our expedition and thus considerably helped in our mission. Also, thanks to his 2002 initiative, my book *Margush*, which contained the most significant finds from the necropolis of Gonur, was published in Ashkhabad.

I am very grateful to the Ministry of Culture of Turkmenistan, to its former and present leaders, Ashir Mameliev, Galina Vazova, Oraz Aidogdiev as well as to the National Department for the Preservation, Study and Restoration of Historical and Cultural Monuments, Doctor Muhammed Mamedov and Ruslan Muradov. They closely watched the work of the expedition and were always ready

to help it in any way possible. I dare say that without their help it would have been almost impossible to organize the extensive, large-scale excavations and to start the work on the preservation and restoration of the palace at North Gonur.

It would be unfair if I did not heartily thank the governor Rahman Odekov for rendering all sorts of assistance (especially technical help) in the everyday running of the expedition.

During the excavations of the Gonur necropolis our expedition cooperated fruitfully with the Ligabue Study and Research Center. First of all this is to the credit of my friend Giancarlo Ligabue, whose tireless activity and energy has contributed so much to the study of the archaeology of Margiana and Bactria. His scientific and financial support for archaeological work in Margiana resulted in the publishing of the book "Margiana, Gonur-depe Necropolis" (2002, Venice), which contains the first complex study of this unique necropolis.

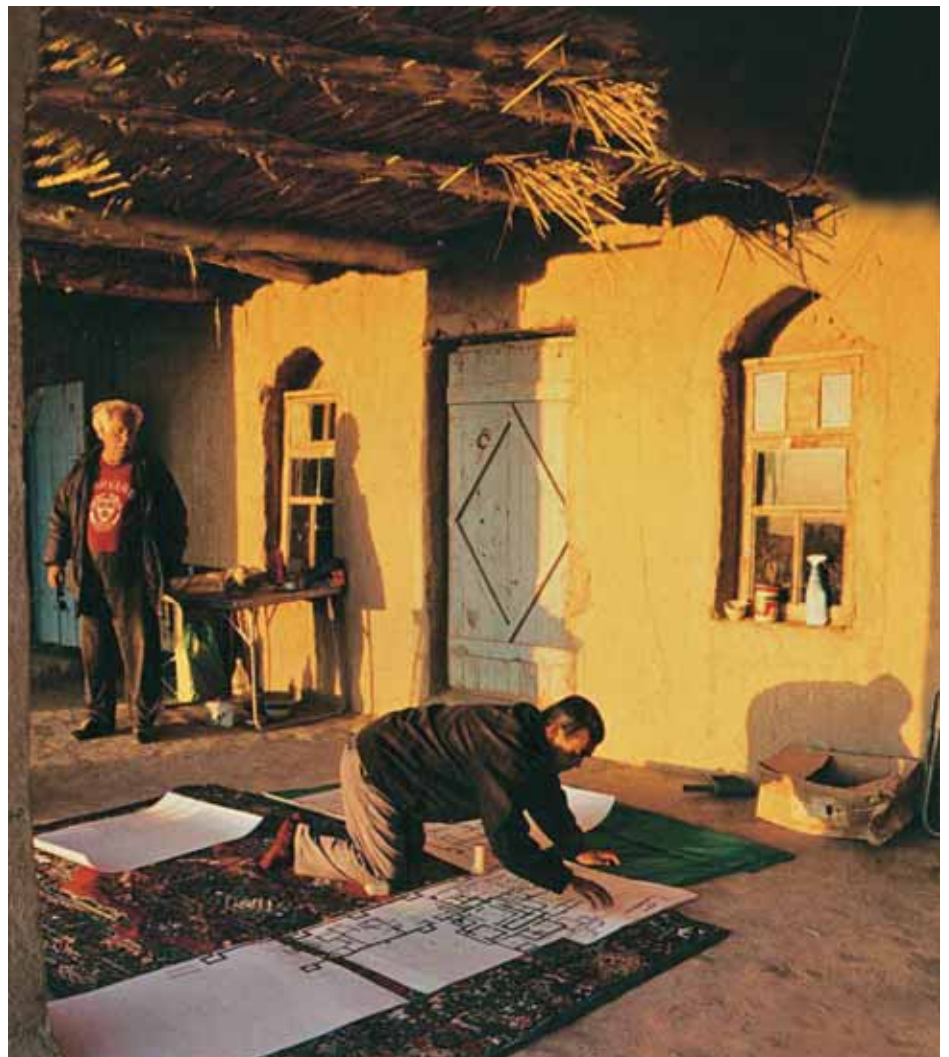
From 1995 to the present, the archaeological studies in Margiana were carried out with financial assistance mainly from the Hellenic Ministry of Culture. In 2000-2001 the work continued thanks to the initiative of Yanina University, and mainly to the energy of Professor Dimitry Glaros. Invaluable moral and financial help was rendered to the expedition by the Greek Pontic societies (F. Stolidis, Ch. Galanidis, P. Psomiadis).

The field works of our expedition received a new impetus in 2002 when, thanks to the initiative of the Greek Minister of Culture, Mr. Venizelos, a new agreement on the financing of the expedition was signed for the period from 2002 to 2006.

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BACKGROUND

Turkmenistan, the north-eastern outpost of the ancient farming culture, was the place where already in the sixth millennium B.C. hunters and gatherers had started a more advanced farming style of life. Safely hidden from the rest of the Near Eastern world by the high mountains of the Kopet Dagh, the local South Turkmenistan tribes developed their own, original culture in the following millennia. The short occasional contacts with the ancient farming tribes of neighbouring Iran were usually peaceful and only very rarely took the form of tribal invasions. The foothills of southern Turkmenistan, richly watered by small and large rivers of the Kopet Dagh mountain system, always attracted ancient tribes and first of all those from neighbouring Iran.

B. Kuftin, a pioneer in the studies of the ancient farming culture in Turkmenistan, was the first to forward a theory that at the transition from the third to the second millennium B.C. a xerothermic period that resulted in the crisis of this culture occurred in this area. This theory was almost completely neglected until recently when some scholars gave their support to it. Russian and American scientists independently came to the conclusion that the xerothermic period affected the large territory of the Near East from Greece to the Indus Valley at the end of the third millennium B.C. as a result of the increased solar activity noticed at that time (Klimenko and Prusakov, 1999, p.p. 5-18). The studies of American scientists clearly show that it is precisely this fact that caused the collapse of the Ancient Egyptian Kingdom (Bell, 1971; 1975). Archaeologists in the Near East came to almost exactly the same conclusion.

Thus, R. Frye agrees that practically at the same time, that is at the beginning of the second millennium B. C., similar crises occurred in Mesopotamia, Central Asia and India but he still denies that this could have resulted in the tribal migration (Frye, 1996, p. 53). More consistent in his view is D. Mattheus who accepts the fact of the global xerothermic period, the military and political events as its consequence and also the tribal migrations that according to him had three periods: Early Akkadian, Late Akkadian and Ur III (Mattheus, 1997, p. 54).

Recently H. Weiss and M. Courty (1993) have thoroughly studied the theory of the changes in climate that resulted in tribal migration. They write: "...around 2200 B.C. the Akkadian rulers seized Tell Brack and at the same period almost all the sites in the Khabur valley and the Assyrian plain were abandoned." The main specialist on Tell Brack, Professor J. Oats came to a similar conclusion; based on the archaeological material, he states that life on this particular site stopped at the end of the rule of King Naram-Sin.

To illustrate the idea of tribal migration caused by the xerothermic period H. Weiss speaks about Turkmenistan, where the local tribes of the Kopet Dagh mountain system were forced to leave their

sites in an attempt to find new places in Margiana where the Murgab river offered the best conditions for farming (Weiss, et al., 1993, Weiss, 2000, p. 211).

This was a long and difficult process of tribal migration when, according to the apt expression of I. Diakonoff, tribes slowly "spread out" seeking new lands. Some tribes left earlier, some later, but they had one thing in common: they all belonged to the Indo-European family and, judging by the archaeological material, to its Eastern part, that is, to the Indo-Iranians or, in other words, Aryans.

By that time Asia Minor, Syria and Palestine as well as Mesopotamia were already densely inhabited by ancient farmers, and only an eastern direction towards Central Asia could still be attractive to the migrating tribes. The available archaeological material leads one to suppose that the immigrants using two main routes moved from the area of modern Kurdistan and other neighbouring historical regions in a generally eastern direction.

The first route supposedly passed through the Urmia region up to Iranian Horasan. This movement is proved by the culture of the upper layers of such monuments as Tureng Tepe and especially of Tepe Hissar where the Hissar III materials differ considerably from the lower layers of Hissar II-I. Some of the migrating tribes occupied parts of eastern Iran including Shahdad and further up to Tepe Yahya. Another group moved through the mountain passes of the Kopet Dagh to southern Turkmenistan where they mixed with the local tribes and settled down in the basin of the ancient delta of the Murgab river (Margush, according to the Achaemenid inscriptions) that offered the best conditions for farming (Sar-



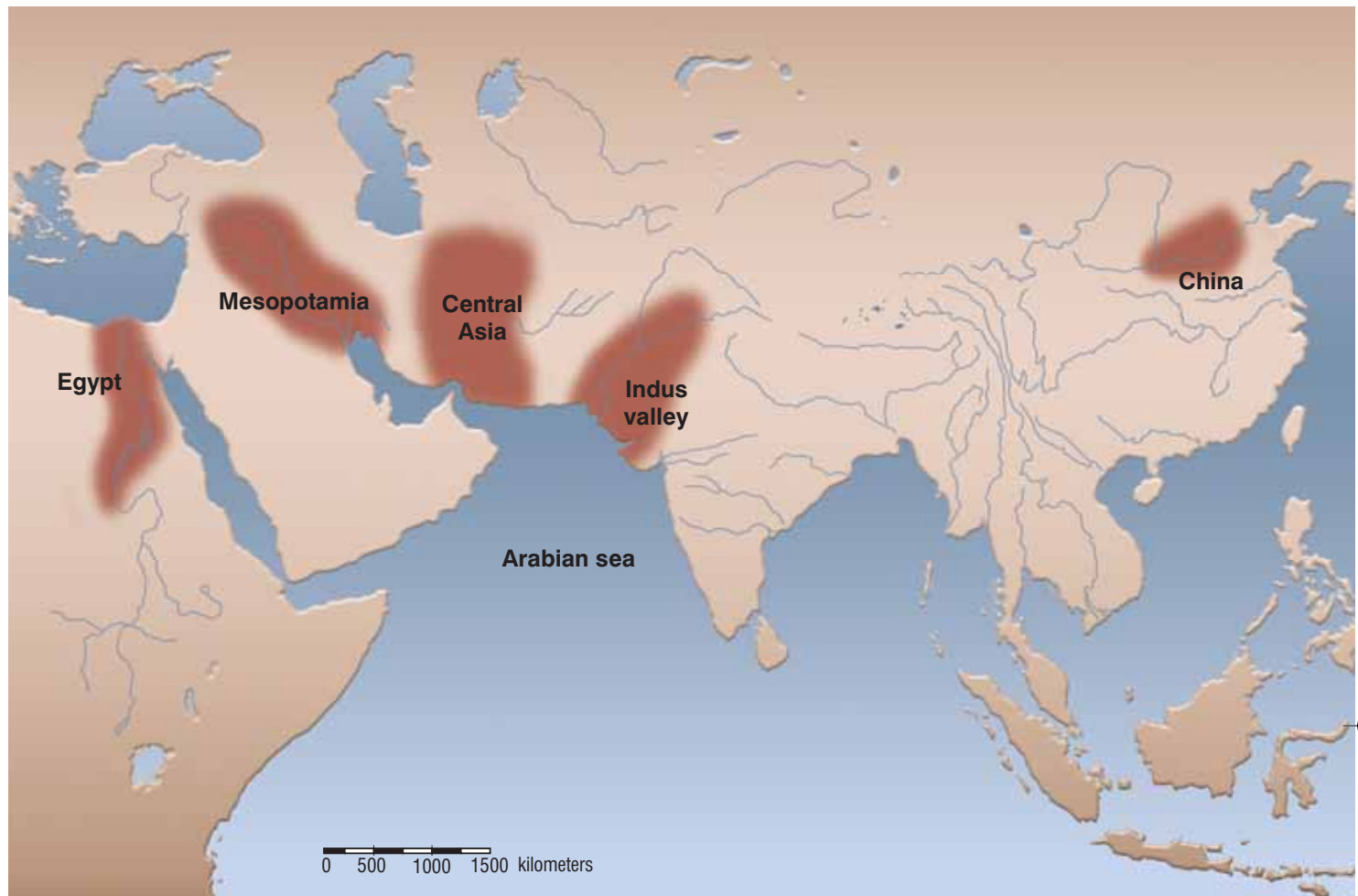
ianidi, 1998). The upper layers of Altyn Depe and Namazga Depe ("Vishka") as well as Ulug Depe and the southern hill of Anau up to the necropolis of Yangi Kala to the West of Ashkhabad, may be defined as the BMAC layers of southern Turkmenistan. The material of this horizon differs from the previous local one and is very close if not identical to the BMAC.

Perhaps some time later another group of related tribes moved further to the East and reached the fertile Bactrian plain, richly watered by the Balkh-Ab river. Neither here, nor in the basin of the Murgab delta, was there a settled farming economy prior to the arrival of these new tribes. The newcomers highly valued these lands and began to colonise first south Bactria (the territory of eastern Afghanistan) and then its northern part that is located in southern Uzbekistan (Sapalli, Djarkutan). Below we will prove that around the middle of the second millennium B.C. the tribes moved further to the East, this being documented by the material of Swat graveyards (northern Pakistan) that exhibit similarities with Bactria and Margiana. The close cultural resemblance (even exact identity) between these two historical regions gives reason to speak about the BMAC.

The second route from the supposed centre passed along the Zagross mountains in the southern direction further up to Elam where the migrating tribes stayed for some time and assimilated a lot from the local culture. Then they moved along the Persian Gulf and the Arabian Sea up to Baluhistan, a fact that is proved by the Quetta Treasure (as well as monuments such as Mehi, Kulli and Mergar-Sibri). Now to this list of monuments one should add the Tor Ghundai monument excavated by C. Lamberg-Karlovsky who admits that the finds at this monument closely resemble the material of the BMAC (personal communication from C. Lamberg-Karlovsky of 23 January 2001).

This vast tribal invasion is clear from the fact that the BMAC monuments are found in a huge territory from the southern area of the Caspian Sea (Hissar) up to the northern coast of the Arabian Sea (Yahya) for almost a thousand kilometers and up to Baluhistan (practically on the Indian subcontinent) for the same distance. The scale of this invasion gives us cause to speak about a truly "great migration of peoples." (Fig. 1).





Already the first archaeological excavations in Bactria (Askarov, 1977; Sarianidi, 1978), and later in Margiana (Sarianidi, 1998) showed that the BMAC included areas of advanced centers, first of all in Eastern. Thus, the spiritual and material culture of the BMAC fully corresponds to that of Elam (and probably of neighbouring Louristan), which in turn reveals some fairly clear contacts with the Akkadian and post-Akkadian periods of Mesopotamia. It seems entirely possible that the Bactria-Margiana Archaeological Complex was formed in the period when new tribes colonised this part of Central Asia. At the same time there are no grounds to suppose that this invasion started from Elam and neighbouring areas. Monumental ritual buildings (such as Togolok-1, 21), the temenos of Gonur in Margiana and Dashli-3 and Sapalli in Bactria, as well as secular ones (the palace of North Gonur) testify to the continuation of the traditions of the monumental architecture of Mesopotamia, Syria and the eastern Mediterranean. This fact is very important for our attempts to find the ancient motherland of the migrant tribes.

It should be noted that practically all the finds from the Bactria and Margiana excavations exhibit similarities with the material culture of the advanced Near East centers. This points to Mesopotamia and the surrounding historical areas as the possible motherland of the new tribes of the BMAC. Though their true motherland has not been established so far, the fact of the supposed immigration is indisputable.

V.V. Struve was the first to set forth the thesis that at various historical stages different names were

1. Civilizations of the Ancient World

used to identify one and the same area located in the basin of the ancient delta of the Murgab river. In the Avesta it was called "Mouru", according to the Achaemenid inscriptions it was "Margush", the ancient authors gave it the name of "Margiana" and in the Middle Ages it was known by the name of "Merv". Until recently this opinion has been accepted.

I. Khlopin has suggested that Margiana was situated not only in the delta of the Murgab river, but along the whole basin of it up to Merverud. At the time he advanced this theory, it did not receive wide support among the specialists, but recently four authors have referred to this very opinion in a special article: "We have serious evidence that leads us to believe that besides the Murgab delta and the Merv oasis, the whole middle part of the Murgab river to the foothills of the Turkmenian/Khorasan mountains was part of Margiana" (Bader, Gaibov, Gubaev, Koshelenko, 1998, p. 196). However, this statement was strongly disputed by the geomorphologist M. Gremaschi (Gremaschi, 1998).

Scientists have rightly noted that Bronze Age sites were found only in the delta of Murgab river, while further south to the Afghan-Turkmenistan frontier there is only one small graveyard of the Bronze Age, near Takhta Bazar. It should be noted that the site is near the small mountain rivers and not on the banks of the Murgab river. Indeed the tribes of the Bronze Age would have found it very difficult to get water from a river as deep as the Murgab, though it is clear that the situation was different in the shallow delta. During the wet season floods, in particular, the people could have easily used this water for irrigating their fields. According to special research undertaken in the vicinity of the Takhta Bazar site, B. Udeumurov (personal communication) has said that not a single ancient farming site was discovered in this area, which may serve as additional support for the view mentioned above. The graveyard in Takhta Bazar seems to belong to the BMAC tribes and marks the intermediate point on the migration route of the tribes from their motherland in the direction of the Murgab delta.

All the material presented above testifies that the migrated tribes settled down in the basin of the ancient delta of the Murgab river, which offered the best possible conditions for the ancient farming economy.

So, the problem of the origin of the BMAC has no simple answer. One of the two main views on this problem suggests that it originated in South Turkmenistan, when tribes left the submountainous area of the Kopet Dag and invaded new lands including those of basin of the ancient delta of the Murgab river (Hiebert and Lamberg-Karlovsky, 1992; Hiebert, 1994). According to this theory at the end of the third millennium B.C. most monuments of the late Namazga V type were neglected and the tribes moved into the territory of South Turkmenistan and settled down in the ancient delta of the Murgab. The authors insist that it was not a migration but colonization that resulted in the origin of the BMAC in Margiana. Thus, F. Hiebert writes: "In Central Asia the period from 2000-1750 B.C. was a time of tremendous change. The oasis colonies in desert of Margiana, first formed culture, have rise to the distinctive culture, known as the Bactria-Margiana Archaeological Complex, or BMAC".

However, the results of the excavations of the Gonur necropolis document the fact that the funeral rites (as well as the funeral structures) of Margiana differ considerably from those of South-Turkmenistan in the Namazga V period and leave no doubt that they belonged to different tribes. The same is true of the other cultural aspects of these two peoples and one can state that the invading tribes had no roots in South Turkmenistan and that their motherland has to be looked for somewhere else.

A prominent indologist A. Parpola has a special position on this problem. He thinks that : "It seems

that the rule of the BMAC was taken over by a band of powerful warriors from the north, who quickly assimilated the local culture" (Parpola, 1998, p. 124). At the same time he speaks about the links between the sphragistics of the BMAC and Syria and Mitannia (following the view of P. Amiet), a fact that speaks in favour of the Near Eastern parallels of the BMAC.

Though the exact motherland of the tribes that migrated to Margiana is not so far known, it was most probably located in the territory of modern Kurdistan and the neighbouring eastern areas, Anatolia, the Aegean world and up to the Urmian region, and reveals connections with Syria and Eastern Mediterranean (Sarianidi, 1977, 1990, 1998, 2001).

It is significant that in his last works Prof. J. Mallory has expressed a rather similar idea. He writes: "In a very crude way the Early Bronze Age oasis citadels of Central Asia reflect a push northeastward of cultures whose roots lie in the Near East" (Mallory, Mair, 2000, p. 263).

Though the problem of the origin of the BMAC still has to be proved on the basis of some new archaeological material, the history of its development seems to be more clear especially in light of the latest discoveries in the basin of the Tarim river.

The similarity between the Gonur necropolis and the Swat graveyards was most probably connected with the migration of the tribes of the BMAC type in a general eastern direction. Their further move in the territory of India is proved by the graves on the southern slopes of the Himalayas, which are determined as the ones belonging to the first Indo-Europeans (Agrval et al., 1995, p. 550). Even more impressive in this aspect is north-western China and especially the graveyards of the Yanbulaq type from the Tarim basin.

Practically all the authors agree with the view that the Tarim graveyards reflect the combination of steppe, cattlefarming cultures of the Andronovo type as well as of the ancient farming tribes of the BMAC type. It is notable that the origin of the Yanbulaq culture is linked with the migration of tribes from the BMAC area (Sarianidi, 1998, p. 157). J. Mallory writes: "In short, if we could fly BMAC colonists from Bactria into the Tarim oases they would make a very strong theoretical candidate for the earliest agricultural settlers in the Tarim Basin" (Mallory and Mair, 2000, p. 269).

The model suggested by J. Mallory seems rather more attractive compared with the other one according to which the Andronovo tribes served as an intermediate link between the Yanbulaq and the BMAC cultures (Chen and Hiebert, 1995, p. 264). Unfortunately we do not have sufficient archaeological material of the earliest stages of the Yanbulaq culture at present. The finds of iron in some Yanbulaq graves prove that these were late rather than early burials that belonged to the deeply assimilated inhabitants of the Tarim basin. According to their old traditions they still bury their dead in a crouched position in brick pits but at the same time the funeral offerings bear a typical local character.

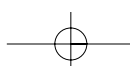
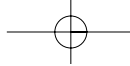
Now, based on these excavations one can offer a more correct explanation of the old finds of seals of the Ordoss type, as well as of bundles of ephedra found in graves (Chen and Hiebert, 1995) and especially of the pommel of a scepter decorated with heads of muflons (Bunker, 1998, Fig. 7), a typical BMAC object.

The previous material shows that at the end of the third-second millennium B.C. some entirely new historical and cultural zones were formed in this huge territory. The tribes that came from the far west mingled with the aborigines and henceforth played a significant role in the history of Central Asia. Margiana with its capital Gonur, which consisted of a citadel, temenos and a large necropolis, is at present the best-studied territory among these new historical areas.

Just thirty five years ago no one could have imagined that the northernmost outpost of the Bronze Age civilization of the ancient East had been located in the interior of the South-Eastern Kara Kum desert, in Turkmenistan. Extensive archaeological works have revealed a totally unknown land there, mentioned in the Behistun inscription as the land of Margush, or Margiana as the ancient Greek authors named it. The land of Margiana occupied a huge area along the delta of the Murgab River and represented a system of separate but interconnected irrigated oases. The main capital of this country was located most probably at the site which is known now as Gonur Depe. This site, superior to all other sites of the time was founded at a key-point of the ancient delta, probably by the very first colonists. Besides palaces, temples, altars and various other constructional complexes, some 200 m to the West of the capital city a Gonur necropolis has been excavated. About 3000 graves were unearthed there. The present book is dedicated to the description of this largest necropolis of the Bronze Age in the whole zone of the Near East.

map





1

CHAPTER



FUNERAL CONSTRUCTIONS AT THE GONUR NECROPOLIS

1.1. Funeral Rites in the Southern Turkmenistan at the Fourth-Third millennia B.C.

It is a well-known fact that the ancient funeral rites are the most conservative part in the life of any society that changes the least under the foreign and domestic circumstances. In the light of this fact the almost 3000 burials excavated at the Gonur necropolis represent an invaluable material for the historical and paleoanthropological reconstruction of those people who lived in Margiana at the end of the third-second millennium B.C. The Gonur necropolis that is almost completely excavated is undoubtedly a unique monument not only in Central Asia but in the whole territory of Near East. It seems that for the first time we have direct archaeological material that testifies to the social structure of the ancient society, its funeral customs and rituals.

But before we start the discussion of the results of our excavations let's give a short review of funeral rites of tribes settled in Turkmenistan in the sixth-third millennium B.C. It is very informative. Though the ancient history of this country is rather well studied, so far there is only one complete work dedicated to its history – a book by V. Alekshin (V. Alekshin, 1986).

The first and most ancient graves of settled farmers in Turkmenistan are of the Neolithic Djetun culture (sixth-fifth millennium B.C.). From this time up to the middle Bronze Age, the south Turkmenian tribes buried their dead within the limits of their sites on open land. There is no sign of any burial made under the floor of a room inside a building. All the dead were buried in a crouched position on the side, usually north-oriented and with rather poor funeral gifts (several vessels) and personal decorations (single beads). Only in a few cases layers of ochre were found.

The funeral rites of the following Aeneolithic Age are revealed in the material of two ancient farming monuments that from the architectural remains of the Namazga I-III period are assigned to the fourth millennium B.C. One of these sites, in central Turkmenistan, is the Kara Depe settlement near Artyk and the other is the Geoksur site in the eastern part of the country. Recently graves of this period were found and excavated in the extreme southwest of Turkmenistan.

On the Kara Depe settlement the dead were buried in simple pits that in some cases were covered with bricks. The bodies in a crouched position were mainly oriented toward the South. Funeral gifts consist of painted ceramic (in some rare cases, stone) vessels and personal decorations (beads, pins and so on). A golden bead found in one child's grave is hardly the most ancient one in Central Asia. In the late Aeneolithic Age there were found singular examples of rectangular brick-made tombs used for collective burials, which reflected the identical funeral traditions of eastern Turkmenistan (Geoksur).

During the whole Aeneolithic period on the eastern sites of Geoksur group of monuments the dead were buried in simple pits in a crouched position accompanied by ceramic (sometimes stone) vessels and personal decorations that included stone beads, different toilet-sets and copper mirrors as well (Yalangach Depe).

A new type of graves appeared on the late Aeneolithic stage when new tribes came to Turkmenistan from western Iran bringing polychrome ceramics of the “Geoksur type”. These were “tolos” type graves made of bricks in the form of round tombs vaulted with false domes. Similar to Kara Depe tombs, these were also collective graves used for burials of persons in consequence. Simultaneously the traditional burials of the Neolithic, Djeitun cultural type were also used when the dead were buried in simple pits. The skeletons were in a crouched position without any fixed orientation. Their funeral gifts mainly included beautiful painted vessels as well as stone articles, including cups, various decorations and cosmetic items.

Our main information about the ancient funeral rites of the following Early and Middle Bronze Age (period of Namazga III-IV), which is for almost the whole of the third millennium B.C., comes from eastern Turkmenistan. There the dead were buried either in simple grave pits or in brick tombs in the case of the burial of a person of rank (Hapus Depe, Ulug Depe, Altyn Depe). A decided majority of the dead was in a crouched position mainly North oriented and accompanied by funeral ceramics and personal decorations.

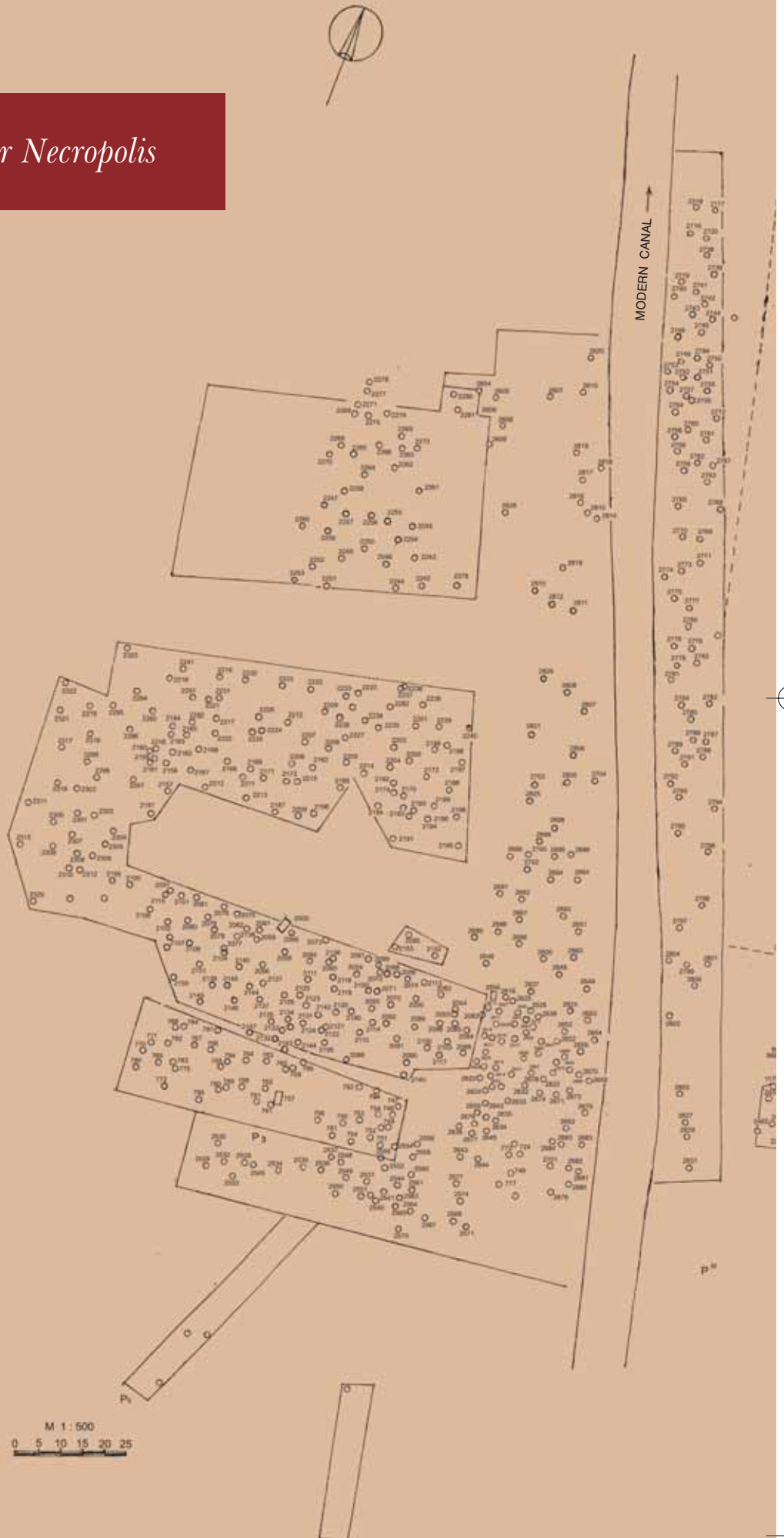
In the extreme southwestern part of Turkmenistan a new archaeological culture was found. In the late Aeneolithic, the dead were still buried in semi-underground tombs with a side entrance. They were in a crouched position either facing the entrance or with their backs to the entrance. In the following Bronze Age (Sumbar culture) the dead were buried in catacombs in a crouched position, on the side with unstable orientation (Khlopin, 1983). It seems to be related closer to Northeastern Iran (where it probably originated) than to Turkmenistan. From the earliest period their dead were buried in collective round tombs with a side entrance capped with bricks. All the dead, independent of sex and age, were placed on the right side in a crouched position with their faces turned to the entrance.

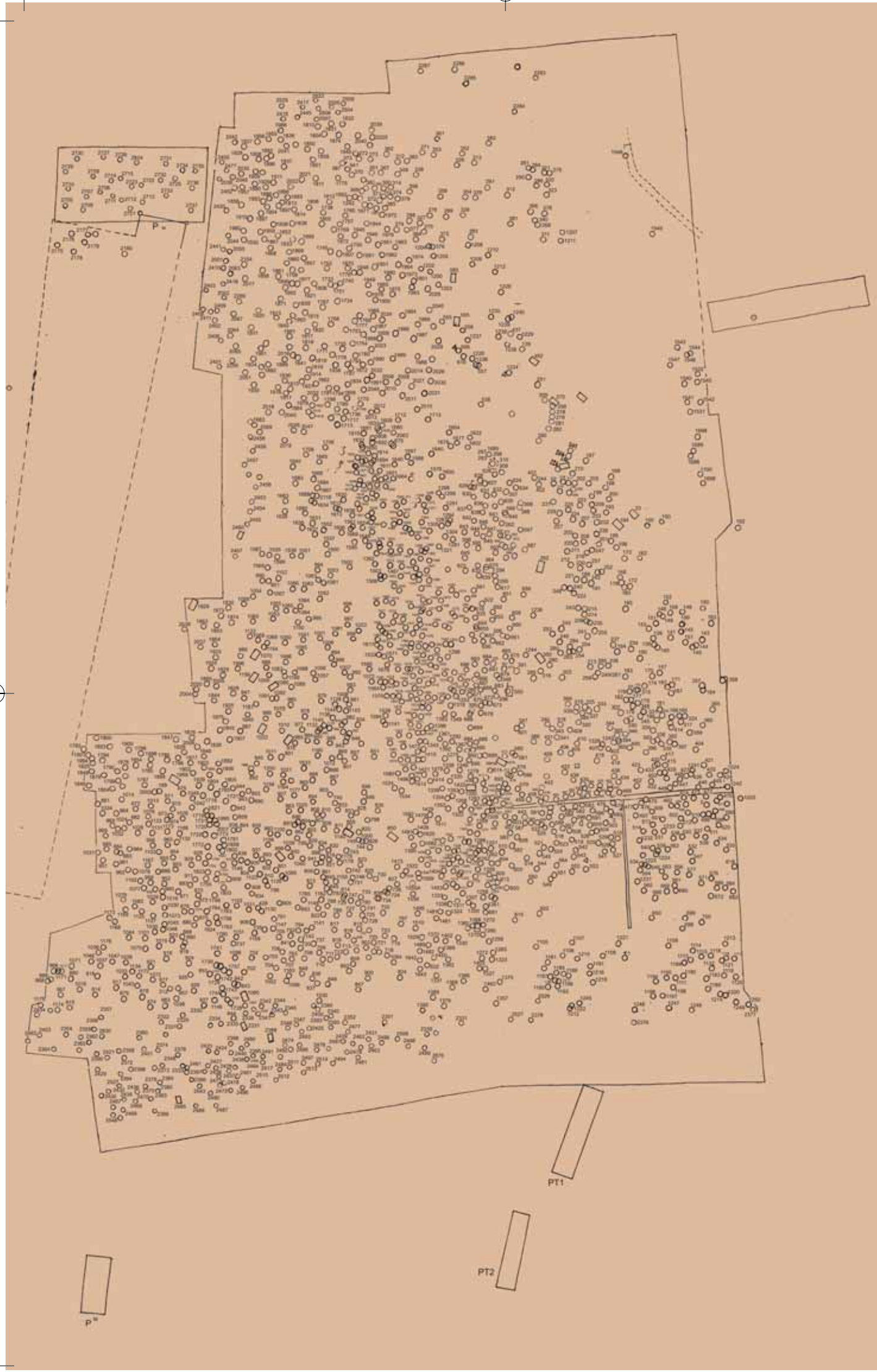
From the sixth to the third millennium B.C. – almost three thousand years – the ancient population of Turkmenistan buried their dead inside their settlements in pit graves in a crouched position mainly without any consistent orientation and with funeral gifts consisting of ceramics, copper and stone decorations and cosmetic articles.

The funeral rites wherein dead are buried in collective brick tombs appeared at the end of the fourth millennium B.C., unknown before this time. This new practice is connected with the arrival of ancient tribes that used polychrome ceramics of the so-called “Geoksur type”.

The situation changed definitively in the last centuries of the third millennium B.C. when a large tribal invasion is evident in most parts of Turkmenistan (from the Takhta-Bazaar graveyard up to the Yangi Kala one). There are traces (though not so clear) of new tribes on such sites as the upper layers of the southern hill of Anau, Ulug Depe, Namazga Depe, Altyn Depe and especially at Tekkem Depe which

Scheme at Gonur Necropolis





belong wholly to this period. All the above-mentioned sites have traces of funeral rites and traditions, which are new for this area, rites which were apparently brought by the invaders. First of all the most characteristic new custom of the newly arrived tribes was the establishing of a necropolis close to the settlements but outside their boundaries. In other words, the archaeological complex that was earlier determined as “Namazga VI” now should be renamed as the “BMAC” according to our present state of knowledge. The Gonur necropolis is the most representative and the most thoroughly studied graveyard. This present work is dedicated to the analysis of its material.

1.2. General Characteristics of Necropolis

The Gonur necropolis is a graveyard situated 200 meters to the West of the capital city of Gonur (Fig. 1). There is an opinion that Gonur consisted of a citadel and a settlement. As it becomes evident now the site was presented by a kremlin (North Gonur) and a temenos (South Gonur) at the distance of 200 m one from another. Also very often the Gonur palace is defined as a “citadel” (Hiebert, 1990; Gremaschi, 1998, p. 17) which is not correct from the point of view of terminology. A “citadel” is a construction placed on a high artificial platform and the Gonur palace together with monumental buildings around it was built right on the virgin soil.

A few words should be said about the scheme-map of Gonur made by the Turkmenian-Italian Expedition (Gremaschi, 1998, Fig. 2). The dimensions of the so-called “Gonur area” are extremely exaggerated and according to it the length from East to West equals 5 km and from North to South 2 km! Probably these dimensions are based on the ceramic findings around the main settlement. But one should

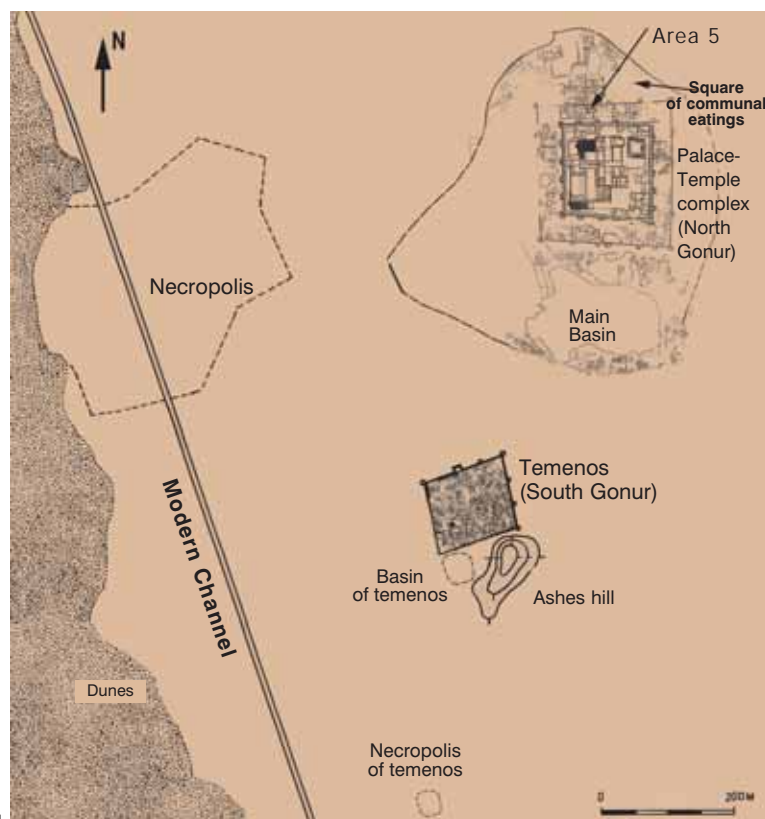
remember the fact that during the frequently strong windstorms, the ceramic fragments are easily displaced from the main site and can be then found many hundred meters away from the place they belonged to. This might give an illusive idea about the size of the settlement which is not methodically correct.

Generally speaking the scheme-map under discussion has quite a number of terminological discrepancies. For example, the meandering beds of ancient rivers are determined to be “paleocanals” though it is a well known fact that the canal bed – as opposed to a river bed – is always more or less direct. It is hard to agree with the statement that the ancient people “technically” straightened and winded the beds of rivers since no special excavations were held on the spot. And it is very sad that this scheme-map is already used in the works of some archaeologists (Salvatori, 2000; Marcolongo, 2002).

Before the excavations it was difficult to imagine the presence of any necropolis there, since the surface of the graveyard was smooth and without any tombstones. The soil of the necropolis consists of intermittent layers of

1. General view of the
Gonur-Tepe. Topographer
K. Shadurdyev.

2. Panorama of the Gonur
necropolis.





very friable sand and clay, a situation, which resulted in poor preservation of many tombs, the walls of which were ruined in antiquity. In 1992 a canal was built through the Gonur necropolis, uncovering the graves and partly ruining them. At that time the main excavations of the Margiana Archaeological Expedition were concentrated on the excavations of the North Gonur palace and so the investigation of the necropolis was entrusted to the Italian participants of the Expedition (Ligabue Study and Research Center, Venice), who were represented by archaeologists S. Salvatori, D. Usai and also by G. Rossi-Osmida. The results of their excavations were reflected in a number of articles (Salvatori, 1993, 1994, 1995) and in a special volume published by the Ligabue Study and Research Center (Margiana, 2002) where on the initiative of its President G. Ligabue besides the archaeological problems there were placed works on geoarchaeology, anthropology, paleobiology, archaeobotanics, as well as on the results of laboratory research of the gold items of ancient colonists. In 1996 the Margiana Archaeological Expedition joined this work with the active participation of the Turkmenian archaeologists E. Muradova and B. Udeumuradov and the anthropologist O. Babakov. In 2000 Russian physical anthropologists N. Dubova, T. Khodzhayov and S. Vassiliev also took part in the expedition activity. During the restoration and conservation of funeral offerings a restorer G. Rossi-Osmida rendered an invaluable assistance to the expedition.

Some time ago the author of this present work has suggested the date of the origin of the BMAC as the very beginning of the second millennium B.C. though most specialists were inclined to assign it to the middle of the third millennium B.C. (Amiet et al.). Now after the new material has become available, and especially after the excavations of the Gonur necropolis, the author has changed his opinion of the BMAC chronology and agrees with the unanimous opinion of specialists that the colonization of Margiana and Bactria dates to the last centuries of the third millennium B.C., which is demonstrated by a series of radiocarbon dates (Hiebert, 1994, pp. 170-180; Salvatori, 2000). In this case the Namazga VI period being a part of the BMAC should also be dated to the end of the third millennium B.C. instead of to the second millennium B.C. This revised opinion is based on the radiocarbon dates which were obtained through the kind assistance of American (C. Lamberg-Karlovsky, Peabody Museum) and Italian (G. Ligabue, the President of the Ligabue Study and Research Center) as well as Finnish colleagues (A. Pärpola and H. Junger) (Sarianidi, 1994, p. 11/ See Appendix 4 in present book).

The Gonur necropolis occupies an area of about 10 hectares and is one of the largest graveyards of the third to the second millennium B.C. in Central Asia (Fig. 3). The western half of the necropolis is located in the sandy section with rare thin clay layers. We have sound evidence to support the idea that it was here in the western area where the most ancient part of the necropolis was located.

We note here the fact that in the eastern section of the necropolis where the soil mainly consisted of compact clay layers and the graves were very dense (sometimes as close to each other as half a meter) still there were some unoccupied areas of land. Certainly the number of such areas cannot be compared with the number of free plots of land in the western section where graves were located at a distance of 10-15 meters from one another. The ancient people seem to have realized that due to the sandy loose soil the walls of graves are destroyed very soon and this fact led them to experiment and try to find more compact soil in the territory of the necropolis. In other words they were looking not for sandy but for clay soil. It is interesting that similar sandy plots of land (though smaller in size) were found in some other sections of the necropolis. The funeral set in these graves (for example, N.N.293-307) was so poor (in some cases it is completely absent) that one may think that they belonged to the poorest people of Gonur.

Most probably the vast areas of land in the western section of the necropolis were free of the graves due to the loose sandy soil. But in other sections of the necropolis there were also some isolated cases of vacant areas (though considerably smaller in size). It can be said that the graves were grouped at random with empty space between the groups. We can suppose that they have been used for funeral sacrifices in memory of the dead.

Additional evidence of such ceremonies is chamber tombs (we will speak about them later) that all had models of double hearths with intensely burnt “furnaces” and lightly burnt “stoves”. Fragments of vessels in some of these models can serve as evidence that alongside sacrifices cult libations also took place there.

In two of the empty areas between the groups of graves small double hearths of a special construction were built. An inner partition in each of them divided the hearth into two chambers, the smaller of which was used as a furnace for a very hot fire. The bigger chamber had light traces of fire from the furnace. It is possible that in some cases, the partition wall was constructed in such a way that flames could not lick the food (presumably the sacrificed meat) in the bigger chamber. This fully corresponds to the ancient Iranian sacrificial traditions. Though these hearths were carelessly made, their special construction seemed to be directly linked with the funeral sacrifices in the memory of the dead.

On the surface of some graves, mainly the shaft ones, there were the so-called “pits for the memory of the dead”. In some cases they were grouped on the border of the necropolis (as for example, on its eastern and western sides). These “memory pits” look like small holes (diameter 30-50 cm, depth - not more than 25 cm and square - about 0.55 square meters). As a rule all of them were burnt inside (not only the bottom, but the walls as well) and there were always layers of ashes on the bottom. Not a single “pit” had any bones or funeral gifts, a fact which could be considered as additional proof of their purpose as a memorial.

We may suggest that common people used for their ritual ceremonies general areas for the memory of the dead while the aristocracy of Margiana – who buried their dead in chamber tombs – had the possibility of doing the same in the case of individual family graves

The western part of the necropolis, as it was said above, is characterized by rather sparse distribution of graves (with distances between them of some 10 meters and more) that is in sharp contrast to the main part of this graveyard. It may be explained in terms of different periods of burials – the western part may be the oldest one, and so first graves have a lot of space around them. Later, while the necropolis was expanding towards the settlement because of limited territory, graves were located in a more condensed way. This to some extent conditioned varying density of grave locations.

Judging from the frequency of graves occurrence we can say, that more than 3000 dead have been buried there. Though results of physical-anthropological studies of bone materials are represented at the end of the book (Appendix 2), one should mention the mean life span for adults, buried at the necropolis – it was 34,3 years, varying from 33,5 for females to 35,1 for males. Maximum age for both sexes was reaching 70 years. The children were most likely buried in a special place as was the case on the later graveyard formed on top of the ruins of the North Gonur palace. As a rule, the dead was placed in a crouched position on its side, with bent legs and arms crossed on the chest (in a “sleeping pose”). Irrespective of the sex and age, practically in all cases the backs of the dead were located opposite the entrance to the side chamber. Judging by finds of copper-bronze pins (used for fixing clothes), a corpse was placed in a dress.

The predominant position of the dead is on the right side, which is shown in the Table I. Out of the total amount of graves only 88 (12,3% of the burials, where the human remains were not scattered) have

Table I

Table I Position of the dead at the Gonur necropolis

Total	Right side		Left side		Prone		Supine		Scattered	
	N	%	N	%	N	%	N	%	N	%
2491 Burials	582	23,4	88	3,5	11	0,4	36	1,5	1774	71,2
717 burials (except those, where the human remains were scattered)										
	582	81,2	88	12,3	11	1,5	36	5,0	-	-

Table II

Table II. Orientation of the head of buried. Variants.

Variants	N	%
NE	20	0,98
NNE	222	10,86
N	522	25,53
NNW	754	36,87
North generally	1498	73,25
NW	194	9,49
WWN	177	8,66
W	50	2,44
WWS	40	1,96
West generally	267	13,06
SW	10	0,49
SSW	8	0,39
S	6	0,29
SSE	8	0,39
South generally	22	1,08
SE	2	0,09
EES	5	0,24
E	7	0,34
EEN	20	0,98
East generally	32	1,56
Total	2045	

a corpse on his/her left side. The supine and prone position of buried are fixed very rarely. These “untraditional” poses could not be explained either by sex or by age.

The main part of buried was orientated to the north and north-north-west (Table II).

South, especially south-east orientations show the lowest frequency. May be it is not accidental that the skeletons which aren't lie on the right side more often have NNW orientation (Table III).

The main part (82,6%) of burials is individual, more rarely - they are double (3,6%). Only 16 tombs (##307, 830, 868, 1266, 1302, 1309, 1326, 1340, 1397, 1406, 1424, 1453, 1747, 1748, 2350, 2399) were triple, in 4 burials (##194, 1300, 1428, 2438) four persons were buried, and in one (#1999) the remains of nine persons were found (Table IV). Among double burials the majority are graves of women with children.

A part of adult double and triple burials is simultaneous: for example, the tomb #330, where a female head was placed on the male hand; a shaft tomb #2639, where a young girl (17 years) was buried with an

Table III. Orientation of the head of buried. Variants.

Table III

Variants	On the left side		Supine		Prone	
	N	%	N	%	N	%
NE	2	2,33				
NNE	12	13,95	5	14,3	1	9,1
N	14	16,28	3	8,6	3	27,3
NNW	23	26,74	14	40,0	3	27,3
North generally	49	56,98	22	62,9	7	63,6
NW	3	3,49	2	5,7		
WWN	12	13,95	3	8,6	2	18,2
W	4	4,65	2	5,7	1	9,1
WWS	4	4,65	5	14,3	1	9,1
West generally	20	23,26	10	28,6	4	36,4
SW			2	5,7		
SSW	6	6,98				
S	2	2,33	2	5,7		
SSE	2	2,33	1	2,9		
South generally	10	11,63	3	8,6		
SE	1	1,16				
EES	1	1,16	1	2,9		
E						
EEN						
East generally	1	1,16	1	2,9		
Total	86		35		11	

Table IV Number of buried in the different types of tombs.

Table IV

Number of buried in one tomb	Total	
	N	%
One person	2324	82,56
Double	100	3,55
Triple	16	0,57
Four persons	4	0,14
Nine persons	1	0,04
Absent (with cenotaphs)	370	13,14
Total	2815	100,00

old man (around 60) etc. Another part of tombs were with people buried in different times: in burial #396 a boy (11-13 years) was buried first, than a man (34-40 years) without a skull was placed in the same grave; in burial #963 a child (8-9 years) was placed in the same grave where a man (30-35 years) was earlier buried. Sometimes it is difficult to say whether this burial was simultaneous or not: in the tomb #2335 one of the buried men (who was over 60 years old) was placed in the shaft, another one (20-25 years) – on the dromos.

Over 80% of the graves at the necropolis were robbed in antiquity soon after burials. This is demonstrated by the fact that plunderers knew the location of funeral gifts inside each tomb very well. Each grave as a rule had one robber's tunnel that was clearly noticed and only sepultures and big shaft graves preserved up to 3 such tunnels made in different times which means that they were robbed more than once. In some cases the undisturbed graves formed a rather compact group (graves ##789-790) which can be explained by the fact that the earth thrown away during the digging of the neighbouring graves covered them and

thus saved from robbers' eyes. S. Salvatori (Salvatori, 1995) was the first one to point out that on the southeastern part of the necropolis some of the plundered tombs of the Namazga V period were overlapped by the ceramists' quarters of the Namazga VI period. Our later excavations proved this observation.

The rich personal decorations and funeral offerings from some huge shaft graves (grave #1022 and other) make one to suggest that these dead could have been buried either in brick cists or even in sepulchres but this was prevented due to their social position which was apparently not high enough. Some burials were definitely undisturbed and preserved intact the brick cover into the side-chamber. They contained only from 1 to 3 vessels and 1 to 2 beads (graves ##335, 337, 341, 343).

A number and variety of funeral rites, as evidenced by the different types of grave construction, characterize the Gonur necropolis. After these preliminary notes we shall begin an examination of the main grave types of the Gonur necropolis.

1.3. Burial Constructions of the Gonur Necropolis

At the moment 2853 graves and "pits for the memory of deads" (fire places) excavated at the Gonur necropolis (not counting those excavated by Italian archaeologists from the Ligabue Study and Research Center in the period from 1992 to 1995). The type of grave construction cannot be determined in 218 cases (7,6% from the total). So it was possible to do this for 2635 tombs (Table V, Fig. 3). Not the same data, registered only unplundered ones and published in the first edition of this book (Sarianidi, 2001, p. 167-168) can be explained by the suggestion that except for the richest sepulchres and cists, the shaft graves, which compose the majority at necropolis, were plundered very often too.

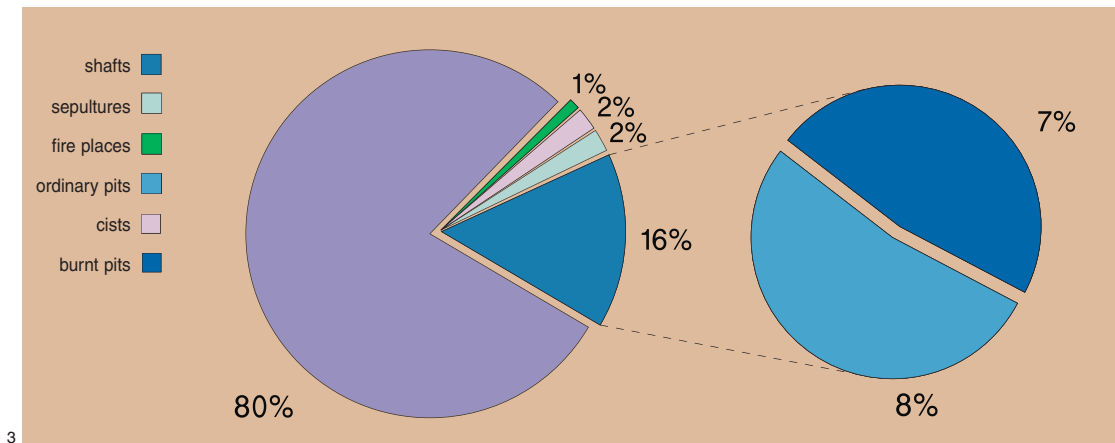
Five main types of burial constructions can be marked: 1) dakhma at the North Gonur Palace, where the King's family buried their dead; 2) sepulchres; 3) cists; 4) shaft and 5) pit graves. Among pit graves a special type – burnt pits – can be marked. In two cases burnt pits cut pit graves, on two ones – burnt pits were cut by shafts. Besides that three fractional tombs were found at the Gonur necropolis. This could serve as evidence of various funeral traditions resulting from the different ethnic roots of the people buried at this necropolis. But this conclusion contradicts the archaeologically proven fact that all graves revealed the same type of burial for the human remains: a crouched position, predominantly on the right side, with the head oriented to N-NW and with one set of funeral gifts placed by the head. Based on this one may assume that the variation in the type of burial constructions is explained by the social position of the dead rather than by their ethnic affiliation.

A part of tombs doesn't have any human remains. Some of them, were cenotaphs, which were defined by the absence of robber manholes. Other ones were not tombs, but "pits for the memory of deads" (fire places) or constructions prepared for the special future purpose (a part of burnt pits) (Table VI).

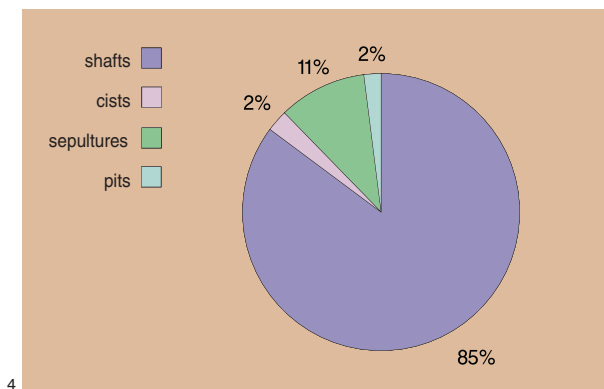
If we exclude the fireplaces and burnt pits, where the human remains were not found, we can calculate a real proportion of several types of burial constructions (Table VII, Fig. 4).

The number of buried persons and the position of the body in the tomb vary in different types of burials (Table VIII)

It must be specially mentioned, that the main part of not individual burials is among sepulchres; the smallest part – among burnt pits. Only 9,5% of shafts, 11,5% of cists and 17,4% of ordinary pits were not individual too. That data doubtless testifies the successive burials in sepulchres.



3. Diagram of all objects, excavated at necropolis.
4. Diagram of the types of burial constructions.



All objects, excavated at the Gonur necropolis

Type	Number
Shaft graves	2083
Pit graves	414
In its number	
Ordinary pit graves	218
Burnt pit graves	196
Cists	52
Sepultures	47
Fire places	39
	2635

Table V

Tombs and other objects at the Gonur necropolis, where the human remains were not found

Type of tomb	Total number of several type	Cenotaphs		Tombs where the remains are absent (except cenotaphs)		
		Number	% several type	Number	%	% of the
Shafts	2083	66	89,19	120	35,19	5,76
Ordinary pits	218	7	9,46	11	3,23	5,05
Burnt pits	196			152	44,57	77,55
Cists	52	1	1,35			
Sepultures	47			1	0,29	2,13
Fire places	39			39	11,44	100,0
?	218			18	5,28	8,26
Total	2853	74		341		

Table VI

The types of burial constructions at the Gonur necropolis

Type of tomb	Number	%
Shafts	2083	85,12
Pit graves	265	10,83
Cists	52	2,13
Sepultures	47	1,92
Total	2447	

Table VII

Table VIII

Table VIII. Number of buried and position of the dead in the different types of tombs.

Traits	Shaft		Pit		Burnt pit		Cist		Sepulture		Unkown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Number of buried in one tomb														
One person	1826	90,48	180	82,56	35	17,86	46	88,46	34	72,34	203	93,12	2324	82,56
Double	62	3,07	16	7,34	4	2,04	3	5,77	8	17,02	7	3,21	100	3,55
Triple	9	0,45	3	1,38			2	3,85	1	2,13	1	0,46	16	0,57
Four persons	1	0,05	1	0,46					2	4,25			4	0,14
Nine persons									1	2,13			1	0,04
Absent (with cenotaphs)	120	5,95	18	8,26	157	80,10	1	1,92	1	2,13	7	3,21	370	13,14
Total	2018	100,0	218	100,0	196	100,0	52	100,0	47	100,0	218	100,0	2815	100,0
Position of the dead														
Right side	422	83,9	105	77,8	11	52,4	5	62,5	2	40,0	37	82,2	582	81,2
Left side	55	10,9	19	14,1	5	23,8	2	25,0	2	40,0	5	11,1	88	12,3
Prone	7	1,4	1	0,7	1	4,8	1	12,5	1	20,0			11	1,5
Supine	19	3,8	10	7,4	4	19,0					3	6,7	36	5,0
Total	503		135		21		8		5		45		717	

Shaft graves

The most widespread type of burials of excavated graves at the Gonur necropolis (85,4%) is described as shaft graves. Shaft graves are vertically dug holes either rectangular or oval (rarely round) with an average depth from one to one and a half meters (in rare cases deeper or shallower shafts). At the bottom of such a vertical shaft, mainly on the western side was an oval side-chamber with general dimensions corresponding to those of the shaft. In the later shaft graves of the second half of the second millennium B.C. the side-chamber is narrower than that of the shaft.

The floor of the side-shaft is either on the same level with the shaft floor or 15-20 cm lower, forming a kind of a step. Rather often there was some kind of small pillow shaped in the soil which was used for the skull to rest on, or in some cases funeral gifts were placed on it.

The personal adornments of the dead and funeral gifts were mostly placed at the head of the corpse. Then the entrance into the chamber was tightly closed with raw bricks (sometimes in two rows and in rare cases in three and even four rows of brick). As a rule such brick covers were simple but in some cases they were made as brick "boxes" or as semi-vaults (Fig. 5). The dead were most probably placed inside the burial chamber without being covered with earth and after the brick cover was built the shaft was most likely filled with the earth that had been thrown aside while digging the grave (Fig. 6). Though no gravestones were excavated still it is believed that an earthen mound was formed on top of a shaft grave. In any case in spite of the fact that the graves were very densely situated they had never fallen in on one another.

As was already noted most of the shaft graves were robbed in antiquity (80%) and for this reason at the time of excavation the skeleton bones were scattered all over the grave (sometimes they were found in the robbers' tunnels and even on the ancient top level). There were cases when graves contained no skeleton or separate bones but rather a kind of "bone crumble" which will be discussed later.

In very rare cases the graves with intact skeletons were found. In most shafts only one person was buried (Table VIII). Some of these skeletons had no heads, which can be explained either by some special burial rituals or since robbers knew that the best objects were located around and on the head they took the skulls and then once on the surface collected the most valuable decorations. In one intact shaft grave (#2123) there was an untouched skeleton without a skull located at the depth of 35 cm in the shaft itself and not in the side-chamber.

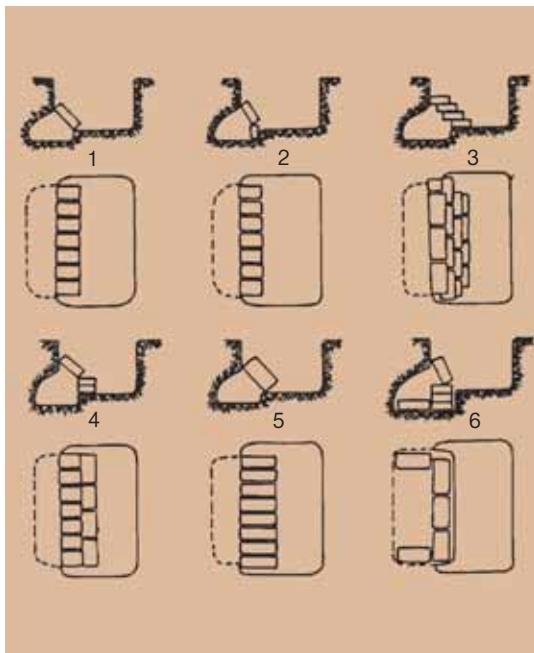
There is a number of very large shaft graves with some characteristic elements of chamber graves (burial #1758) such as a model of a double hearth with traces of fire. In burial #823 (its dimensions are 245 by 160 cm) in the western wall, there was a side-chamber (160×90×50 cm) and in the eastern wall a model of a double hearth with some ashes and traces of fire on the walls and the vault of the hearth were found. The southern butt-end wall reveals preserved steps that led into the grave and were partially disturbed by a robber's tunnel. This entrance to the grave is analogous to those of the double-chambered graves. So it is not accidental that this kind of hybrid grave combines the most characteristic features of shaft graves (side-chamber) as well as of chambered graves (models of hearths, rabbit entrances).

Though in some intact shaft graves the main funeral set was found in the sealed side-chambers, still 1 or 2 vessels were found in the shaft corner, as was the case in grave #856.

- 5. Types of shaft graves.
- 6. Shaft graves (burial#500).
- 7. Shaft grave #1500.



6



5



7

In grave #1500 a stone scepter, a disk, a “miniature column” and four cups with food remains (ram’s bones) were excavated in the main shaft pit (Fig. 7). Such a funeral set is usually thought of as a set used for ritual ceremonies. At the same time it should be noted that inside the side chamber on top of a skull there were 16 arrowheads and in front of the skull was a bronze ceremonial axe. The blade of the axe was made in the shape of a sculptured cock’s head and its butt in the form of a fish tail. On his neck the dead person had a gold bead. One may think that the dead in his lifetime had performed ceremonial as well as secular duties but this still has to be proven.

It should be noted that 5,8% of the shaft graves contained no skeletons or bones but rather a kind of “bone crumbles” mixed with singular small bones such as teeth, finger phalanxes or some vertebrae. This situation suggests that decomposed skeletons together with funeral gifts were removed to other tombs, a possibility that will be discussed later.

Besides vessels, most of which were everyday cups, the funeral gifts and personal decorations in shaft graves can be divided into “male” and “female” sets, which will be discussed below.

The Margiana type of shaft tombs was widespread in Bactria as well, a fact that can be explained by their common origin. In northern Bactria this type of tomb was represented in the Sapalli and Djarkutan graveyards (Askarov and Shirinov, 1993). In southern Bactria in the territory of Afghanistan the soil graves outside the settlements were not scientifically excavated and all our information was based on the excavations of pit graves in the ruins of such neglected monuments as Dashli-1 and Dashli-3 (Sarianidi, 1977). Besides, there were known graveyards that were located outside settlements but close by (Sarianidi, 1976, pp. 51-54, Fig. 30-31). In the best-preserved shaft pits, north-oriented skeletons mainly on their right side as well as brick-lined entrances into the side chambers were found. The funeral rites of Bactria and Margiana seem to be almost identical, an additional proof of their common origin.

Though no shaft graves were found in neighbouring eastern Iran, still some indirect hints lead one to believe that they existed in the Kerman region in the Shahdad graveyard. As a result of natural destruction most graves were found almost on the surface; the better preserved were located at the depth of only half a meter, and some tombs preserved brick entrances that are highly reminiscent of the shaft pits of Margiana (Hakemi, 1997, Fig. 48, pp. 213, 215). The close similarity and in some cases even exact likeness of funeral gifts serves as additional proof of the similarity of funeral monuments of Shahdad and Gonur.

So far these shaft graves have not been found farther to the West. Nevertheless, they were rather popular along the middle Euphrates where they appeared as a result of trade contacts with the Akkadians and most probably belonged to the local elite (Carter and Parker, 1994, p. 113). There is a hypothesis of a local North Syrian origin that was based on the shaft tombs of a simplified type like those of Selenkaya (Carter and Parker, 1994, p. 114).

The most ancient shaft graves, often with three or four chamber catacombs, were known in Palestine as far back as the eve of the fourth- third millennium B.C., which later spread all over the Near East. Besides individual tombs, family tombs with collective burials were found there, including an apparent reburial. To a certain extent they resemble the funeral rites at the Gonur necropolis. Shaft graves were rather widespread in the territory of Eurasia and reflected a natural desire of the living to protect the dead from profanation. Nevertheless based on the archaeological material, we conclude that the shaft graves at the Gonur necropolis had one common origin and were linked with the funeral monuments of the shaft type that was common earlier in Syro-Palestine and to some extent in the Anatolian regions.

Pit graves

PIT GRAVES make up 10,54% of all the excavated tombs at the Gonur necropolis (Fig. 8, 9). Pit graves of the soil type seem to belong to the poor people of ancient Margiana. Though the dead were buried in a traditional crouched position, their orientation was not consistent. Typically, only pit graves yielded some paired and singular triple burials. The skeletons in these tombs had a regular anatomic order. Quite often the pit graves were dug in the “bad” sections of the necropolis where the soil consisted of sand, a fact that caused the fall of the walls very soon after the burial. A set of poor funeral gifts was also very characteristic. It mainly consisted of a number of ceramic cups. Burials that contained no funeral offerings were found only among pit graves and they make up twenty percent of the total number of grave pits. Perhaps future archaeological material will yield more information on “graves of the poor” at the Gonur necropolis.

Only one pit grave contained 7 vessels, a bronze mirror, a cosmetic stick and a seal (#333), while another – a miniature model of a silver vessel, an earring, a pin, a mirror, a ceramic vessel and a bead (#601) (Table IX). It should be also noted that the majority of these artifacts were personal decorations, rather than funeral gifts.

In general, the simple construction of burial pits together with an extremely limited set of funeral gifts and personal decorations lead one to conclude that the dead buried in them belonged to the poorest class of the local Margiana society.



8. Pit grave #146.



9. Pit grave #141.

Funeral inventory in the pits

Table IX

Inventory	Number	%
Absent	58	26,6
Ceramic, 1-2 beads (including 1 burial with 1 ceramic vessel and 1 arrow head; 2 burials with ceramics and 1 stone vessel; 1 burial with ceramics and bone axe; 1 burial with ceramics, 8 beads and 1 feminine terracotta statuette)	134	61,5
Ceramic and bronze artifacts	26	11,9
Total	218	100,0

Burnt pit graves

At present there is an intriguing question: to whom did the burnt pit tombs belong? They make up 7.43% of all the excavated graves at the necropolis. They are usually rectangular or round pits with an area from 0.35 to 1.2 square meters and a depth from 50 to 120 centimeters. It is characteristic that only walls were burnt in these tombs while on the bottom there were layers of black ashes about 10 centimeters thick (Fig. 10). This shows that the fire was burnt directly inside the pit graves. On the other hand some singular graves were excavated where either only one side of the grave was burnt or only two spots in the whole pit were not burnt. One may suppose that the burning process was complicated and some special fuel was used for this purpose. In those BP, where no remains were found, the ash layers were covered by layers of pure sand 10-15 cm thickness. It is possible, that those tombs could be prepared before for future burials and a sand protected the sacrificed ash from the pollution. It should be noted that 25 such tombs were grouped in the southeastern part of the excavated section of the necropolis though singular burnt tombs were found in other parts of the necropolis as well.

Out of 196 burnt graves, bones were found only in 44 ones, which makes up 22.45% of all the graves of this type. But the osteological material was not the same in all these graves and requires special study. Only in twelve burnt graves there were found singular bone fragments mixed with “bone crumbles” on the floor (24.7%). The “bone crumbles” look like dust, which can be a result of the careful sweeping of the floor after the complete decomposition of a skeleton (Table X).

Thus in the center of a small burnt grave (#1075) were found only skulls (without lower jaws) in each of the other burnt graves (##191, 250, 901, 1176)- only human teeth of adult and children were found. This can be explained by complex funeral rituals, when skeletons were removed from one grave and replaced in another. In some burnt pits skeletons were found without hands (#907) or in a strongly crouched position, when a head was placed between the knees (#1017, 2941), sometimes bones of pelvis and vertebrae were missing.

According to the unanimous conclusion of anthropologists, five of these burnt graves contained individuals with various physical defects (Fig. 11), three of which were dwarfs. Here we shall only generally touch upon these burials since in Appendix 2 they are discussed in more detail.

One of these skeletons belonged to a child with very short and distorted extremities (#1172). The child's skull was practically destroyed. Next to the body, fragments of vessels and a bronze pin were found. Separated bones found on the bottom of this grave belonged to a dog according to paleo-zoologists (see Appendix 3 of the first edition of this book). Another burnt pit (#1141) contained a dwarf in the usual crouched position placed in a side chamber. In the tomb #2004 a skeleton of woman 35-40 years old, who had osteoporosis on both legs, was buried. The osteoporosis was so hard, that she couldn't walk (see Appendix 2).

The grave #1413 contained a male skeleton about 20-25 years old in a rather unusual position: it was sort of leaned against the tomb wall, bent at the pelvis and the upper part of his body was twisted (Fig. 12). His arms were also placed unnaturally: the left one was slightly bent and stretched to the side while the right arm touched the wall. The lower jaw was resting against the wall and the jaw was awry in relation to the skull. According to the anthropologist N. Dubova (Institute of Ethnology and Anthropology, Russian Academy of Sciences), this unusual position may be explained by the fact that the dead man was found some time after he died and by that time his body had stiffened to such a degree that it was impossible to place him in the usual crouched position.

There can be another explanation to this: the grave could have been too small for this corpse and they had to “push” it inside and lean it against the wall. Perhaps this could explain the fracture of the elbow bone of the right arm while the radial bone remained intact. Certainly the fracture could take place

before the man's death but the bone condition and the character of fracture made it appear doubtful.

In the grave #2171 skeleton was found in unusual position as well: it was leaning on the wall with bent legs and arms widely apart, hands on pelvic bones. A man of a small height was literally pushed into the grave #370 with the area of only 0,5 square meter. He was also positioned on his back, with bent legs apart. His skull has unusual narrow eyesockets, and it means that when alive he had ugly narrow-eyed face. In one more tomb (#1555) there were found only an adult woman on the floor and in the side-chamber – a full skeleton of a child about 2-2,5 years old. The child was disabled: because of pathologically strong development of cerebellum he suffered from bathrocephalia. The child had specifically transformed back of the head and was mentally handicapped. This pathology was congenital, and life for bathrocephals is very short, all of them die at about the early childhood.

About a half of all burnt graves contained only singular ceramic fragments that cannot really be regarded as funeral offerings. In only three graves (##87/2002, 447, 1555) two or three intact vessels were found and in one (#1017) – fragment of a stone artifact. There is some BP, where no remains were found and the ceramic vessels there were in the upper layers of the graves.

10. Burnt pit grave #1921.
 11. Burnt pit grave #2396.
 12. Burnt pit grave #1413.
 13. Burnt pit grave #2004.

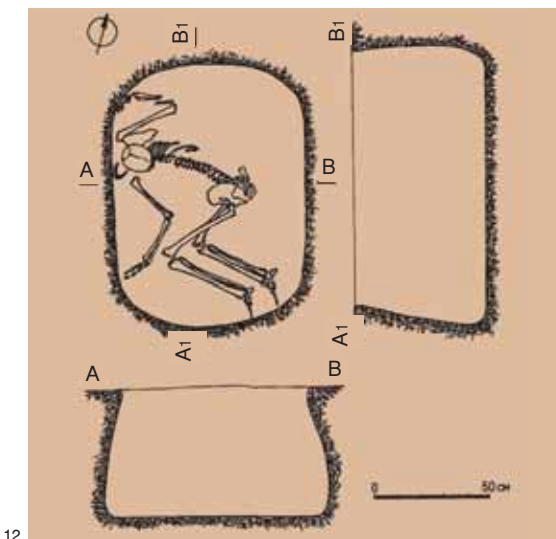


Table X

Table X. Characteristics of burials in burnt pit graves (BP) with remains

N	Grave	Description of osteological materials	Dimensions (cm)	Depth from the surface (cm)	Sex and age (years)	Funeral inventory	Evidence of burying the grave's floor
1	31	Scattered fragments of human bones	90x70	60	?	Fragments of 2 ceramic vessels	-
2	43	Scattered fragments of human bones	83x60	63	Child ?	Fragments of 1 ceramic vessel	-
3	87/2002	Teeth and scattered bones of a dog	75x50	141	-	1 whole and fragments of 1 ceramic vessels	-
4	189	Fragments of human skull and lower jaw	D 110	90,5	?	Fragments of 4 ceramic vessels	-
5	191	Some fragments of human teeth	84x67	69	Female, 15-18	Fragments of 1 ceramic vessel	-
6	250	Four fragments of human teeth	98x75	44	?	-	+
7	258	A dog's skeleton on its left side, head to the NNE	88x60	61	-	Fragments of 1 ceramic vessels	-
8	275	Two small fragments of human bones; the pit orientation WWS-EEN	86x62	45	?	Fragments of 2 ceramic vessels	-
9	370	Human skeleton in a strongly crouched (the knees are near the frontal bone) unusual supine position, head to the EES. An area of the burial is not more than 0,5 m2.	75X60	35	Female, 55-60	Fragment of 1 ceramic vessel	-
10	376	Human bones crumbles	79x60	40	?	-	-
11	447	Human skeleton in the crouched position on the right side, head to the NNW	85x85	65	Child, 10-12	2 ceramic vessels at the back of the dead's head	-
12	471	Scattered fragments of human bones	D 65	40	Adult	-	-
13	767	Human skeleton in the crouched position on the right side, head to the E	60x55	50	Child, 5-6	-	-
14	861	Three small fragments of human bones	95x75	65	Adult	Fragments of 3 ceramic vessels	-
15	901	One human tooth	70x60	65	Child, 7-8	-	+
16	905	Scattered fragments of human bones; a skull is out of the BP	80x50	60	Female, 20-25	Fragments of 1 ceramic vessel	-
17	907	Human skeleton on the left side, head to the EES. A face of the skeleton in prone position, the legs are few crouched. Upper limbs bones are absent	85x85	65	Female, 15-16	-	-
18	913	Several fragments of human bones	80x60	100	Adult	Fragment of 1 ceramic vessel	-
19	936	One human tooth	D 75	85	Adult	Fragments of 3 ceramic vessels	-
20	991	Human skeleton on the left side, head to the NNE. Left hand – near the face, right one – on the left knee.	D 95	80	Female, 30-35	-	-
21	1017	Supine human skeleton in a strongly crouched position (the knees are near the frontal bone), head to the NNW.	D 80	95	Male, 25-30	Fragment of stone artifact (glosser)	+
22	1071	Two human skeletons. Male one was prone in a crouched position. The layer of sand was covered him. Female skeleton without a skull on the left side was lying on the sand	80x60	130	Male, 35-40 / Female, adult	Fragments of 5 ceramic vessels	-

N	Grave	Description of osteological materials	Dimensions (cm)	Depth from the surface (cm)	Sex and age (years)	Funeral inventory	Evidence of burying the grave's floor
23	1075	Two human skulls	70x45	90	Females 25-30 and 30-35	Fragments of 1 ceramic vessel	-
24	1141	Skeleton of a dwarf in a crouched position on the right side, head to the WWN	85x65	60	Male, 30-35	-	+
25	1172	The shaft burial in the BP. The dog's skeleton was on the right side on the pit's floor. A human skeleton on the right side was in the side chamber	120x80	150	Child, 8	Fragments of one ceramic vessel and a bronze pin - near the child's head	-
26	1176	One human tooth	70x55	90	?	Fragments of 3 ceramic vessels	-
27	1192	Skull and scattered human bones WWN oriented	75x60	65	Adult	-	-
28	1413	Human skeleton in unusual position	119x85	60	Male, 20-25	-	-
29	1555	BP was made in pit grave. In the BP - skeleton of disabled child in a crouched position on the right side, head to the WWN; in the pit - a scattered female skeleton	80x65	65	Child, 2-2,5; Female, 30-35	1 ceramic vessel	-
30	1800	Scattered human bones and 1 dog's fang	90x65	95	Adult	-	+
31	1858	Human skeleton in the crouched position on the right side, head to the WWN	110x75	85	Child, 12-13	-	-
32	1939	Dog's skeleton in unusual position ("pushed" into the pit)	90x70	95	-	-	-
33	1977	Human skeleton in a crouched position on the right side, head to the NNW. Right hand was on the waist.	105x65	65	Female, 25-30	-	-
34	2004	Human skeleton in a crouched position on the left side, head to the WWN. Osteoporosis	134x85	115	Female, 35-40	-	+
35	2005	Human skeleton in a crouched position on the right side, head to the NNW.	90x75	75	Adult	-	-
36	2087	Dog's teeth	65x60	55	-	-	-
37	2171	Human skeleton in unusual supine position. Teeth of the second juvenile persons	95x70	90	Male, 25-30; Juvenile < 18	-	-
38	2354	Human skeleton in unusual position: "Head down legs up"	85x60	95	Female, 45-50	-	-
39	2396	Human supine skeleton, head to the SW.	80x60	60	Female, 35-40	-	-
40	2410	Scattered human remains	80x60	70	?	Fragments of 2 ceramic vessels	-
41	2421	Scattered human remains, head to the W	90x50	80	?	Fragments of 2 ceramic vessels	-
42	2479	Scattered human remains	D 105	80	Male, 18-20	Fragments of 1 ceramic vessel	-
43	2541	Shaft in BP. Human skeleton in a crouched position on the right side, head to the WWN	110x70	125	Male, 9	Fragments of 2 ceramic vessels	-
44	2545	Shaft in BP. Human skeleton in a crouched position on the right side, without a skull, head to the NNE	60x40	80	Child	Fragments of 2 ceramic vessels	-
45	2304	Human skeleton in crouched position on the right side, head to the N. A skull in unusual position	92x60	105	Female, 11	-	+
46	2283	Human skeleton in supine position with the light crouched legs, head to the W	110x60	100	Male, 15-16	-	-
47	2313	Distorted human skeleton in strongly crouched position on the right side, head to the S	80x55	60	?, 17-18	-	-

This lack of offerings was hardly accidental and this fact singles out the burnt graves among the rest of those at the Gonur necropolis. Almost one quarter of the burnt pit graves was grouped on the outskirts of the necropolis and included skeletons of people with some clearly apparent defects (dwarfs, hydrocephalics, armless and so on). Perhaps this explains the premeditated burial of these people separate from the other dead. It is quite possible to conclude that this group also included those whose defects were not so evident. These could be sterile women or those who gave birth to dead children. If this supposition is true then it explains the burial of such



14

14. Burnt pit grave #1939
with a dog's skeleton.
15. Cist #1337.

“unclean” people separate from all the others. Anthropologists confirmed this supposition. This also explains the fact that they were buried in graves that were first burnt inside in order to protect the pure nature of the earth from profanation.

In this connection it should be remembered one place in Avesta, which said: “Thus Ardivi Sura Anahita Gorbade, those to partake of her zdotharas who were crazy, or distempeled, lying, cowardly or spiteful; but she also rejected the leper, the blind and deaf and all these physically deformed” (Boyce, 1989, p. 166).

The fact that few burnt pit graves contained random bones of dogs, placed on special ash layer, deserves special attention. In graves ##258 and 1939 full skele-



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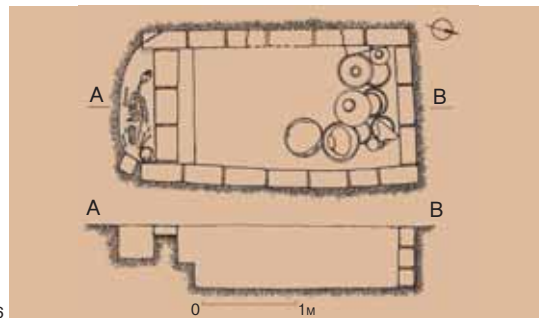
tons of dogs were laying on ash layers (Fig. 14); in the burial #87/2002 the scattered dog's bones and teeth in the sand mixed with ash were found. The human bones with dog's fang were found in the grave #1800. In the burial #1172 the dog's skeleton was laying on the right side on the pit's floor and the children's skeleton with very short extremities was situated in the side chamber. This is by no means accidental if one takes into account the important role of this animal among ancient Iranians.

The pit graves represent simple funeral monuments that were widespread in the ancient world and it is almost impossible to define the place of their origin. At the same time pit graves with fully burnt walls were met for the first time.

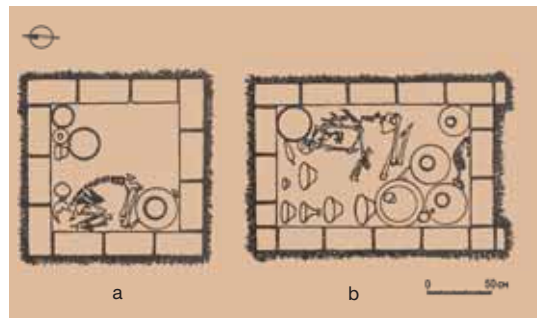
Cists

Unlike shaft and pit graves the cists represented brick burial monuments constructed on the ground surface (with the exception of a few underground ones) and they made 2,13% of all the excavated graves of the Gonur necropolis. They had a rectangular shape usually built from five rows of bricks (44x24x12 cm) and were covered with vaults. The vaults were formed by two bricks inclined to each other and a horizontal brick as a sort of "lock" between them. At the same time singular underground cists (#1337) preserved the tops and thus one can judge about the way cists were constructed (Fig. 15).

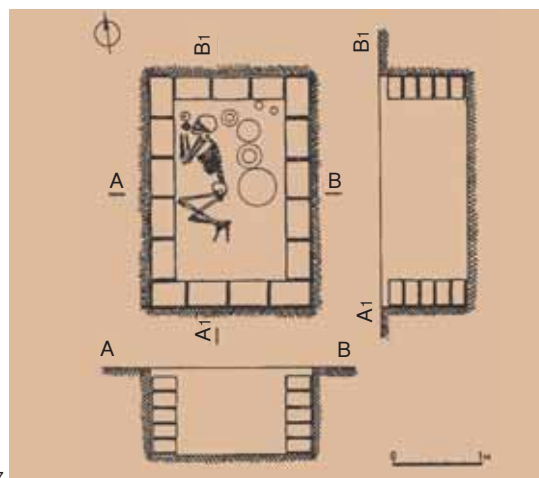
As a rule cists had no entrances and were used only once - not successively - for a burial of one corpse (Fig. 16-19). Only in 3 cists there were found remains of two individuals and in two ones - of three persons (Table VIII). All male and female skeletons in cists were found in the usual crouched position and no earth touched them. It is perhaps not accidental that the majority of cists were excavated in the southeastern part of the necrop-



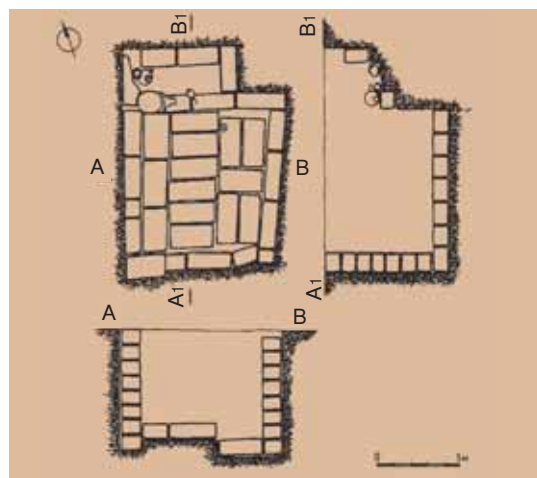
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18



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19

16. Cist #1741.
17. Cist #228.
18. Cists: a) #147 and b) #269.
19. Cist #1320.

olis. To a certain extent this recalls a similar situation at the Gonur-24 necropolis where all cists were gathered into one comparatively compact group (Sarianidi, 1998, Fig. 31).

Only one cist (burial #560) was not plundered and preserved rather rich funeral gifts containing personal decorations that included some gold items.

In the strongly disturbed cist (#709) were a woman about 45-50 years old and 5 ceramic vessels. One vessel was probably a ritual one and was decorated with a tree and two goats standing in front of it.

Among usual cists there were found some individual ones as for example grave #1320 (Fig. 19). The floor of this cist was completely laid with bricks and in its northern wall a two-stepped platform was dug in the soil. It was used as a niche where the funeral offerings were placed that besides six vessels contained a cosmetic set as well. In spite of the fact that this was a burial of a young woman (25-30 years old) a stone mace head was found on the floor. This can be interpreted as a sign that the dead belonged to a high class in her lifetime. It thus appears that the people buried in cists belonged to a rather high class of local society though not as high as those “aristocrats” that were buried in chamber graves (this will be discussed below).

The earliest of the known cists which were made of stone plates and used for one corpse, including those of children, were found along the middle part of the Euphrates (Tilmen, Karchemin, Barsip, Lidar) in the same zone where shaft graves and probably chamber graves were excavated. It is quite possible that from here the migrating tribes spread these types of graves in the general eastern direction up to Central Asia and Margiana in particular.

Remarkably significant is an intact cist (burial #2900) that was found at the Gonur necropolis. In chapter 4 there will be given its description in all the details.

Chamber graves or sepultures

Tombs of a chamber type played a special role in the funeral rites of Margiana. While shaft and especially pit graves were rather popular throughout the largest expanse of Central Asia, the chamber tomb (Fig. 20), on the other hand, was an almost unique phenomenon in all the Near East. The chamber tombs (or sepultures) made up 1,9% of the total number of the excavated graves at the Gonur necropolis. They were found randomly placed throughout the whole area of the necropolis without any pattern. Several types of these tombs can be identified, all of them representing models of houses or more precisely of bedrooms. The main characteristics of these tombs are stepped entrances blocked by bricks, walled fireplaces and models of double hearths. Some of the tombs had “cupboards for dishes”, brick “beds” and “tables” (Fig. 21).

The first chamber tomb (340 by 160 cm) with only two remaining brick walls was found by Italian archaeologists in the beginning of their excavations at the Gonur necropolis (Salvatori, 1994).

All sepultures are partially underground constructions; three-fourths of their height being dug in the soil and probably only arched vaults visible on the surface. In some cases the height of the preserved walls equals one and a half meter, which leads one to believe that the initial height of the grave from the bottom up to the arched vault was two meters. In constructing a grave, a rectangular pit was dug in the soil and then its walls were lined with bricks or more rarely covered with a layer of clay. In a few cases the graves were not lined.

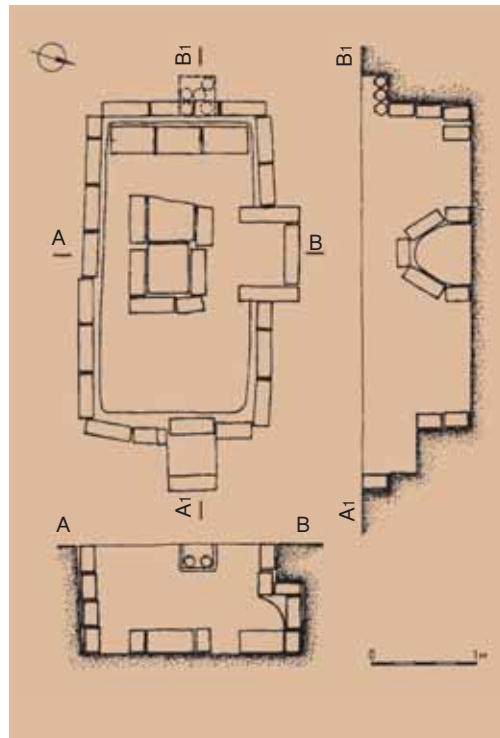
Some indirect clues such as the entrance steps located on the modern day surface lead to the supposition that one-third of all chamber tombs protruded over the ancient surface and had half-vaulted covers. The principal difference between chamber tombs and cists is that cists were made only for one-time



20



21



22

20. Sepulture #2650.
 21. Sepulture #1068.
 22. Sepulture #256.

use while chamber tombs were designed for successive burials. In the latter case the brick partition was disassembled for the dead to be brought in. The previous skeleton, which lay in the center with the funeral gifts and personal decorations, was removed to the opposite wall of the chamber (in case of the one-chambered tomb) in order to make room for the new skeleton. In a double-chambered tomb the first and smaller chamber was used for the new skeleton while the previous skeleton was removed to the second bigger chamber.

The chamber graves can be divided into two groups according to size: the small group being four to five square meters and the other almost double in size, from seven to eight square meters. If one takes into consideration the fact that chamber graves were family mausoleums with consecutive burial rituals then it is possible to suggest that the ancient people planned ahead how many dead they were going to bury in each grave.

Not a single sepulture with a brick floor was found. As a rule the floor is a soft sandy soil almost always about 15-20 cm lower than the level of the brick walls. In general single-chambered sepultures are positioned along the N-S axis (with some deviation) and only in one case along the E-W axis.

One type of single-chambered grave had entrances in the southern wall and had two to three steps leading down into the chamber. The most simple single-chambered graves had no “tables”, or “beds”, but all of them had (with a rare exception) in the center of the eastern wall (and always on the wall to the right of the entrance) models of double hearths (for example, graves ##270, 350). In some graves such hearths were replaced by fireplaces in the wall.

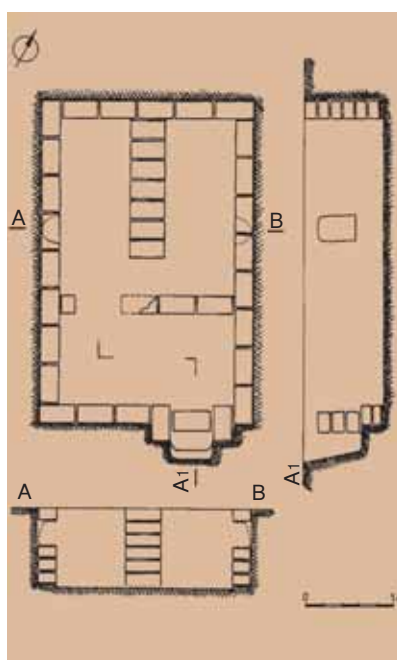
The second type of single-chambered graves had brick “beds” on the short wall against the entrance. They look like narrow brick platforms one brick high (graves ##262, 550, 1190). In some graves either in the center or some place at the side there were rectangular “tables” also one brick high but somewhat wider than the “beds” (graves ##833, 570, 2303 and others).

Some sepultures had both “beds” and “tables” and in rare cases fireplaces too (graves ##256, 450, 1070, 1099). The most representative is grave #256 which deserves to be described in more detail (Fig. 22). This

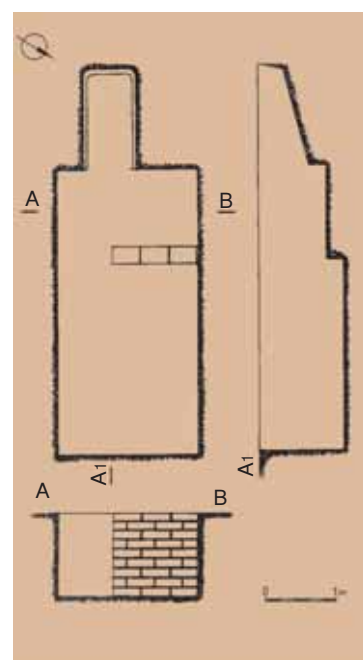


23. Sepulture #194.
24. Sepulture #2244.
25. Sepulture #1999.

23



24



25

particular chamber grave is oriented on the E-W axis with an entrance in the middle of the eastern wall. The inside walls were lined with bricks (41-49x21-32x11-19 cm). By the time of excavations, the chamber was filled with wind-blown sand. In the center of the floor there was a rectangular “table” (110x90 cm) of one layer of bricks, a “bed” along the northern wall and above it a “cupboard” with piles of vessels one inside the other. A normal sized fireplace with a flue was located in the middle of the eastern wall. Small bones of the skeleton were preserved and only some fragments of vessels and a stone bead represented the funeral gifts and personal decorations.

Only one unlooted grave (#194) of the first type was excavated (Fig. 23). It was preserved at the height of only two to three brick layers. The entrance to the chamber was most probably located in the southern wall and on the opposite northern wall was a brick “bed”. There were remains of four people in the chamber: three women and a child (9-11 years old). The ages of the women were: over 20, about 35-40 and 30-35. All skeletons (except one) were commingled and laid out in a chaotic position on the “bed” along the northern wall.

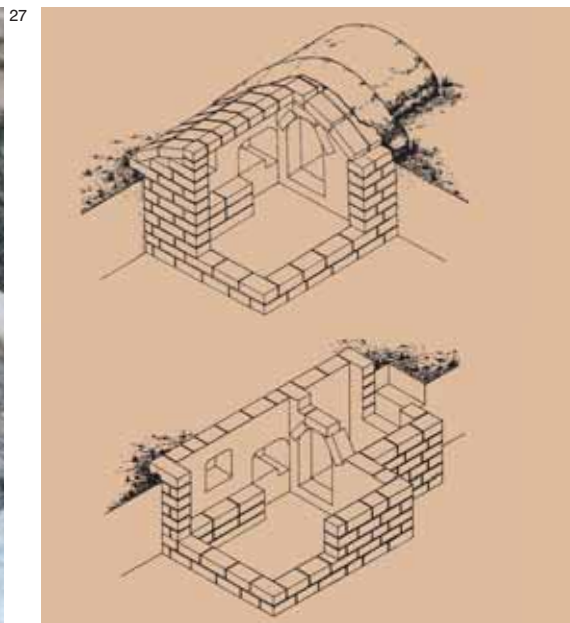
At the entrance, lying on a special ash layer was the last burial, whose skeleton was found intact in a crouched position on his left side; his skull was under his right hand. The main funeral set was found in the northern section among the scattered bones. It consisted of ceramic vessels, about 1000 gypsum beads and an empty golden sculpture of a mountain goat (without a head) as well as a golden turtle shell. At the feet of the intact skeleton was a piece of coloured mosaic box that apparently had not been preserved and fragments of vessels.

The archaeological material of the grave shows that it was used for successive burials. The previous skeleton, which lay in the center with funeral gifts and personal decorations was simply removed to the northern wall of the chamber in order to make room for the new skeleton. In other words the skeleton at the tomb entrance was the last one. It remains to be explained why they removed the skull and put it under his hand and we will speak about this later.

The ceremony of successive burials explains why the entrances to all chamber graves of Gonur with-



26. Sepulture #2230.



27. Double-chamber tomb.
Grave #1300. View inside.
28. Double-chambered tomb.
Grave #1300.
Reconstruction of A. Orasov.

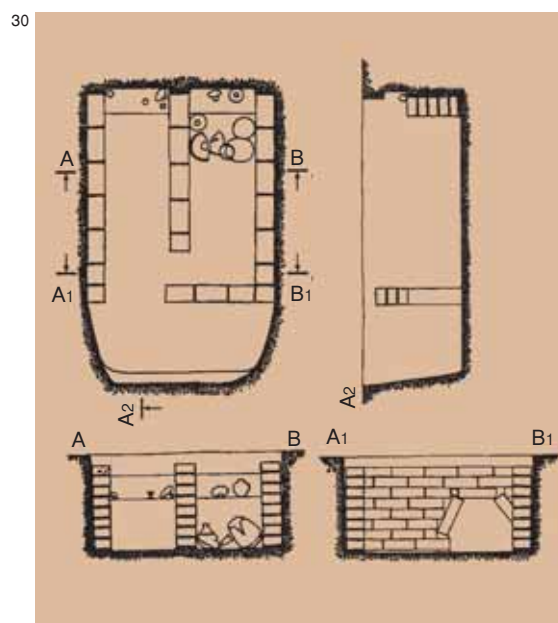
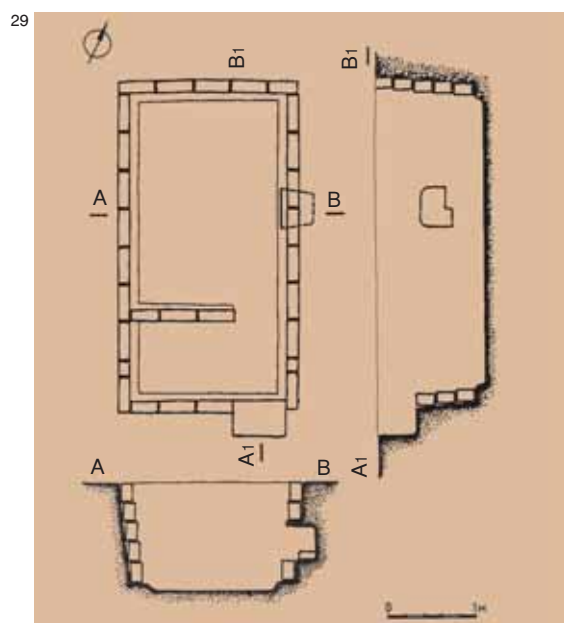
out exception were capped with bricks but always “dry” without any clay layer between them (Fig. 23, 24). This was done for easy access into the tomb for the next burial. As a rule the entrance steps were done inside a sepulture and only in the grave #1999 (Fig. 25) the entrance was made as a “dromos” which closely reminds the analogous sepulture entrance from Ugarit.

The presence of grown ups and children in one tomb suggests that these served as a sort of family grave or mausoleum that belonged to the local Margiana elite.

This second type of graves is represented by double-chambered graves of two variants. They are rectangular constructions dug in the soil with the inside walls lined with bricks or simply covered with layers of clay. The first and presumably the earlier type is represented by the constructions in which the parallel chambers are positioned along the long axis as a rule (Fig. 18, 20). Between chambers is a passage about 60 to 70 cm high (with an arched vault, when it was possible to determine) and in the south-western corner of the grave is a common entrance about one meter high.

Foundation pits of practically all such tombs were deliberately prepared larger than the brick layers inside of them. Thus a depression was formed before the main entrance – a pit (sometimes with steps) where the relatives with the deceased entered. The dead body was taken into the chamber through the main entrance and placed in the first chamber while the bones and the funeral gifts of the previously buried corpse were pushed to the second chamber.

Some indirect findings suggest that the construction of double-chambered graves was determined by the necessity to create an arch, based on the common wall of the chambers (Sarianidi, 2002, p. 250). This supposition would seem to be accurate, keeping in mind the fact that this type of grave was found in the western, the oldest part of the necropolis. Later when local builders developed knowledge of constructing arches over the larger bay they did not need to erect the intermediate wall and this explains why practically all later tombs were single-chambered (Sarianidi, 2001, Fig. 9). It may not be accidental that such double-chambered tombs had no deep niches in walls or models of double hearths that are always present in single-chambered graves. The latter type of graves had “beds” or “tables” as well as fireplaces built into the walls. In certain



29. Double-chambered sepulture #555.

30. Sepulture #1750.

31. Sepulture #850.

32. Sepulture #2460.

cases they had also models of double hearths typical of double-chambered graves. Only one double-chambered grave (grave #1300), instead of a model, had a real double hearth (70x45 cm) almost on the floor level next to a niche placed higher in the wall. In some cases in the butt-ends of the pit there was a kind of a shelf where they left the funeral gifts and this gave the impression of a “cupboard” (Fig. 32, 33).

The second variant of double-chambered sepultures is represented by burial constructions with chambers oriented along the short butt-end axis (Fig. 29, 31). Their sizes vary and sometimes the smaller chamber was located at the common entrance to the grave (grave #555) and in others the smaller chamber was located opposite to the entrance side (grave #124). The total area of the intact grave #555 was equal to 8 square meters (Fig. 29). A common passage joined it to a bigger chamber. Almost in the middle of the eastern wall was a model of a double hearth used for cooking sacrificed food with a “furnace” and “oven”. The skeleton was not found and only in chambers (mostly in the smaller one) was there preserved a bit of very small separated bones that belonged to a male 30-35 years old. One gets the impression that the skeleton was buried in the small-



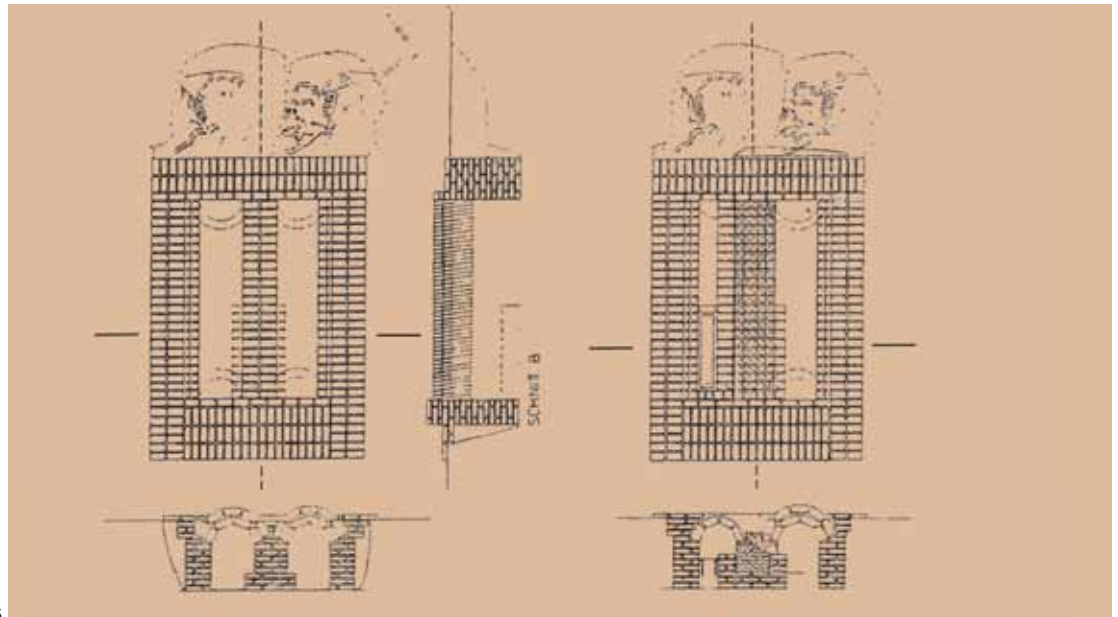
31



32



33. Sepulture #270.
34. Sepulture #1090.
35. Palace tomb F/I-
m/18-no, stratum d/1 at
Avaris (Bietak 1996).



35

er chamber. The second chamber yielded 10 ceramic vessels (two of them were decorated by primitive designs), one big copper-bronze conical goblet, three miniature silver cups and one stone cup. Besides these, there were also a silver seal with a falcon torturing two snakes, a copper cosmetic flacon and a massive copper-bronze top of a scepter or rod delicately ornamented in the form of a plant, presumably pipala, which is typical for the Indus Valley and is a characteristic decoration on the objects of the Harappan civilization.

The funeral offerings of this grave were piled by the northern wall in a heap of one meter high and gave one the impression that they were just “thrown out” of the first chamber, which may suggest that the grave was plundered and robbers simply did not notice them or that the skeleton was removed and reburied somewhere else. The latter suggestion will be discussed later.

Among the double-chambered burials of an “unusual” plan, grave #2000 attracts our attention. Its entrance was most probably located in the southern wall, which was heavily damaged by robbers’ tunnels. Only bone crumbles of former skeletons and a silver goblet were preserved in the small chamber. In the northern wall of the second and larger chamber a model of a simple (and not a double-chambered) hearth

was found. It bore traces of smoke and had 18 ceramic vessels, 2 silver saucers and a bronze sword. Inside the robbers' tunnel a miniature stone bead was found.

Almost all sepultures were plundered in antiquity. Sometimes they were robbed more than once which is demonstrated by the existence of two or three passages used by robbers. Little was left after these raids. There remained some fragments of gold foil, silver and gold vessels, some fine articles, cosmetic items made of ivory and so on. But even these few things leave no doubt that chamber graves were used by Margiana "aristocrats", by those who belonged to upper classes of ancient society.

Sets of funeral gifts in chamber tombs were very similar to those found in shaft pits and cists, but in chamber tombs they were found more often than in ordinary burials. Thus, silver items were found in thirty-two percent of graves, seals in twenty-eight percent and gold pieces (mainly fragments of gold foil) in forty percent of the tombs. Even these small things left by robbers may give us an idea of how rich the people buried in these tombs were.

Many burials suggest that the presence of bone crumbles and small separate bones cannot be explained simply by robbers' activities. It is clear that robbers would have never left behind the funeral gifts. In this case one may draw a conclusion that skeletons were removed from their original place in order to be reburied somewhere else.

Chamber tombs represent house models and are related to the Hypogeum type graves that were used only by Indo-Europeans, including the Indo-Iranian tribes (M. Gimbutas). Up to that point in Central Asia no chamber tombs of this period had been found and thus the Gonur necropolis demonstrates the first (but certainly not the last) example of such burial constructions at the end of the third – beginning of the second millennium B.C. Lately in the middle part of the Euphrates basin graves that to a certain extent resembled the ones under discussion were excavated. These were rectangular rooms, 5 by 3 meters, with stepped entrances, niches, "beds," "windows," and "pillows" that gave an impression of a real bedroom (Halawa, Lidar, Gediki, Hadidi). Here too these tombs were believed to belong to local elite and represented collective family graves used for successive burials. Especially representative were tombs from Till Barsip of 2600-2000 B.C. that were presumably used by local "aristocracy." There is an idea that the Hypogeum type of tombs reflects not only the commercial but cultural expansion of the Early Dynastic III Akkadian period. At the same time it might have a local North-Syrian origin (Carter and Parker, 1994, pp. 113-115).

Sepultures of a similar type were known in Dab*a (Fig. 35) in the Nile delta (Bietak, 1994, Abb. 277), in Mari from the beginning of the third millennium B.C. (Parrot, 1969) and in Ugarit where they were located under the floors of houses (Pitard, 1994, p. 20). All these facts prove that in Syria this was a long-lasting tradition. In Greece already in the third millennium B.C. there were graves that copied houses (Mochlos, Crete, Palaikastro).

The Tall Tuttul graveyard from Syria of 2600-2100 B.C. yielded more impressive parallels wherein shaft tombs as well as Hypogeum type burials were excavated (Strommenger and Kohlmeyer, 1998, p. 51). Like the Margiana tombs they were also built as house models and though all of them were plundered in antiquity, the remains of the "furniture" left no doubt of their belonging to the Hypogeum type of graves. Such graves in Levant seemed to have centuries-old traditions which was shown by the Urartian graves of the Altyn type with various pieces of furniture and even thrones (Ozguch, 1969, p. 114, Fig. 4). They probably originated within the funeral traditions of such graveyards as Tuttul and Basip that were famous for their rich gifts of gold, silver and ivory items. The Urartian rock graves consisted of several rectangular chambers with wall niches and one common entrance. Inside the remains of wooden furniture (tables,

coaches, thrones, chairs and so on) reflected the local Anatolian and Syrian traditions. Very specific were the thrones decorated with typical Uartian carving as well as sarcophagi (Ozguch, 1969, pp. 66-70), clear evidence that the dead belonged to the ruling class of society. To a certain extent graves from Mycenae and Cyprus also belonged to this type. In Cyprus (Kition) double-chambered graves with a common passage between them were excavated (Karageorghis, 1976, Fig. 20).

All this leads one to believe that they had one common place of their origin in the middle of the third millennium B.C.

The chronological priority of Syrian tombs compared to the Margiana tombs leads one to suggest that this grave type was introduced to Central Asia by the tribes that migrated from the far West at the end of the third millennium B.C. They were unknown here before this time.

So far in the intermediate territory of Iran, chambered tombs were not found and the western parallels to the Gonur necropolis look somewhat isolated. Still there is a strong belief that future archaeological excavations will fill up this gap in our knowledge as it often happened in the history of the scientific research.

1.4. Fractional Burials

Usually fractional graves were small pits that contained carefully piled bones and always a skull topped them. Fractional burials undoubtedly indicate that the dead were first placed in a special place (“dakhma”) where the flesh was cleaned from the bones. Less likely is the “boiling” of a skeleton, though theoretically this way was also possible.

At Gonur fractional burials were found only in three graves (Fig. 36). Besides the Gonur necropolis, this type of burial was excavated in such monuments as Togolok-1 and Togolok-21. In the ruins of Togolok-1 one room was used as a burial and on its floor there was found only a very small “spot” of bone crumble that included finger and foot phalanxes (definition of G. Lebedinskaya and T. Balueva). The burial was definitely not robbed since an intact lazulite amulet was found in the burial (Sarianidi, 1998, A. N.1620). After the Togolok-21 temple was neglected, in its altar square in room #68 under large fragments of pythos there were found

36. Fractional burial
#412.



long bones topped with two skulls (Sarianidi, 1990, p. 128). Separate bones topped with skulls were found in North Gonur (Sarianidi, 1990, p. 156, N 2) and in the ruins of the Togolok-21 temple (Sarianidi, 1990, p. 160, N 21). These finds proved that the bones of the dead were most likely first cleaned of flesh. But it should be admitted that this type of burials was not popular among the local population of Margiana unless these partial burials were performed in special places separated from the main graveyard. Until then, similar funeral rites had not been found anywhere else except for the Baluchistan regions. A. Stein excavated them (A. Stein, 1931, pp.77-78; A. Stein, 1937, p.120).

1.5. Cenotaphs

In spite of the fact that cenotaphs were found in different types of burials neither of them can be determined as a special funeral construction but still it will be reasonable to dwell upon these types of graves before closing this chapter .

Cenotaphs make up 3,1% of the excavated burials at the Gonur necropolis, and 26,7% of investigated cenotaphs have been in situ burials. One should understand that cenotaph is a grave without any human bone. Some 89,2% of cenotaphs are shaft graves, and only 9,5% of cenotaphs are represented by pit graves with orientation of the pits, traditional for the Gonur necropolis: North-West-North (63%), West-North-West (18%) and North-North-East (18,5%). Location of funeral inventory mainly “at the head” and presence of sacrificial food (ribs of a ram) in the grave are traditional too (Fig. 38).

Funeral inventory is represented in the following way: ceramic vessels (from 2 to 9) – in 100% of cases; stone beads (1-2 pieces) – in 41% of cases; pieces of kaolin (from 1-3) – in 15%; copper-bronze mirrors, flint arrow heads, pins and “miniature columns” – in 11% of cases; gold single beads, bronze and glazed potter stamps, cosmetic bottles, lead “rings” and knives – in 7,5% of cases.

At last one should mention that entrances into the side chambers of the shaft cenotaphs (like of the ordinary ones) were tightly blocked by bricks. According to funeral gifts, cenotaphs belonged both to men and, presumably, women (“female set”), while the “miniature columns” indicate that some cenotaphs belonged to various ministers of religion (Fig. 37).

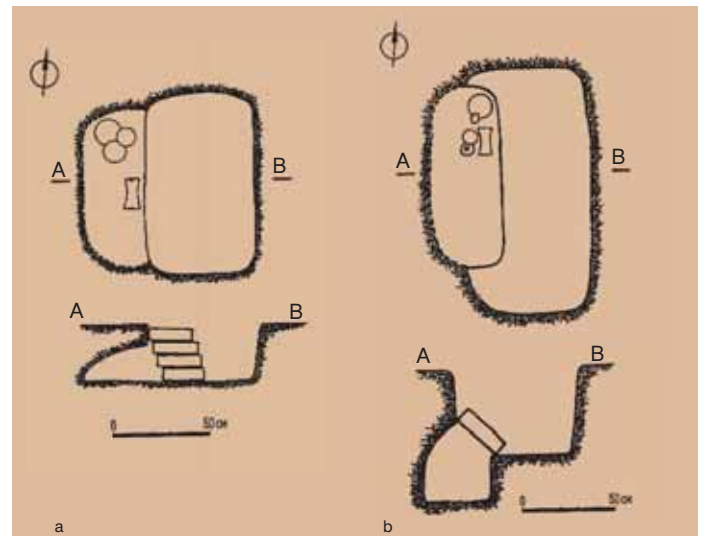
The available data prove that cenotaphs were not always connected with those who died far from the motherland, as it was believed earlier.

This short review of the archaeological material obtained at the Gonur necropolis clearly shows that one general idea prevailed at that time – above all they tried to avoid the direct contact of a decomposed corpse with the pure nature of the earth. It has already been mentioned that corpses in the shaft graves, chamber tombs, in the burnt pit graves and cists were placed in a vacuum, without the earth touching them. The only exceptions were fractional burials but in this case only “clean” skeletons (that is, the ones that were cleaned of flesh) were buried. This general idea found its confirmation and continuation in the funeral rites of Zoroastrians.

37, 38. Cenotaphs: Shaft grave #1230 (37, 38b) and shaft grave #2228 (38a).



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CHAPTER



FUNERAL GIFTS AND PERSONAL DECORATIONS

2.1. General characteristics. “Female” and “male” funeral sets

The term “funeral inventory” is a widespread one in archaeological literature, and its use prevents from differentiating between funeral gifts and personal decorations.

Indeed, there is only relative difference between the former and the latter. For instance, we can define ear-rings, rings, bangles, beads, diadems, hair-pins and pins for clothes, cosmetic utensils (bottles, sticks, so called spades) and other less important artifacts as personal decorations. One can definitely describe ceramic, stone and metal vessels, prestigious items (so called miniature columns, “crooks”, “weights”, stone disks, ceremonial axes, stone and metal heads of scepters) as funeral gifts. In isolated cases there were found professional gifts like instruments of master in stone cutting (burial #1200). Taking this into account, let us turn to review of various artifacts, excavated from the Gonur necropolis’ graves.

It has been mentioned above that most of the Gonur necropolis graves were plundered in antiquity and as a result we cannot get a complete and realistic idea of how rich the funeral gifts were. But based even on the limited quantity of gifts we may reconstruct the social life of ancient Margush.

Statistics show that 29% (almost one-third) of finds from intact graves were identical in male and female burials. They included ceramic and bronze vessels, stone, frit and metal beads, spindles, “bronze sticks”, bone pins, mirrors, cosmetic “applicators” and bottles. Though the set of gifts was almost the same in both types of graves they differ in quantity. In other words based on this we may speak of “female” and “male” sets of funeral gifts.

The “female set” was more diverse, included 18 types of items that made up 44% of all registered articles and consisted of silver models of small vessels, gold and silver beads and rods, bronze and frit seals, ear-rings and bracelets, shells or beads made of shells, sewn buttons, silver pins and diadems, gold disks and steatite bottles. In female burials there were found twice as many ceramic vessels as in male burials. On the whole, the female graves were characterised by having mostly cosmetic and jewelry items.

The “male set” consisted of 11 types of items that make up 27% of all the registered articles and include stone vessels, bronze ceremonial axes (and a bone one), stone rods, bronze tops of scepters, “miniature columns”, lead rings, metal knives and swords and flint arrow heads. As one can see, these were articles that mainly reflected the power and strength of the male population of the ancient land of Margush. It is remarkable that practically all social symbols of power were found in the male graves which may be interpreted as an indication of the indisputably high status that men experienced in the social life of Margiana.

Perhaps it is not accidental that the same situation was recorded in North Bactria (Sapalli, Djarkutan), where the female gifts were “richer” than the male gifts (Aleksin, 1986, p. 28). Let us now discuss the available archaeological material from the Gonur necropolis.

2.2. Funeral ceramics

Ceramic vessels make up the most popular type of funeral offerings at the Gonur necropolis. It should be noted that funeral ceramics usually bore traces of effaced bottoms on the vessels, an indication that before being placed in tombs they were used for every day needs. In some cases clearly spoiled over-fired vessels were put into graves, which can be interpreted as a sign of a certain disrespect for funeral rituals. The archaeologist B. Udeumuradov has analyzed all the pottery found in the Gonur necropolis (Udeumuradov, 2002). His groupings and preliminary conclusions were as follows: "The following parameters were principally taken into consideration during the study of ceramic ware from the Gonur-depe necropolis: a shape of vessel, its morphology and also texture and technological attributes. In particular, the texture parameters of vessels include pottery colour and a structure of clay, they are made of. On this basis all crockery of the Gonur necropolis is divided into seven basic texture groups:

- group 1 – crockery with red, pink or brown pottery in fracture and of light colour outside;
- group 2 – includes ceramics of the so-called "Namasga" type with light-greenish pottery;
- group 3 – crockery, having red, pinkish or brown pottery in fracture and outside;
- group 4 – kitchen utensils made of paste containing the large admixture of quartz, gruss, sand or chamotte;
- group 5 – grey or black-clay ceramics;
- group 6 – red angobed ceramics with glossing;
- group 7 – dark green colour ceramics that have been defected at burning.

The collection of a ceramic material from Gonur-depe necropolis have numbered more than 2193 fragments of ceramics for the last two years (Fig. 1-10), 1819 units of them are the archaeologically whole shapes (forms). In particular, the whole vessels, which are the most convenient for the analysis of the whole ceramic complex, became an objective of the present work.

A large, basic number of the investigated material are the utensils made on a potter's wheel (98,3%). The modeled ceramics makes only 1,7%, but in this case both kitchen and table vessels are of equal numbers. Both the modeled utensils, and the machine-tool ones, in majority, are made of the high-quality paste of good levigation. The distribution of ceramics texture groups is as follows:

1-st group is 85%, 2-nd is 3,3%, 3-rd is 7,8%, 4-th is 0,4%, 5-th is 2,4%, 6-th is 0,7% and 7-th is 0,4%. As it follows from the given data, undoubtedly, the dominating from the total number of ceramics, are vessels of light background and, to the lesser degree, are vessels of red background. On the other hand it is rather curious to note almost the six-fold superiority of grey and black ceramics over vessels of a kitchen type. Such combination is not practically typical for the majority of South Turkmenistan monuments of bronze epoch.



1-10. Rare forms of ceramics from necropolis.





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27f-j. Rare forms of ceramics from necropolis.

The ornamental utensils make less than 1% (20 pieces) from the total number of ceramics. And the 14 vessels are decorated with the so-called “finger ornament” where the red paint is used on a light background of vessels. The specificity of these paintings is notable for its uniformity and simple performance. Most often the basis of composite subjects of such paintings is represented with horizontal and vertical strips roughly drawn by a finger, initially dipped in a paint. Taking into account that circumstance, that the utensils with the finger ornament are discovered exceptionally in chamber – crypts and cenotaphs in 95% of cases, its ritual purpose is evident.

The other kind of ornamentation is engraving. Mostly it is schematic images of trees, multibeam asterisks or conventional signs-symbols. In an only case the vessel with the engraves ornament such as Gissar III (Table 1, 126) was come across.

The shapes of vessels from the Gonur necropolis are various enough and amount not less than 140 types. (see: Morphological Table). Probably their actual number was greater. For the present time, only fragmentariness of material does not allow seeing their real assortment in a full measure. The frequency of various-shaped vessel finds is extremely non-even. So the seldom met forms (from 1 up 3 pieces) make 36,3% from ceramics total mass and are represented by 48 types (forms 1, 7, 12, 22, 27, 32, 35, 36, 39, 40, 67, 73, 74, 82, 86, 88, 99, 100, 104, 109, 111, 115, 116, 120, 122, 126-132, 135-140). The poorly met forms (72 types) represented by the pieces from 4 up to 28, make 54,5%. At last, only 12 vessel forms are the most frequent (28, 29, 49, 50, 51, 53, 54, 59, 70, 92, 96, 97). It is necessary to mention conic cups, jars, and cylindrical vessels with bent out corolla and pots among them. As the statistics show these ceramics forms, in particular, were the most traditional parts of funeral offering of the Gonur ancient population.

The ceramic complex of Gonur necropolis is well synchronized with materials of many ancient agricultural settlements of epoch of the advanced and late bronze not only in Southern Turkmenistan (Altyn-depe, Namazga-depe, Kelleli, Taip-depe), but also in Bactria (Sapalli, Djarkutan, Dashly), Pakistan (Mergar VIII), Iran (Shakhdat, Shakhri-Sohte IV, Hissar–III) and India. Unfortunately, a number of ceramic shapes having good chronological binding is limited. As a rule, it is due to a wide chronological and distribution spectrum of the most quantity of ceramic vessels. Nevertheless, the comparative analysis of the various ceramic shapes allows

11. Rare forms of ceramics from necropolis; burials #2420 (a) and #2000 (b).

12. Rare form of ceramic from necropolis; burial #1265.



11



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to notice, that the Gonur findings can be divided into two complexes having significant number of conformities, but distinguished between each other in a number of essential attributes. Their chronology is easily established by radio-carbonaceous dates of similar complexes in ancient East (Askarov, 1977; Daison, Howard, 1983; Jarridje, 1982; Masson, 1981; Agraval, 1971; Salvatori, 1994; the same author, 1995).

In particular, the first and earliest complex dates from the end of the third – first third of the second millennium B.C. It is characterized with vase-shaped vessels with a hardly visible breakage of corolla (forms 43, 44, 47), pots with extended body and narrow neck (forms 71, 72), glasses on the squat pallet (form 112), and also specific pots of Altyn type (form 124) and cylindrical vessels with slots (form 73). It is necessary to add, the anthropomorphic terracotta statuettes were met only among the items of this complex.

The second complex of ceramics which can be dated by the second quarter of the second millennium A.D. On the basis of parallels, it corresponds to the materials of the transitive stage from advanced to late bronze or complexes such as Namazga V and VI on the standard terminology of South Turkmenistan materials of this time. The most typical and determining vessels of that time are the vases on a stand with bent inside corolla (forms 6, 104), glasses of various configurations (forms 8, 9, 10, 11, 14), hemispheric dish with corrugated bottom (form 85), large bowls such as (form 105, 120), large pots sometimes having two – three horizontal strips drawn with a red paint on their body (form 136) and conic bowls with bent inside corolla (114, 135) are. Besides the red-glazed utensils, typical for a late stage of the Gonur-depe palace part, were discovered exclusively among the materials of the second complex. Probably it is necessary to rank all burials, where the cylindrical seals and stone seals – amulets were or will be found, to the same period.

At the same time the materials like of late Namazga VI differing not only by narrow assortment of vessels, but also by rough style of their performance, are not available in ceramic complexes of the Gonur necropolis. Regardless a significant scale of works the ceramics of a steppe type or vases and glasses on a baluster-shaped stand were discovered in none of the necropolis interments. This circumstance allows to assume, that the necropolis functioned only until the Gonur settlement was functioning.

On the other hand, the painted ceramics of epoch of early bronze (such as Namazga IV) are not noted in materials of the Gonur necropolis as well. The single fragments (not more than 4 pieces) of such materials occur



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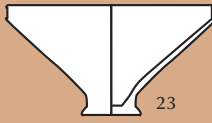
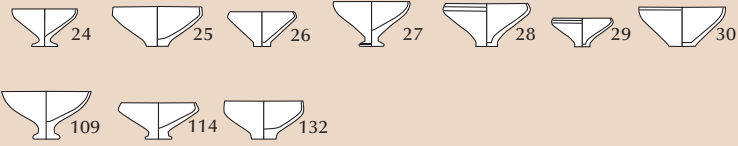
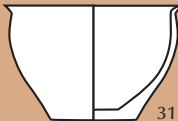
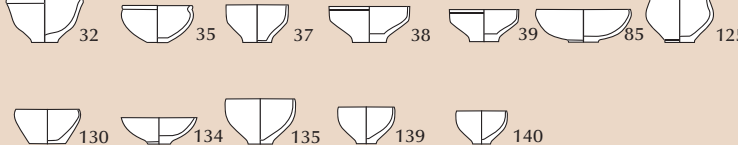
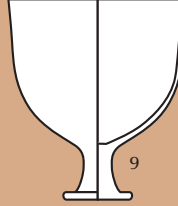
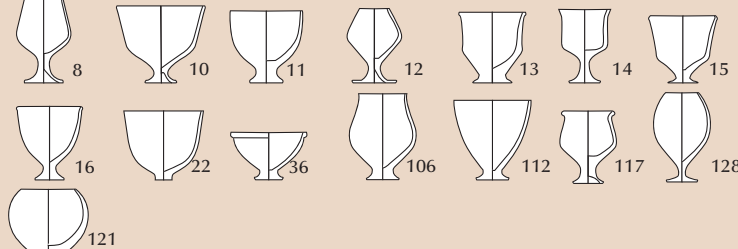
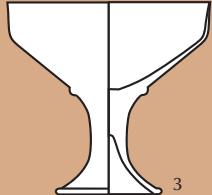
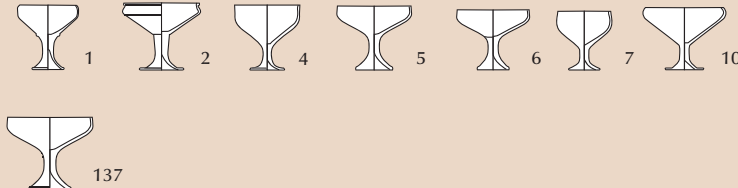
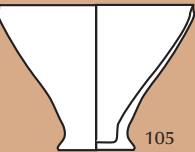

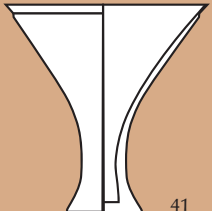



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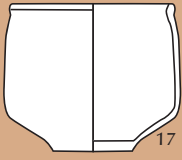
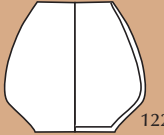

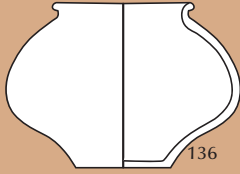
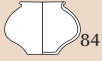
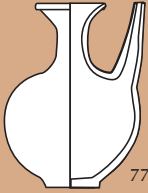

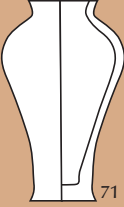

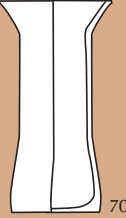
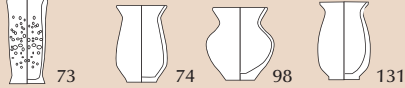
13. Ceramic vessel with stamped ornamentation; burial #2010.

14. Gray clay vessel in an anthropomorphic shape; burial #469.




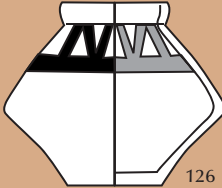

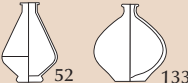
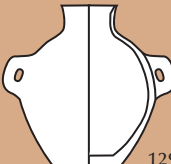
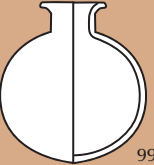
MORPHOLOGICAL TABLE (by B. Udeumuradov, 2002)

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2	 <p>31</p>	
3	 <p>9</p>	
4	 <p>3</p>	
5	 <p>105</p>	
6	 <p>41</p>	

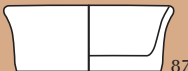


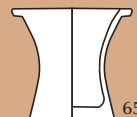
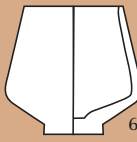
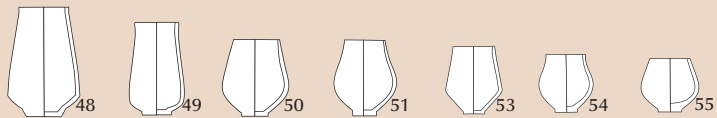

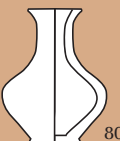

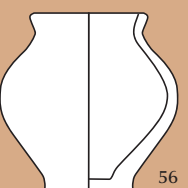


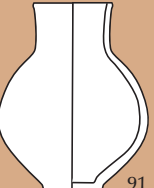

MORPHOLOGICAL TABLE (by B. Udeumuradov, 2002)

	Type of shape	Versions
7		unknowns
8		
9		
10		
11		
12		

MORPHOLOGICAL TABLE (by B. Udeumuradov, 2002)

	Type of shape	Versions
13		
14		unknowns
15		unknowns
16		
17		unknowns
18		unknowns

MORPHOLOGICAL TABLE (by B. Udeumuradov, 2002)

	Type of shape	Versions
19		 
20		<p style="text-align: center;">unknowns</p>
21		 
22		
23		 
24		

15. Ceramic vessel with two pairs of pins at the bottom; burial #150.

16. Vessel with the bull's horned heads on its rim; burial #2630.



15



16

from the bottom layers of a palace complex of North Gonur. On that basis it can only be assumed that the burials of this period can be found within or near to the Gonur necropolis.

Unfortunately, the significant conformities in ceramic materials of the Gonur burial ground complexes, selected by us, do not allow carrying out their more detailed chronological partitioning. However, now it has already been possible to certify confidently, that the both ceramic complexes identically “gravitate” towards the materials of the BMAC, its originality and communications were more than once mentioned in the correspondent literature (Askarov, 1977; Sarianidi, 1977;1998; Udemuradov, 1993; Hakemi, 1972; Hiebert, 1994; Hiebert, Lamberg-Karlovsky, 1992; Santoni, 1984).” (Udeumuradov, 2002, pp. 134-141, Morphological Table).

This set of typical funeral ceramics of the Gonur necropolis might be enriched by a few particular forms that reveal more distant parallels.

In a grave that was destroyed during the construction of a canal there was found a fragment of a cup with a painted design typical of the Late Namazga IV period (Sarianidi, 1998, Fig. 11, N. 6).

From another grave that was destroyed in the same way came an average-sized vessel with four spouts decorated with bull's heads (Sarianidi, 1998, Fig. 10, N. 7). A singular ceramic vessel of light colour with stamped ornamentation in a way of horizontal rows of almonds (Fig. 13) finds its

analogies in Tell Brack (Mallowan, 1937, Fig. 210). Another singular flat vessel of grey clay in an anthropomorphic shape (Fig. 14) resembles a vessel from Hissar III (Schmidt, 1937).

Among the individual numbers of non-typical forms of ceramics two cylinder vessels of the same type stand out. At the very bottom of each vessel there were two pairs of small conical pins with through-holes up to 2 mm in diameter (Fig. 15). The composition of one of them consists of a tree, goat/ram and a bird with a snake trying to reach its belly. The rim of the second vessel was carelessly decorated with three sculptured bull's horned heads (Fig. 16). Undoubtedly both vessels had cult purpose.

The main bulk of the pottery is not ornamented and some singular examples have the same composition representing three scratched trees and a pair of goats (often on their back hinds) on both sides of each of them (Fig. 17). This composition of the “tree of life” and a pair of goats had a common Mesopotamian origin (Akkadian, Mitannian) that goes back to the “eclectic art” of Syria (G. Frankfort). At the same time these com-



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positions were rather popular in Egypt, Cyprus, Palestine and Elam (Vincent, 1924, Pl. XXV) and later from these areas they appeared and spread in the BMAC zone. On the vessel from the grave #2326 from Gonur above a top of each tree there was made a hole (not throughout) that was perhaps used for fixing ears of some kind of cereals in them. Each of these vessels had three spouts which suggests their use for cult libations (Fig. 18-21).

In the grave #717 an intact vessel of grey clay with an incised design of the Namazga VI or Hissar III period type was found (Sarianidi, 2001, Fig. 13, p. 47; Pl. 18, N. 4) (Fig. 22). Equally unusual was a grey burnished clay vessel with not a flat but a rounded bottom found in a grave (#367) with a skeleton which anthropologists defined as having some Equatorial (veddoid) features (Appendix 2). There were also found grey clay carafes, vessels



20



21



22

17. Ceramic vessel with a tree and two goats from the territory of necropolis.

18. Cult ceramic vessel with a tree and two goats from burial #12/96.

19. Cult ceramic vessel with a tree and two goats from burial CH02/96.

20. Cult ceramic vessel without ornamentation from the territory of necropolis.

21. Cult ceramic vessels with a tree and two goats from the territory of necropolis.

22. Grey clay vessel from the burial #717.

23. A vase on a high pedestal from the territory of necropolis.

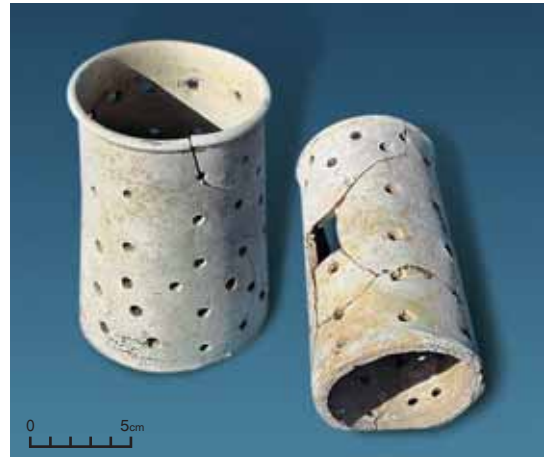
24. Perforated jugs from the burial #2000 (a) and the territory of necropolis (b).

25. Ceramic vessel in a form of a circle; burial #1025.

26. Goblets and jugs with rims in the form of semi-oval; burials #1261 and #1352.



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with long spouts (Pl. 2, N. 5,6; 18, N. 9) and vessels in form of anthropomorphic figurines that have direct parallels in Iranian Horasan ceramics (Hissar, Tyureng-Tepe, Shah-Tepe). This grey clay ceramics are few in numbers and most probably it is imitation of the Horasan ceramics, though certain vessels (those with long spouts) were perhaps imported from North-Eastern Iran.

The funeral ceramics contained some vessels, showing Swat and influence of a clearly different culture possibly that of the Indus Valley or Harappa civilization. The Swat and Shortugai ceramics occupy the intermediate position. These were two vases on high pedestals that generally repeat the ceramic vases popular in Margiana with the difference that the soft profile of their lines was replaced by a severe profile and the opening of the hollow pedestal was very wide. On the bottom of one were bracket-like impressions (characteristic of the Harappa pottery) and the surfaces of both vessels were painted bright red (Fig. 23). A marble vase that dates to 2700-2200 comes from the Cycladic Islands (Sothbey's, 1989, N. 73). At the same time as pottery forms reminiscent of Harappan ceramics, cylinder vessels with wide openings on the bottoms and a number of small holes on their bodies were found (perforated jug) (Fig. 24).

Attention was also attracted by some locally made vessels (three goblets and a jug) with rims in the shape of semi-oval (Fig. 26). Similar ones (with handles)



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came from Anatolia, for example from Kanish (Ozguch, 1953, Pl. XXI, XXXI), Alishar, where they “are rather often found in graves” (Schmidt, 1932, p. III, Pl. XI), Indandik Tepe (Ozguch, 1998, Fig. 31) and many other Bronze Age sites of Asia Minor.

There is one single case of vessel from the Gonur necropolis in the form of a circle (Fig. 25) with a mastered neck (its bottom part was not preserved) that to that point had never been excavated – neither in Margiana nor in the Central Asia (Pl. 18, N. 8). Similar vessels, though with handles, are found in Anatolia beginning with the period of Troy II (2500-2000 B.C.) (Fischer, 1963, #1071). The same type of pottery



31

27-31. Ceramics of the late period from the necropolis.

32-42. *Ceramics of the late period from the necropolis.*

items was met in Ugarite (1900-1750 B.C.) (Schaffer, 1949, Pl. XL). They became especially common beginning with the early Hittite kingdom (Bittel et al., 1984, Abb. 14; Blegen, 1950, Fig. 406). One such vessel from Syria dated to 3500-3000 B.C., which according to E. Strommenger was unique and was used for religious libations. The accuracy of this opinion was supported (apart from the unusual form of the vessel) by the fact that it was found in both religious and administrative center. The Margiana item looked like a simplified variant of the Syrian vessel with one important thing in common: both of them were so carefully polished that their surfaces shone almost as brightly as a mirror (Strommenger, 1985, p. 114, Fig. 33). Similar vessels were found in Avaris (in the Nile delta, Egypt) which was inhabited by immigrants from Syria. The fact that such vessels in a form of an empty disk were found in two extremities of the Near East leaves no doubt in their Syrian origin.

Comparing the early ceramic complex of the Gonur necropolis with that of the late graves of the Area 5 of northern Gonur one can see that the forms of objects became simpler and its assortment reduced (Fig. 27-42). In the late period they began to repaint the vessels (especially, vases and goblets) and the upper part of vase pedestals was decorated by sculptured bands in the shape of rings.



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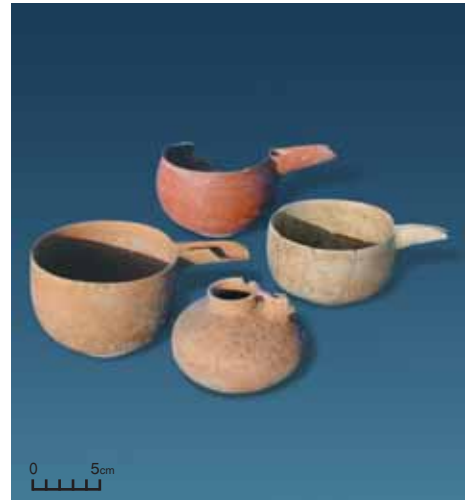
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2.3. Anthropomorphic Plastics

The BMAC tribes were most likely unfamiliar with anthropomorphic plastics in their far away motherland. Only some rare composite statuettes and individual terracotta ones (grave #560) were excavated. After having settled in the ancient delta of the Murgab river they had accepted the anthropomorphic plastics of the local South-Turkmenistan tribes and then had begun to place them next to the stone composite statuettes inside the tombs.

According to the opinion of some scientists, on the early stages, the BMAC tribes had only female deities which were later replaced by male ones (Winkelman, 2000, p. 78). But this supposition needs some additional proof.

43. Male terracotta statuette from the burial #2427.

44. Female terracotta figurine with holes in her crown from the burial #731.

45. Terracotta figurine without signs of sex; burial #1226.



Terracotta Figurines

The tombs of the Gonur necropolis have yielded 48 terracotta statuettes all of which (with the exception of 7 that had no sex signs) were female and only one male.

The female terracotta statuettes were found in six female burials and three that belonged to children (5 to 6, 10 to 11 and 11-12 years old). Four statuettes were found in graves in which the sex of the dead body could not be determined. The male statuette was found in grave #2427 in which the sex of the dead body was also unknown (Fig. 46). Statuettes without sex signs were excavated in two female burials, one in a pair burial (a man and a woman) and two in burials in which sex of the body was unknown.

In cases when it was possible to determine, the statuettes were placed in the following way: in one grave - in front of the face, in the second one - by the right hand, in the third one - by the right shoulder. Also, in one grave it was by the neck, in one grave - by the left shoulder, and in two graves - by the head.

The only one male statuette found among terracotta statuettes from funeral offerings (grave #2427) was a flat standing statuette with definite sex signs that has preserved some scratched ornamentation on its neck. The statuette was made in the style of local South-Turkmenian anthropomorphic plastics of the Middle Bronze Age.

Flat female terracotta figurines of a local deity were found in singular graves; in some cases, as for example, in burial #359, two intact statuettes were found: one by the head and another was vertically stuck in the sand at the feet of the dead. Most of them represent a standing female figurine with rhombic sculptured eyes (very often their cheeks are painted black) and a head with a crown that was decorated with scratched bands or ribbons and that spread upwards. In each corner of the crown was a hole (Fig. 44). A crown from burial #806 (Fig. 47) had two copper rings in these holes that to a certain extent recalled similar decorations on the Hissar III stone statuettes (Schmidt, 1937, Fig. 114) and on terracotta figurines from Syria and Palestine. The arms were always stretched wide and in some cases the shoulders were decorated with scratched signs that probably revealed the personification of a certain deity, such as, for example, the “Deity of Vegetation”, the “Deity of Water” and so on. The legs were always concealed and beneath the belly was a large triangle filled

46. *Terracotta figurines from burials: #359 [h=16,0 cm] (a), #359 [h=15,5 cm] (b) and #1613 [h=13,5 cm] (c).*





47. Female Terracotta figurine with copper rings from burial #806.



48. Female terracotta figurine with holes in her crown from the burial #390.

49. Terracotta figurine without signs of sex, burial #446.



49

with small slanting scratched lines. The bust was represented by small sculptured cones.

Also there were found rather schematic figurines (often without sex signs) that looked like flat armless triangles without “a crown” (often on the back of the head was a hole), but with a scratched necklace on the neck and signs and/or symbols on the shoulders (Fig. 45, 49)

All these figurines undoubtedly belonged to the Middle Bronze Age in South Turkmenistan (Namazga V period), with only one very characteristic differing detail. Contrary to the South Turkmenistan ones that were always shown seated, the ones under discussion were standing. This difference was very significant because different poses of female deities corresponded to their definite purposes. The seated ones seemed to be placed in special niches in houses whilst the standing ones were used instead of composite figurines as grave offerings.

Composite statuettes

About a quarter of a century ago the antique shops of Kabul (and later those of Europe and America) offered so-called composite statuettes from plundered tombs of Bactria. The clay copies of such statuettes were excavated at the Djarkutan graveyard, a fact which demonstrated the practice of placing composite statuettes into some graves of the BMAC tribes. Probably the terracotta statuettes of the South Turkmenistan type described above and found in graves replaced the stone composite ones.

A terracotta figurine that copies a stone composite statuette was found in a cist at the Gonur necropolis alongside some gold ornaments (burial #560) (Fig. 50, 51). This was a seated female without distinct sex signs with arms crossed on the bosom and legs stretched forward. Her face had a large beak-like nose, almond-like eyes, curved eyebrows and a cap which was painted black. Small and well-modeled ears testified to high professionalism of the craftsman. A dress with a low-cut neckline that continued on the back was painted black.

Another terracotta statuette (probably a copy of composite ones) as well as gold beads and a neck-

50, 51. Terracotta statuette from the burial #560.



50



51

lace of semi-precious stones was found in the pythos where a young boy 13-15 years old was buried (Fig. 52, 53). It should be noted that it was found in the ruins of the North Gonur palace instead of in the necropolis. This seated figure with large eyes and clearly defined pupils had semi circular eyebrows, a big nose and thin lips. Its roundish concave cap of black colour closely reminds similar ones with traces of soot from Swat. It is worth mentioning that the cap of the North Gonur statuette also bore traces of soot. The arms of the statuette were crossed on the bosom and the legs were concealed under a long, fluffy black-painted dress. It was in the style of a robe with open sleeves and neck.

It is only logical to suggest that in a country poor in stone these two statuettes most probably were modeled on the stone composite figurines and then were placed in graves as funeral offerings.

During the excavations of the Gonur palace and temenos, steatite figures decorated with “small tongues” were found, as well as marble hands and heads from original composite statuettes. These finds document that the statuettes belonged to the Bronze Age.

52, 53. *Terracotta statuette from the Palace, burial #115.*

In one tomb (#1799), a hollow black steatite composite statuette was found (Fig. 54). It consisted of two parts and dressed in a typical luxury Sumerian dress of a “kaunakes” type, decorated with scratches



52



53

of “small tongues.” Separately produced head and arms of white marble assembled with the body, made this composite statuette an exact copy of the known Bactrian ones, coming from plundered burials.

Another tomb (#1028) yielded a gypsum casting of a headless composite statuette with marble arms crossed on its knees (Fig. 55). Its fluffy dress of a “kaunakes” type was decorated with scratches of “small tongues.” The kaunakes was topped by a cloak, the detail never met before among the composite statuettes (Fig. 56). A headless gypsum statuette of a similar type was also found in Mari (Parrot, 1936, p. 9).

Though both statuettes did not preserve their heads, deepenings on tops of the bodies, filled with remnants of a red sticky substance, left no doubts that the statuettes once had marble heads like the one found during excavations in temenos.

A composite statuette made of black steatite was found in grave #2900 in the clay (unfired) “little basket” (See paragraph 4.2). Its inside walls were plastered and painted white with red and black bands. Like the rest of the composite statuettes it was dressed in a fluffy dress of the crinoline type decorated with scratches that looked like a typical Sumerian dress “kaunakes”. The head and arms were made of marble, the face had male features. The statuette’s head was topped with a cap of a soft black mass that looked like the ones found on other composite statuettes (Zimmerman J., 1991, p. 47).

In plundered grave #2780 only hands of a former composite statuette made of white marble were found (Fig. 57-59). Instead of a cap a careful hair-do has been preserved. Carefully combed hair was tied at the base with a bun over a roller and two locks of hair hanging from it. On the back was a semi-circular projection of a “cap peak” sort. This rare style of hair-do with a roller was found on the very impressive statuettes from the plundered tombs of Bactria.

The stone and terracotta composite statuettes never show sex signs and still in some cases (as grave #2900) they look more like male than female figures.

So far we are not sure about the purpose of composite statuettes nor do we know why the heads and arms were affixed to the body with some kind of glue (usually of a red colour) while the torso was not affixed to the bottom part. To a certain extent the composite statuettes remind us of the two-part stone vase from grave #1750.

There is an opinion that composite statuettes originated in the territory between Elam and Khorasan. Perhaps this opinion is correct but in all the available pictures we see statuettes from the BMAC.

And finally, in another grave of the necropolis (#2655), destroyed by robbers, a fragment of a dress of the “kaunakes” type, made of black steatite was

54. Composite statuette from the burial #1799.



found (Fig. 60). One should also mention a steatite object in the shape of an elongated triangle decorated on both sides with riffled “leaves” that looked like decoration of the “kaunakes” dresses (Fig. 61). Along the long axis of the item is a hole filled with a copper-bronze stick. The fact that the hands were made of white marble (burial #1200) leaves no doubt in the local production of composite statuettes

After the first composite statuettes from the plundered Bactrian tombs appeared in the antique shops of Europe and America, they attracted the serious interest of specialists. Such stone composite statuettes were placed sometimes in ancient tombs of Bactria and Margiana and probably in the whole territory of the BMAC and farther up to Baluchistan, as one may judge by the “Quetta treasury” (Jarrige and Hasan, 1989). It is rather significant that lately some heads and fragments of the kaunakes type dresses were found in the layers of late Harappa IIIc. (Kenoyer, Meadow). Though the information on statuettes is not something new, we are still ignorant of which image (male or female) they reflect. There was a supposition that they reflected the dead person (which seems most inconceivable), or personified local deities and could be images of a fertility deity, such as for example the Sumerian Inanna (Carter, 1997, p. 326).

In the Metropolitan Museum (New York) there is a statuette with some reddish spots on the back. According to laboratory research these are pigments of a paint that probably occurred because the statuette was wrapped in some red cloth. One should note here that the red paint on some items from the “stone carver's tomb” (burial #1200) in Margiana were most probably traces of some kind of glue.

The present complete publication of all composite statuettes of the Near East (Winkelman, 1999) leaves no doubt as to their western origin. They were very characteristic of the cultural zone of the BMAC and their Sumerian and Elam origin seems most probable. The tradition of placing composite statuettes in tombs

55. Composite statuette
(gypsum) from the burial
#1028.

56. Composite statuette from
the burial #1022.



55



56



57



58



59



60



61

57-59. Fragments of the composite statuette from the burial #2780.
60. Fragment of the dress of the "kaunakes" type; burial #2655.
61. A steatite object in the shape of an elongated triangle; burial #2790.

was probably used by the western tribes that in their new lands continued to follow their funeral rites. But in Bactria and Margiana there were no stone deposits and gradually the stone composite statuettes were replaced first with clay (and even gypsum castings) and later with terracotta ones of the South Turkmenistan type.

It seems that the overwhelming majority of these statuettes show one general physical-anthropological type of people with long, slightly curved noses, small, plump lips, almond-like eyes and a gentle face outline (with a few wide faces).

2.4. Zoomorphic plastics

Zoomorphic plastics are represented by unique terracotta or clay animal figurines that were sculpted roughly and without details. Humped bulls and supposed goats or rams prevailed. On the surface of the necropolis a sculptured figurine of a frog was found among other statuettes. Most probably they were all part of cultic vessels.

2.5. Metal items

Before we start our review of copper-bronze artifacts let us make some preliminary remarks.

Though the Gonur graveyard yielded quite a number of metal objects they were not analysed in any laboratory and were conventionally thought of as copper-bronze. Some lead, gold and silver items were found but no iron.

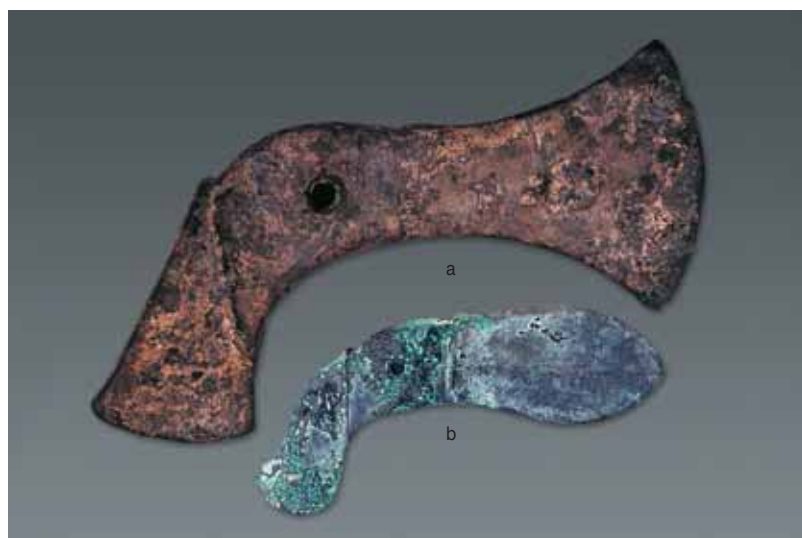
Previous research has reported that contrary to Bactria, with its tin-rich and lead-rich bronze, in Margiana mainly arsenic-rich bronze was found (Avilova and Terekhova, 1989, pp. 290-296). The latter had close analogies with the copper-arsenic alloys of the Iranian plateau (Yahya IV A, Khinaman, Shahdad).

The lack of natural metal resources in Margiana seemed to determine the poor set of metal objects. On the other side, the Anatolia and Iranian plateaus marked two centers in the Near East where the earliest metal items appeared, a fact that in its turn can be explained by rich natural resources. Besides, in Badakhsan there were resources of both lead and gold that were considered quite rare metals. The opinion exists that perhaps already in the most ancient times Afghanistan served as the main source of metal for such areas as Mesopotamia, Iran and India. This list could include the territory of the BMAC cultural zone as well. A portion of the metal funeral gifts such as swords, knives, spearheads, mirrors, pins and others showed signs of being shaped for a purpose. As in other ancient cultures this shaping of the metal could have been done for magic purposes.

The majority of silver objects were manufactured of low quality silver which explains the green patina on them, a characteristic sign of copper-bronze items.

62. Bronze axes from Margiana; burials #2003 (a) and #517 (b).

63. Bronze axe from the burial #1481.



62



63

At the same time some copper-bronze seals, cosmetic bottles and pins were covered with silver film, which suggests a special method of manufacture. As was stated, in Margiana the artisans used arsenic with bronze, which with their special technology accelerated the diffusion process and pushed arsenic to the outside of the cast. This gave the impression that the item was made of solid silver (Ryndina and Konkov, 1982, p. 30). This specific and complex technology was believed to have originated in the Crete-Minoan culture and had been known only in Anatolia. Now it has been found in Margiana as well where it was probably brought by the new tribes.

And now let us move to review different types of metal artifacts found at Gonur.

Ceremonial axes

This is a very rare type of an object with a characteristic “cock's tail” butt (Fig. 62). So far they have been found in only few tombs of the Gonur necropolis and deserve special description.

From burial #517 came a massive axe with a beak-like blade and a butt bent in the form of a forked “cock's tail” (Sarianidi, 2001. Fig. 18) (Fig. 62b). The socket with a hole for a partially preserved wooden handle was not perpendicular but slanted in relation to the axe itself, this being characteristic for all the ceremonial axes. A “cock's tail” shaped butt is rare (Fig. 62). To my knowledge another such example exists only in Anahita Gallery (USA) among the unpublished material of Bactria which I could study thanks to kindness of A. Hail and K. Fitz Gibbon. On the whole, to a certain extent this axe resembles the profile of a bird's head with a long beak, a round eye and a “double” cock's tail. The axe from burial #149 was much simpler. It had a blunt blade and its socket bore a hole for fixing the handle. Burials ##1481 and 2003 have yielded ceremonial axes with butts turned down (Fig. 63).

The next axe, from a burial #1500, was a unique example heretofore unknown in the territory of the BMAC (Fig. 64). It had a flaring blade and a butt in the shape of a cock's head with a big crest looking like a fish tail and a long slightly curved beak; the socket had a hole for a wooden handle.

In burial #963 another ceremonial axe with a

64. Bronze axe in a shape of a cock's head from the burial #1500.

65. Ceremonial axe from burial #963.



64



65

slightly flaring blade and a shaped socket was found (Fig. 65). The top of the blade with a hole for the butt was decorated with two slightly curved protrusions that vaguely resembled birds' heads.

In the plundered shaft grave #2760 robbers didn't notice a small bronze ceremonial axe in the sculptured shape of a running wild boar whose body was wound by a snake with jaws stuck into the boar's neck (Fig. 66, 67). A snake didn't only coil the body of a boar but its widely opened jaws stuck into the boar. The axe missed a butt which was replaced by a coiled body of a snake or more precisely of a snake dragon that pursued a wild boar.

Ceremonial axes decorated with sculptured compositions that represented wild boars fighting tigers or lions were already known (Ortis, 1996, Fig. 14) but for the first time they were shown fighting snakes or snake dragons. Earlier the ceremonial axes were found at other Margiana sites; it was not accidental that all of them were excavated in the ritual buildings (Sarianidi, 1998, Fig. 25). An axe from the Gonur temenos had a preserved handle 0.5 meters long.

A clay mould for a ceremonial axe found in the area 5 of North Gonur indisputably testifies to the local production of such axes (Fig. 68).

All the axes found in the graves of the necropolis were ceremonial ones and belonged only to male burials. Every-day life axes in the Gonur necropolis were represented by miniature models (Fig. 69) that look like usual modern one-bladed axes (burial #2644).

Ceremonial axes were also excavated in Eastern Iran. The ceremonial axes from Bactria have already been partially published (P. Amiet, D. Ligabue, V. Sarianidi). Two ceremonial axes (but more official and artistic) from the Shahdad graveyard (Hakemi, 1997, pp. 195, 207, 208, 693) closely resemble the axe from the Gonur temenos.

Axes with purposely blunted blades and a butt in the shape of a cock's tail were used for ceremonial

66, 67. Bronze axe in a shape of wild boar with a snake. Burial #2760.



occasions. The latter statement is supported by the fact that this type of axe was found among other ritual funeral gifts (miniature column and staff) in burial #1500 of the Gonur necropolis. P. Amiet was the first to show the link between such ceremonial axes from Bactria and Elam. The axes from Margiana can also be added to this list. Identical ceremonial axes were found in Luristan as well where they could have been either imported from Bactria (P. Amiet) or locally made and from there brought to Bactria (E. Hertzfeld, V. Sarianidi). Attention has already been drawn to an axe-hammer from Elam with an inscription “in the name of divine Shulga” (Mesopotamian ruler Shulga who conquered Elam and ruled in 2000 B.C.). The type clearly recalls axes from Bactria, which suggests their common Bactrian origin (Potts, 1994). According to another opinion this type of axe originated in East Iran (Arus, Harper, Tallon, 1992, p. 92).

The axe-hammer (of Shulga) from Elam has two realistic birds' heads. An identical silver object was found in the G. Ortis collection. Among the ceremonial Bactrian axes from plundered tombs one typical axe-hammer with two conical protrusions on the socket stands out. This axe probably imitated the forgotten bird figurines of the Elamite prototype (Sarianidi, 1977, Fig. 34, #5). Identical to the Elamite one was the axe from the Gonur necropolis with two slightly shaped protrusions on the socket.

All these facts give us an opportunity to conclude that axes from Gonur are typologically identical to Bactrian ones, both of which probably had one common Elamite prototype. One may suggest that local craftsmen from Bactria and Margiana gradually replaced the original birds' heads that decorated the sockets of Elamite axes with simple protrusions.

In addition to the assumed Elamite-Luristan origin of ceremonial axes of the BMAC, some indirect data suggest a more distant origin. It has already been mentioned that the most artistic ceremonial axes from Bactria and East Iran (Shahdad and especially Hineman) had a crescent-like blade (Curtis J., 1989,

68. A clay mould for a ceremonial axe from the surface in the Area 5 of North Gonur.

69. Bronze miniature model of an axe; burial #2644.



10) which has been replaced with a wild boar figurine whose back served as a blade. Usually beasts of prey (tigers, lions) and monsters (a man with two eagle heads in the Metropolitan Museum) are shown torturing this wild boar. Especially representative are the gilded silver ceremonial axes in the G.Ortis collection (Ortis, 1996, Fig. 14) and Christie's collections (Christie's, 1994, N.Y., N. 68).

An axe probably from Hineman had a butt that can be interpreted as the crest of a galloping horse (Zimmerman, 1991, p. 50, Fig. 13). Another unusual axe is in the British Museum (Curtis, 1989, p. 11). Very representative is a ceremonial axe of unknown origin. But it seems quite possible that it belonged to the BMAC culture. Near Eastern in type, it reveals stylistic parallels with the artistically produced metal objects of ancient Greece (Dalton, 1964, Pl. XXIV).

Besides in Bactria, Elam and Luristan, the axes with crescent-shaped blades were also popular in Anatolia where they were found at the king's gates in Hattusa and on the rock reliefs of Yazilikaya (Bittel et al., 1975, Taf. 58, p. 131). Already more than half a century ago E. Herzfeld pointed out the similarities of the Asia Minor axes to those from Elam and Luristan and from Hineman (Herzfeld, 1988, p. 131). Now the same commonalities can be seen in axes from Bactria and Margiana. Also he was the first to pay attention to the fact that bushes of ceremonial axes instead of being strictly perpendicular were slantwise which can testify to their cult use.

The problem of the origin of ceremonial axes is far from being solved. From Sakiz (modern Kurdistan) came a ceremonial axe with a seated human figurine on a throne, a bird and a beast of prey. It dated to a later period (Huot, 1976, Fig. 86) than the BMAC ceremonial axes, but it is very significant that Kurdistan was one of the most probable places from where the migrating tribes (BMAC) started to move in the direction of Central Asia.

70. a) A model of the mace-head from the burial #1443.
 b) Stone mace-head from the burial #1063.
 c) Stone mace-head from the territory of necropolis.



Mace-heads

Heads were occasionally found in shaft graves as well as in chamber tombs. All have rounded forms with finely polished surface and through holes for wooden handles. Absolute majority of such items were made of various types of stone, and very few – of copper-bronze. One artifact was presumably a model (3 cm in diameter), made of highly glazed pottery with green stains (Fig. 70a). All these were clearly prestige objects, identified as heads of rods or scepters with wooden handles. A massive copper-bronze head from the chamber tomb #555 had preserved a design in the form of a sprout with small triangular leaves (possibly of a pipal, a very typical Indian plant) (Fig. 71). In the burial #1445 was found a smaller and simpler copper-bronze head. The grave #2900 contained two one-type copper-bronze mace-heads which upper parts were flattened and the lower ones had pointed four-petals endings. Inside of them were wood remains which indicate that once they had rods. This type of mace-heads was widely represented in the plundered graves of Bactria.

Lead rings

Lead rings were found only in a few tombs. In one case such a ring was excavated in a tomb containing a stone “rod” or “staff” and in another case, the same kind of ring was found in a cenotaph (burial #728) (Fig. 72). The lead rings look massive and very heavy, with a diameter of 25 cm each and on one of them there were thin silver bands. A “miniature column” and a “rod” found in the same tombs with the rings may indicate their general ritual character. Besides in Margiana such rings were found in Bactria as well (Sarianidi, 1993, Fig. 2).



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71. A massive copper-bronze head from the burial #555.

72. Lead rings from the burials #728 and #500.

73. Bronze artifact from the burial #516.

74. Gypsum signal trumpet from the burial #2511.

Signal trumpets.

Small artifacts with wide bell-shaped end and articulated mouthpiece, made of copper-bronze (in rare cases founded from gold and silver) and being no more than 15 cm long. As a rule, signal trumpets have smooth surface, and only the special ceremonial ones sometimes are decorated with sculptural human heads. One of these trumpets preserved a human head with a large protruding nose and a hair dress of three plaits (Fig. 73). Absolutely the same sculptural heads are owned by Ron Garner and Anahit Gallery (USA), and all of them come from illegal excavations in Bactria and Astrabad buried treasure (Pottier, 1984, pp. 47-48, Pl. 313-314). One signal trumpet from Shahdad is very representative (Hakemi, 1997, p. 635). Similar to those from Bactria and Margiana (Sarianidi, 2002, p. 235-236) it is also decorated by a sculptured human head. The same artifacts made of gold and silver, are known from Shahdad (Hakemi, 1997) and Hissar (Schmidt, 1937, p. 210, Fig. 121) and now from Margiana.

R. Girshman considered that these were precisely signal trumpets, used by Indo-Aryans when train-



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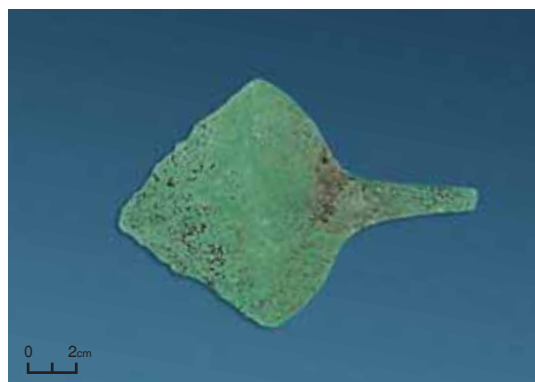


75

75. A dagger from the burial #1922.

76. Bronze artifact from the burial #516.

77. A dagger from the burial #1922.



76



77

ing horses. At the same time M.-E. Pottier suggests they were musical instruments like cornet, the latter used by Yima, according to Videvat, “in order to guide people to the sanctuary” (Pottier, 1984, p. 72). The trumpets were possibly used for hunting.

One can add that at the Gonur necropolis only 5 such trumpets have been found: 2 copper-bronze and 2 silver ones and one made of gypsum (Fig. 74).

Below in the paragraph 3.1 “Burial of a Horse” it will be shown that all signal trumpets were found in the supposedly male graves and that they were most probably connected with the horse-breeding process.

Models of small stairs

Bronze-copper models of “small stairs” were found in warrior graves ##2380 and 2900 (See paragraph 4.2). In the grave #2380 such badly preserved “staircase” was wrapped into a piece of linen cloth (See Appendix 3) and placed under the left shin of the dead. The “staircase” from the grave #2900 was preserved much better. It was practically intact with four steps that form a kind of small “windows”.

We can only guess about the exact purpose of these objects but it seems rather probable that since they were found in male burials (and judging by offerings, warriors) they could symbolize the high rank of military men.

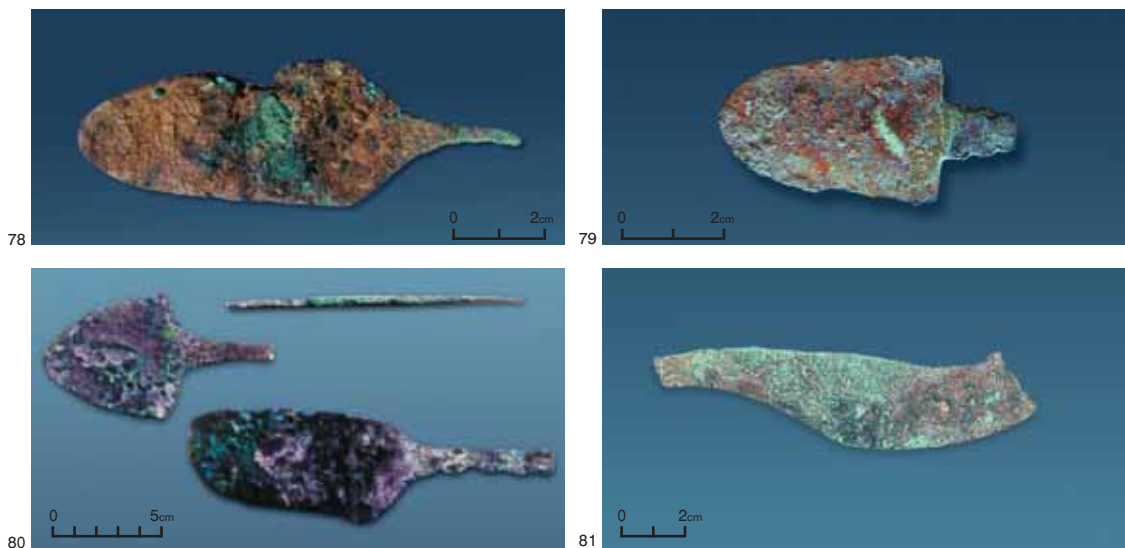
Exactly the same metal “small staircases” were found in the graves of north Bactria (Sapalli, Djarkutan) where they are up to 25 cm long. There too the funeral offerings (models of military axes, goblets for wine, special metal plates) suggest that they were part of accessories of some military rank. They were most probably popular in the whole area of the BMAC zone (Biscione, Bondioli, 1980, pp. 70-71; Askarov, Abdullaev, 1983, Table XXXII, N. 6; Table XLV, N.15).

Daggers, knives, arrow- and spearheads

Daggers, knives, arrow- and spearheads were difficult to classify (Fig. 76). Conventionally knives were determined to be objects with one sharpened blade while swords had two sharpened blades, pointed tips and wooden handles. A sword from burial #517 had a handle made of a branch of some bush. At the same time official objects had figured metal handles, like the one from the burial #1922 with the handle casted in a form of a pair of inter-woven snakes

(Fig. 75). All the knives had sharpened blades and pointed tips. Some, but not all, daggers were seriously bended (Fig. 77-79). Knives and daggers of almost identical type were found in the plundered graves of Bactria (Pottier, 1984, Pl. II-III). All the knives had pointed tips and the condition of the blades show that they were well used. Some knives seem to be shaped for a double purpose.

As a rule all supposed spears at the Gonur necropolis were flat and it was difficult to differ them from daggers or darts. However, at North Gonur in grave #2900 a real spear was found. It had a mid-ribb and the end of its tetrahedral pivot was bent and forked thus closely reminding analogical ones from East Iran more precisely from Hissar III. One should note that spears with forked ends as the one from Bogazkei (Boehmer, 1979, Taf. XV) were rather rare. All such spearheads refer not earlier than to the end of the III millennium B.C.



77-80. Daggers, knives and spearheads from the necropolis burials: #517 (77), #1157 (78), #2511 (79), #1255 (80).
81. Chopper (blade?) from the burial #921.

Choppers

These items were found in singular cases and among them the most representative is the one from the grave #2900. It seems that its handle with some wooden remains was probably removed on purpose and then placed on top of the blade (See paragraph 4.2. Fig. 176).

“Blades”

Few “blades” were found and all of them had a slightly curved form with a handle and a wide and sharp blade. To some extent they resemble modern “safety” blades (Fig. 81).

Copper-bronze and silver vessels

Copper and silver vessels in the shape of simple hemispherical cups with roundish bottoms were found in singular cases (Fig. 83). Cylinder vessels were even more rare. A set of vessels from the unlooted burial #1999 greatly widened our perceptions about metal vessels, as well as a vessel with the exceptionally long discharge, the latter being more typical for Bactrian and Iranian ceramics, including that of Shahdad. There was also found a unique double vessel, consisting of two hemispheric cups with flat bottoms, and the latter were fixed together with a special dowel. Silver vessels from this set are of special interest. Their walls are no more than 1-1.5 mm thick (Fig. 82, 85, 88). The vessels are made as a conic goblet, directly imitating ceramic ones. Similar vessels were found in other graves (burial ##1200, 2000)

82. *Silver vessel from the burial #1999.*
83. *Bronze hemispherical cup with round bottom from the burial #2357.*

too. Analogous silver goblets were found in Bactria (Pottier, 1984; Sarianidi, 2002, p. 120) and Shahdad (Hakemi, 1997, p. 632). Exceptionally important was a finding of a rounded corrugated silver vessel with a special flat saucer. Silver vessels with analogous decorations but with different forms are known in Egypt (Tod Temple). The same vessels from Troy II (2500-2000 B.C.) are more like Margiana ones.

One can also note that models of silver vessels (goblets, cups with flat bottoms) are found in other graves at the Gonur necropolis (Fig. 84) and also at Shahdad (Hakemi, 1997, p. 632).

The grave #2900 among its copper-bronze vessels contained a cylinder goblet with a flat bottom. It has direct analogies with the one excavated in the grave #2380 where a warrior has been buried (Fig. 87). These two similar goblets belonged to the graves of warriors and one can suggest that they were



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84. Silver vessels, burial #1080.

85, 88. Conic goblet from the burial #1999: before (85) and after restoration (88).

86. Bronze vessel, burial #555.

87. Bronze cylinder goblet from the burial #2380.

89. Bronze vessel, burial #1999.



88



89

used by warriors-aristocrats for drinking different beverages, such for example as beer or wine. Both goblets have direct analogies with those from Elam where they probably had some special purpose.

The graves #1999 and #2900 have also yielded a strongly sooty copper-bronze cattle with a small spout that was clearly used for the every day purposes and that was placed in the burial to accompany its bearer in the other world (Fig. 89; compare with Fig. 14 in paragraph 4.2).

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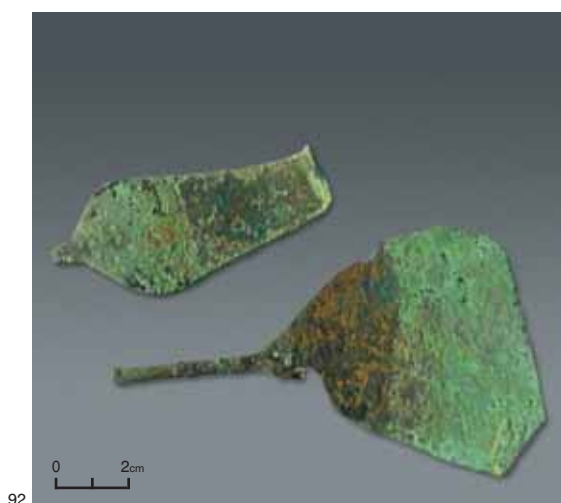
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90. Strainer from the burial #1999.

91. Bronze filter tube from the burial #2460.

92. Bronze artifacts from the burial #806.



92

Filters

Filters served for separating juice from small particles of the plants that were used for preparing the liquid (Fig. 90). Such filters were already found in the “priest’s tomb” at the Togolok-1 temple (Sarianidi, 1998, Fig. 23, N. 5) as well as in the grave #1999 at the Gonur necropolis (Sarianidi, 2001, Tables 23, 10). All of them had a simple semi-spherical reservoir with a lot of small holes on the bottom.

A filter from the grave #2900 of a more complex construction compared to the semi-spherical filters had a cylinder body with a downward handle bent on its end. In the bottom center is a soldered round plate with small holes and reservoir’s end was made in the shape of a nipple convenient for pouring liquid into vessels with narrow necks (see paragraph 4.2, Fig. 44).

Very similar filters were found in the Bronze Age graveyards in Mari (Marylon, 1999, Pl. 54; Parrot, 1952, Pl. XVII) and Uruk (Boehmer, Redd, Saljer, 1955, Taf. 94). The Near Eastern origin of such complex filters is illustrated by one image from Tell Amarna. It shows a servant who is pouring some liquid into her mistress’s goblet using for this purpose a funnel-shaped filter (Desroches-Noblecourt, 1956, Fig. 163).

There are also some other analogous scenes that show how liquid is being poured into different vessels without any help of a filter (op. cit., Fig. 153-156, 160, 162). The Tell Asmar “treasure” besides other items contained 4 funnel-shaped filters as if representing a whole set of “ritual purpose” (Frankfort, 1934, p. 37). Absolutely the same filters were known in Elam (Muller-Karpe, 1974, Taf. 172).

Simple filters of a semi-spherical form were rather widely spread in Near East and especially in Elam (Tallon, 1987, N. 808) whilst filters of the type found in the grave of the Gonur necropolis much rare.

In the grave #2460 a copper-bronze perforated conical strainer 38 cm long and 8 cm in diameter was found (Fig. 91). Its one end was sealed and had several through holes. Such items were widely used in Syria (Tell Brak, Chagar, Bazak, Baghous, Halawa, Meskene-Emar along Syrian Euphratus) and were used for separating alkaloid liquids (beer, wine) from chaff or other material. Perhaps they were used also for drinking hallucinogenic drinks of the Soma-Haoma type.

Vessels in a form of a kidney

Only few vessels of this type were found: one was made of stone, two – of copper-bronze and one – of glazed pottery. Absolutely the same objects were found in temples of Margiana. It is believed they were used in religious ceremonies. Probably an artifact, made of highly glazed potter in a form of a crescent, belonged to the same type of findings. In the burial #2900 among the ritual funeral offerings there was found one such vessel and one may come to the conclusion that they had some special purpose.

Triangulars

In the same grave #2900 among the objects of the ritual set for the first time there was found a copper-bronze item triangular in shape of the unknown purpose. The burial #806 yielded a copper-bronze triangular object with a rod on top (Fig. 92) that was identical to a silver one from Shahdad with an engraved image of a horned hero – a dragon fighter (Hakemi, 1997, p. 715).

Mirrors

Most of them were from ten to fourteen centimeters in diameter, with round, slightly convex surfaces (Fig. 93, 94). Sometimes they had a simple and hard-to-see relief decoration along the edge of the mirror. In rare cases mirrors had a side handle, most probably a wooden one. Occasionally in some tombs mirrors of a similar type were found, but very small ones, up to five centimeters in diameter (burials ##441, 2900).

Singular mirrors with a side handle in a form of a coiling snake stand out. They closely remind analogous handles of cosmetic shovels.

Small cosmetic shovels

These were nondescript objects made of copper-bronze (Fig. 95-97). They were flat, up to 25 centimeters long, their ends flat and rounded. The pivot



93. Mirrors from the burial #2710.

94. Mirror from the burial #2290.

95. Cosmetic shovel from the burial #175.

96. Cosmetic shovels from the burial #1354.



94

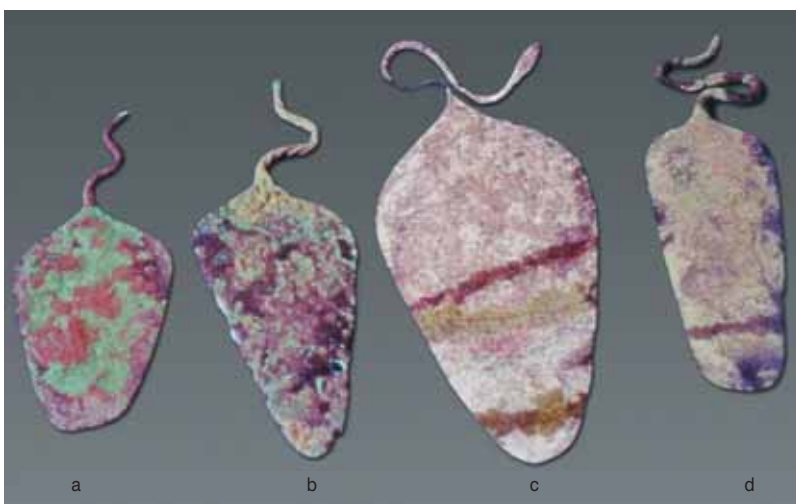


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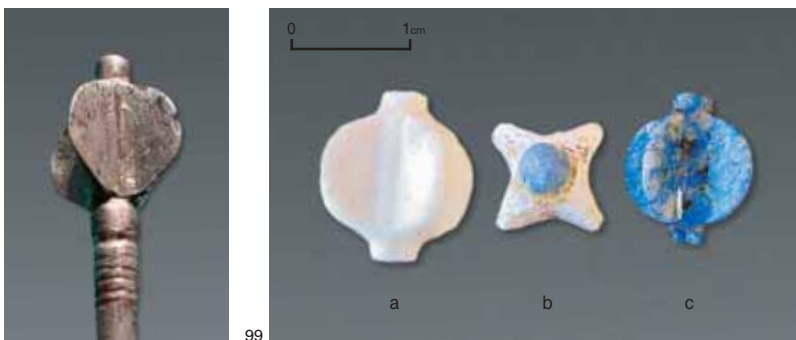


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was twisted as a cork-screw and a handle probably was fixed on it. Such small cosmetic shovels were widely represented in tombs of Bactria where their pivots were also twisted. Similar gold items with twisted pivots for handles were found in Hissar III where they were determined to be “ear-rings” (Schmidt, 1937, Pl. XXXV and LVI, H-3218). Perhaps it is not accidental that in the Demichi graveyard in Asia Minor a sword with a rod for fixing a handle in the shape of a cork-screw was found (Seeher, 2000, Abb. 30, G. 213). But its link with the ones described above remains unclear. Besides pivots in the style of a “cork-screw” (known in Bactria as well as in Margiana) “small cosmetic shovels” with pivots in the form of a twisted snake were found. Such unusual pivots for fixing handles were characteristic of this type of object. So far they were found only in the BMAC zone.



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97. Cosmetic shovels from the burials: #2599 (a), #2710 (b), #2705 (c) and #2827 (d).

98. Silver pin with top of a four-blade type from burial #560.

99. Pins with tops of a four-blade type from the burials: #1838 - gypsum (a), #1867 - gypsum with lapis-lazuli (b), #1845 - lapis-lazuli (c).

Cooper pins with ordinary tops were the most popular, and this type was found in many graves. The most impressive pins are those with quadrle tops made of gypsum, bone, lazurite, silver and copper-bronze. The best silver pins had figured tops and their number is limited. One of them (burial #560) is decorated with a four-bladed top with a small ball on it and a circular design scratched underneath. Quite similar four-bladed tops are known, made of white marble and with a lazurite drop-like knob atop, and even totally lazurite ones (burial #1867). There were also the same objects with bone pivots, as well as those made of bone (burial #1799). This type of pins was rather popular in Margiana. Alongside these pins there were known bone pins with separately made stone (gypsum, bone, lazurite, silver and copper-bronze ones as well) tops of a four-blade type (Fig. 98, 99). Identical objects were found in Shahdad (Hakemi, 1997, p. 692) and especially in Anatolia. For example, in Alaca Huyuk, one such gold pin was found in a set of burial offerings (Arik, 1937, Pl. CLXVII). A lot of them were found in Bogaskoy in different chronological layers (Boehmer, 1972. Pl. IX and CLXVII), which speaks of the deep local traditions. Besides Asia Minor this type of pin with a ribbed top was found in Syria (Osten, 1956, Taf. 29, N. 188) and Elam (Tallon, 1987, N. 960-963).

Burial #392 yielded a high quality silver pin with a sculptured top in the form of an artistically made small

Metal pins

Metal pins always had pointed ends while the ends of “cosmetic sticks” (or “applicators”) on the contrary were made in a teardrop shape which helped in applying cosmetics to the body. In some cases the pins were shaped for a purpose, for magic perhaps. Most pins were made of copper-bronze with only isolated ones of silver or gilded silver. Probably, some of these pins with pointed ends were used as dress buttons (as has been found in grave #2900) together with big biconical steatite “beads” decorated with circle-like design.

Cooper pins with ordinary tops were the most popular, and this type was found in many graves. The most impressive pins are those with quadrle tops made of gypsum, bone, lazurite, silver and copper-bronze. The best silver pins had figured tops and their number is limited. One of them (burial #560) is decorated with a four-bladed top with a small ball on it and a circular design scratched underneath. Quite similar four-bladed tops are known, made of white marble and with a

goat with big ears and slightly curved small horns (Fig. 100). Pins with zoomorphic sculptured tops were very popular in Bactria and in Anatolia as well.

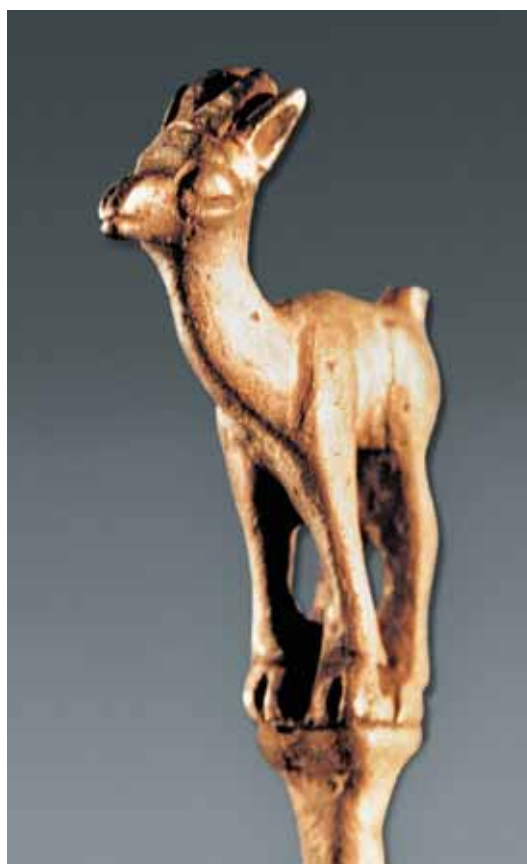
Burial #164 had a pin of low quality silver with the zoomorphic top in a form of a pair of lions (with wings along their sides) and a bird (probably an eagle) with widely spread wings atop of the lions (Fig. 101). The bird possibly had a head of a snake. Artistic treatment of the top of a pin as a pair of lions with a common head was known in Mesopotamian art as well as in the art of Mycenaean Greece (Lions' Gates). The pin in the burial #164 is the first case where lions' heads were replaced with a snake's head, which probably reflects the local Margiana interpretation of a foreign image.

Burial #1999 yielded two silver pins with tops in a form of a resting ram (Fig. 103) and of a wild goat with bended horns, both being distinguished by their artistic quality and good knowledge of animal's plastics (Fig. 105).

Pins of the same type, i.e. with a miniature top in a form of lions with thick and long manes and tails on their backs, were found in two graves. One of them was fixed on a free moving dowel, that was a unique finding (Fig. 104).

Besides these artistic silver pins, other burials gave simpler pins with bispiral or conical tops, sometimes made of high quality silver.

Special interest deserves a silver pin from grave #2900. It was found under the chin of the



100. Pin with a top in a form of goat. from the burial #392 (h=12,0 cm).

101. Pin with a top in a form of lions and eagle from the burial #164.

102. Silver pin with a top in a form of wild goat from the burial #1799.

103. Silver pin with a top in a form of resting ram from the burial #1999.

104. Silver pin with a top in a form of lion from the burial #2115 (h=11,5 cm).

105. Bronze pin with top like a wild goat from the burial #1999.



100

101



102



103



104



105

106



dead and was apparently used for fixing his cloak. The top of the pin was made in the shape of a proudly marching camel with clearly decorative pillows on its humps.

An exceptional attention deserves a silver pin (burial #2760) with the top that represents a moody (one could even say malicious) face with rich curly hair stuck upward (Fig. 106). Analogous faces with similar hair-does (sometimes with whiskers stuck out) were found on Bactrian amulets (Sarianidi, 1998 (A) NN. 905-907). On one amulet such face belonged to a winged lion-like monster with a tail in the shape of a coiling snake (op. cit., N. 927). A similar facial image was found in the grave of a stone-carver (burial #1200) at the Gonur necropolis. All these images remind us of a popular hero Kersaspa from the Avesta where he is described as a “curly-haired” personage. It is quite possible that the existence of one common personage both in Bactria and Margiana may prove that probably in these lands there existed myths or probably an epos linked with one and the same hero and that later this fact found its reflection in the Avesta (Boyce, 1989, p. 102).

Several graves gave pins (including a silver one) with tops in a form of an open hand, the latter being very characteristic for bone pins. Some simple pins have a conical top (Fig. 108, 109). Besides them there is one silver pin with a gilded conical top made of high quality silver (Fig. 107). Rather significant are silver pins with a top with eight-ray rosette (for example from the burial #2398; Fig. 111) and especially one (burial #2790) with top like eight-ray rosette on a half moon.

An exceptional example is a silver pin from a tomb destroyed during the construction of a canal. The pin has a pointed end and its top is made in the shape of a disk with a small ball beneath it. The most western point of location of such pins was in Troy, where they were made of silver or gold (Muller, 1971, Fig. 31. Blegen, 1963, Fig. 18). There the gold pins represented two types: simple and complex ones; the latter were very artistic (Blegen et al., 1950, Fig. 356). They seem to have been very popular among the local Anatolian tribes.

Exact copies of the Gonur type pins were excavated in North Mesopotamia, in Chakhar Bazar in particular, where they were found on the corpse's shoulders and were determined to be “foreign” (Mallowan, 1937, Pl. 16). Further to the East of Gonur absolutely identical pins were found in dozens of graves in Swat

106. Silver pin from the burial #2760.

107. A silver pin with a gold conical top from the burial #2115.

108, 109. Bronze pins from burials # 2029.

110. Applicator from the burial #1320.



107



108



109



110

and in one grave in Sibri (Baluchistan, in other words, all of them in the BMAC distribution area).

Pins with heads in the shape of a disk with a small ball under it were supposed to have a Syro-Anatolian origin whence the migrating tribes brought them to Central Asia. Admittedly it is difficult to explain the existence of these pins in such distant areas as Chakhar Bazar and Swat. The history of their distribution must be very complex since in Swat they appeared in dozens of graves and in Margiana only one in about 3000 graves. So far the excavations show that such pins were mainly distributed in a latitudinal direction and so far were not found in Mesopotamia.

Pins ornamented with a small ring from Swat (Antonini and Stacul, 1972, Fig. 24c) show direct analogies with the pin from Chakhar Bazar (Mallowan, 1937, Pl. XVI). The identity is so striking that it suggests the existence of some intermediate point between North Mesopotamian and North Pakistan where this type of pin was popular. One of such places was apparently North Gonur where in the “Lamb's grave,” a silver pin with a top in the shape of small rings was found (Sarianidi, 1998, Fig. 34). Probably it is not accidental that an identical pin with small rings was found in one of the Hissar III tombs (Schmidt, 1937, Pl. XLVIII, H-1744).

In any case, most pins from the Gonur necropolis were made of copper-bronze with simple top shapes, such as round, conical, biconical and double-spiral. More rarely pins had artistic heads in the shape of an open palm (burial #914) and occasionally silver pins in the same shape were found. One chamber tomb (burial #1999) yielded a “pin” with both end sharpened and in the middle of it was a wooden biconical object of an unknown purpose.

Applicators

Applicators differ from pins by their working ends, which were drop-like compared with the pointed ends of pins. Most of them had simple heads in the shape of a triangle or elongated spear-like widening (Fig. 110). In three burials (## 869, 2029, 1157) identical cosmetic sticks (or applicators) with tops in the shape of a goat's head with twisted horns and a teardrop-like thickening on the working end were found (Fig. 112, 113). Most of these “applicators” were found inside of cosmetic bottles, a fact which suggests that they served for applying the contents of the bottle on the face.

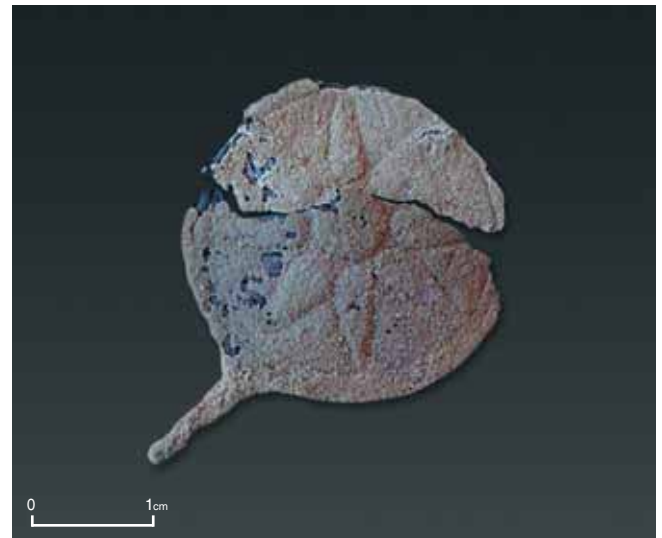
Burial #1654 yielded a “knitting needle”, 27.5 centimeters long, with the top curved for magic aims.

Besides in Margiana and Bactria cosmetic sticks (or applicators) were found also in the Hissar III tombs, some of them with sculptured tops (Schmidt, 1937, Pl. XLVIII), and also in Sibri and Zardcha Khalifa in other words in the BMAC zone. An identical “applicator”, a direct copy of Margiana ones, was found in Altyn Depe in the BMAC layers. But in Shahdad they haven't been found yet.

111. A top of a silver pin from the burial #2398.

112. Applicator from the burial #1157.

113. Applicator from the burial #2029.



112

113

114. Stone cosmetic flacon,
burial #2450,
115. Stone cosmetic flacon,
burial #397.

Cosmetic flacons

Cosmetic flacons were mainly found in female graves and were made of copper-bronze. In all cases they were metal, in rare cases they were made of stone, highly glazed potter or bone (Fig. 114, 115, 117). Sometimes the copper-bronze vessels on the outside were turned silver. They all represented one type of miniature vessel, from 6 to 8 centimeters high on the average, with a biconical or conical (more rarely, round) body and a high neck and a rim strongly turned outwards. The most official of them preserved engraved designs around the upper part of the neck. The designs were simple geometrical ones among which stand out some designs in the form of a “twisted rod” that were characteristic of Syro-Hittite art and were more precisely used for seals. One bottle from the Gonur necropolis had preserved a sculptured image of a crawling snake (Salvatori, 1993, Fig. 12). In singular cases flacons with perforated lids were found and applicators were stuck in them (Fig. 118, 119).

Though some flacons were assumed to be made of silver (Pottier, p. 66), it seems more probable that they were only covered with silver. These objects were mentioned above as findings in the Gonur necropolis. Besides metal bottles, unique bottles made of ceramic and frit were excavated and some of them were decorated with simple scratched designs. The analysis of organic remains done by French specialists showed traces of powder inside the flacons from Bactria. The flacon from the Gonur necropolis contained remains of *Artemesia* (Moscow University Laboratory), which had a wide range of use including medicine. In another flacon from the Gonur necropolis on its bottom there was found a thick black mixture probably paint used for facial make-up.

One bone cosmetic flacon was found in burial #421. It was made of an animal tubular bone, a hole on the bottom was tightly closed with a bone plate and the neck was decorated with a frit ring with two holes for attachment. In the bottle's neck there was found a “cosmetic stick”.

Cosmetic flacons were found throughout the BMAC zone (Sarianidi, 1979, pp. 255-261). One example was found in Moghul Hundai where it was probably brought from the BMAC area; other bottles were excavated in Tepe Hissar (Schmidt, 1937, Pl. LVII, nn.3497, 4014) and Shahdad (Hakemi, 1997, p. 222), the most western point of their distribution. Though H. Pittman suggests their Central Asian origin (Pittman, 1984, p. 66), their western origin seems more probable, which was indirectly demonstrated by the cosmetic bottles from the Sumbar graveyard (Khlopin, 1983, Table XVIII, No. 15; Table LXIII, No. 8).

Among Bactrian bottles two unique ones from the Anahita Gallery stand out. One of them has a composition that depicts a party scene where personages look like humanized animals. Generally speaking this is a known method but in the ancient art of Near Asia and Mediterranean very rarely found (Sarianidi, 1992, pp. 81-89). The scene on the second bottle is clearly mythological and depicts snake-dragons torturing hares.



114



115



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116. Cosmetic flacons from various graves of the necropolis.



117

117. Stone cosmetic flacon from the burial #2511.



118

118. Cosmetic flacon with applicator in the burial #1175.



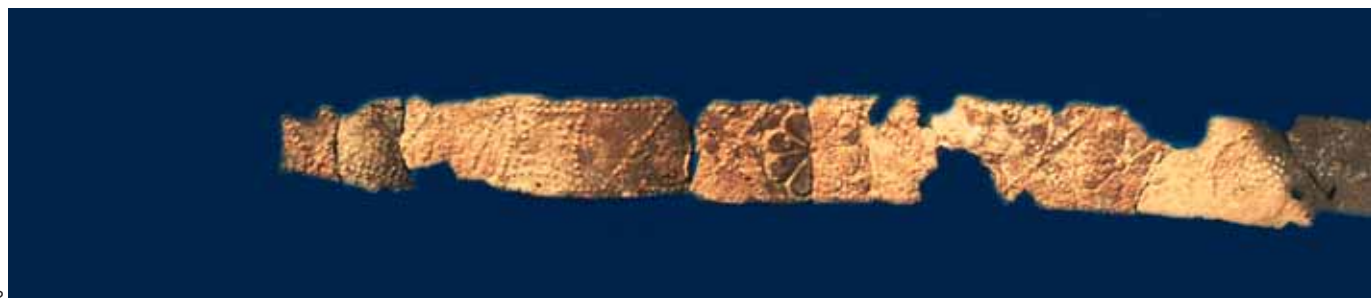
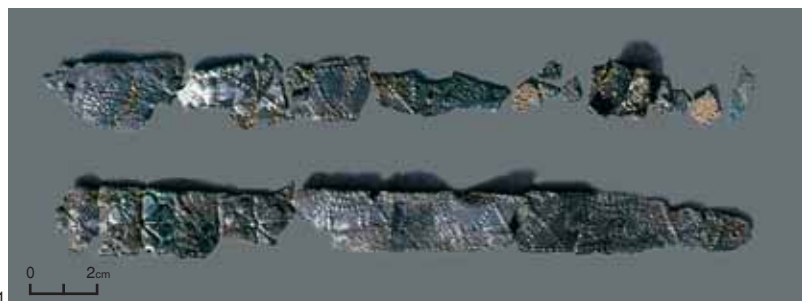
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119. Cosmetic flacon with applicator in them, burial #1890,

120. Burial of a 25-30 years old woman with a silver diadem on her head; burial #549.

121. Silver diadem from the burial #549.

122. Bronze diadem from the burial #1770.



Diadems

Diadems are represented by a few examples made of gold, low quality silver and copper-bronze (Fig. 120). The most ceremonial were decorated by puanson designs in the shape of a row of triangles and in one case it was a row of eight-ray rosettes. Burial #549 yielded a diadem in rather good condition that encircled the whole skull. The strongly oxidized diadem was 0.5 meters long, 2 centimeters wide and several millimeters thick. Each end had a hole for braids used for fixing the diadem on the head. Another bronze diadem, an extremely thin one (34 cm long and 3 cm wide), was found in the burial #2910.

Presumably a lead band with a hole on one of its ends found in the burial #1875 together with a “dowel”, could be considered a diadem too, but this should be studied additionally.

In South Turkmenistan diadems were found in Yangi Kala and Namazga Depe graves as well as in the Sumbar graveyard (Khlopin, 1983, Table XVI, XXIII). In Eastern Iran gold and silver diadems were yielded by the Hissar graves (Schmidt, 1937, Pl. XLVI, NN. 4112 and 4128) and also in Shahdad (Hakemi, 1997, p. 692).

Gold and silver diadems often decorated with puanson design were spread in the Mediterranean region, in Mycenae of Greece in particular. The Margiana diadems find analogies with the diadems with the puanson design from the Kanish graves of the last quarter of the third millennium B.C. It is interesting to notice that all of them have one and very characteristic feature – the absence of any ornaments on the gold diadems, unlike on the silver ones.

Bracelets, earrings and small rings.

Bracelets were mostly found on the arms (never on legs), sometimes two at a time (Fig. 124). Almost all of them had pointed free ends for easy attachment (Fig. 123). All bracelets were round in cross section and only two bracelets from burial #1057 were hollow and semi-circular in the cross section. They resembled those from the Zeravshan Valley (Muminobad, Dashti Kozi) and served as additional evidence of the link between the Valley and the BMAC.

Only one non-flat bracelet was found that consisted of roundish “beads” joined together (burial #2910).

All known bangles are made of copper and silver, in rare case they are silver-plates. Bangles of “faience” were found for the first time in the intact burial #1799 (Fig. 129) at the wrist of a female (whilst in the burial #2900 the similar item was found near the wrist of a man), and single fragments of similar bangles from plundered graves are more characteristic for the Harappa population.

Most of the earrings were made of bronze, and some rare items of silver or gold. Sometimes earrings made in one and a half circles were found at the temple area of the head of the corpse, but they had probably been worn on the ears. Gold earrings are very identical to the Mesopotamian ones including those found in the Urmian royal burials. Very popular were thin copper-bronze small rings, as a rule round in the cross section (very rarely, flat) that were found usually on fingers and in one case on the finger phalanx (Fig. 126, 127).

Gold and silver objects.

Though the majority of graves of the Gonur necropolis were plundered in ancient times still there is quite a number of gold and silver items found in them (Fig. 130). They represent a high level of craftsmanship which testifies to centuries-old jewelry traditions (Fig. 131). The local jewellers could produce gold foil thin as tissue-paper; they knew how to prepare “liquid

123. Bracelets from the burial #183.

124. Bracelets from the burial #560.

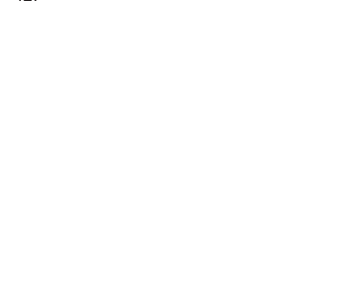
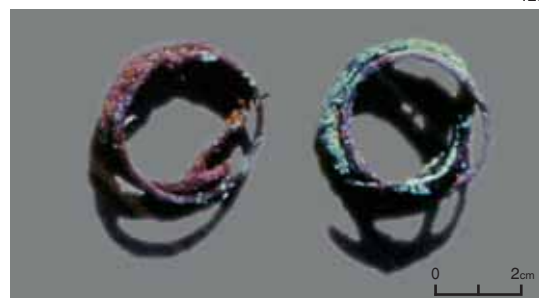
125. Bracelets from the burial #1057.

126. Bronze ring-earring from the burial #2593 (a) and 2258 (b).

127. Bronze ring-earring from the burial #196.

128. Bronze ring-earring from the burial #1341.

129. Faience bangles from the burial #1799.



130. Gold pin from the burial #397.
 131. Gold conical item from the burial #560.
 132. Gold medallion from the burial #560.
 133. Gold figurine of a goat from the burial #194.
 134. Gold diadem.
 135. Gold bracelets from the necropolis.
 136-137. Necklace from the burial #G-011/1993.
 138. Gold earrings from the burial #397.
 139. Gold earrings from the burial #560.
 140. Gold earrings from the burial #280.

gold” (amalgama) that covered gypsum and faience beads with an extremely thin layer and gave the impression of pure gold. Using the thinnest gold and silver plate, the Margiana craftsmen could make adornments, mainly earrings, which they covered with exquisite relief designs equal to the jewelry of the most advanced centers in the world, including Mesopotamia.

One intact cist from intact burial #560 gives a general idea of the high level of jewelry craftsmanship. Three gold (two identical designs and one different) earrings (cast together with hooks), a round gold medallion decorated with an eight-ray rosette in relief, with a hole in the center (Fig. 132), a cast gold cone with an inner hole for attachment and finally a gold bracelet made of two twisted wires with an intact loop on one end and a broken loop on the other end. Besides these whole pieces, the cist yielded nine round beads made of faience covered with gold foil (amalgama) and eleven gold cylinder beads.

In one unplundered chamber (burial #194) an intact gold figurine of a headless goat was found (Fig. 133). It was very beautifully made and testified to the high artistic level of Margiana goldsmiths (Lozzo, 2002, p. 201).

In one burial two large hollow gold bracelets were found together with a gold diadem without any dec-



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oration but with two holes for holding braids (Fig. 134, 135) that were completely identical to bracelets from Anatolia (Kultepe). Gold necklaces were known in the Margiana society and this is proved by a finding of one such necklace at the neck of a female skeleton (Fig. 145). A necklace was found that consisted of thin gold wires in the shape of a spiral with three centrally located snake heads made of thin gold sheet with delicately engraved details (Fig. 136, 137) that had direct analogies with those from the plundered tombs of Bactria (Galerie Nefer, 1993, Fig. 30a). Large agate beads of a barrel form with gold bands on their ends were found for example in the burial #500 of necropolis and were identical to the Mesopotamian ones of the Akkadian period.

Gold (Fig. 138-140) and silver earrings with loops were made entirely of one very thin sheet of gold. They were convex hemispheres with simple rifled geometric ornamentation and closely resemble Mesopotamian prototypes. One burial yielded gold and burial #970 (Fig. 142) yielded silver earrings with different designs in the way of parallel and slightly pointed. Wide convex earrings of Margiana made of sheet gold and silver give an impression of massive jewelry.

One lazurite and one gold quadruple pendants excavated by Italian archaeologists in the Gonur tombs represented very typical decorations found as far West as Troy. This type of decoration was known from rulers' tombs of Asia Minor (Alacha, Kanish), Crete, Mycenae, Syria (Mari) and Tell Brak (Alkim, 1988, p. 220, Pl. LVIII). All of them were made of silver and gold and were believed to have a Syrian origin of the fourth-third millennium B.C. (Jebel Arunda). Further to the East they were found in Elam (Mallowan, 1947; Petlenburg, 1997, Fig. 2) and in the BMAC in Central Asia up to Lothal and their distribution from the West to the East seems to be most probable.



138



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A silver ring was found in the burials #2770 while the burial #1799 yielded a gold ring and both of them had similar quadruple decorations (Fig. 143, 146).

The high craftsmanship of Margiana jewelers was clearly manifested with gold, almost microscopic "glass beads" (up to 2 millimeters long) with holes for threading on thin bronze wire as well as miniature beads with a relief design. There were also gold beads made of two hollow cones (burial #860) that made the article look rhombic and another forms (burial #1770; Fig. 141).

Miniature silver vessels (sizes 3 by 3 centimeters) directly imitate the usual ceramic ones. In burial #1461 there was found a figured eight-ray star with a hole in the center.

In the tomb #2900 among the silver decorations a silver conic disk with inlays was found of which only one carnelian piece survived.



137

- 141. Silver rosette from the burial #1770.
- 142. Silver earrings from the burial #970
- 143. Silver ring from the burial #2770.
- 144. Gold bead from the burial #1200.
- 145. Gold and semi-precious stone beads from the burial #1040.
- 146. Gold ring from the burial #1799.
- 147. Silver tortilla's shell from the burial #1999.
- 148. Gold tortilla's shell from the burial #194.
- 149. Silver leaves from the burial #2827.

Tortilla's shell.

A gold (burial #194) and a silver (burial #1999); tortilla's shells were found in chamber tombs (Fig. 147, 148). These were very realistically made exact small copies of tortillas (Lozzo, 2002, p. 199). Another shell made of "faience" and decorated with an incised design in the form of triangles was found in the burial #2900. Similar "faience" models of a tortilla were very popular both in Bactria where all of them were found in plundered tombs and at Hissar III (Schmidt, 1937, Fig. 134).

Small leaves

The grave #2827 yielded 10 miniature models of leaves, 7 of them with tooth-like edges were made of "faience", and the other 3 bigger ones of silver. Holes for fixing were made in the base of the "faience" ones. It seems most possible that these objects as well as the items of a "faience" rings type were used as adornments (Fig. 149).



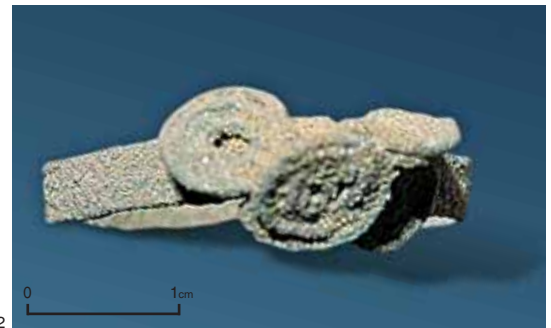
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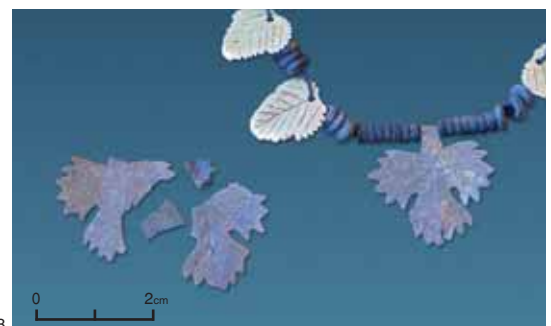
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2.6. Seals

The seals were found in 109 tombs, only in that, where adult peoples (18-70 years old) were buried. Two seals together there were only in three tombs: in shaft burial #75, where an adult woman was buried – 2 bronze seals; again in shaft #2029, where a man 40-45 years old was buried – 1 silver seal and 1 bronze one; in a sepulture #555, where a man 30-35 years old was buried – 1 silver and 1 gypsum seals. Seals were made of different materials (Table XI). The main part of them were bronze ones, the less one – limestone. Only one was lead. Three stone cylindrical seals there were found too.

Seals were mainly found in female (60,6%) graves. Only 14 seals (12,8% of total amount of this item) belong to men (Table XII). 33 percents of the total amount of the seals were found at the waist of the dead, 20% at the neck, wrist and head. It was noted long ago that from the third to the beginning of the second millennium B.C., seals were not used so much as signs of property but more as magical symbols to save their owners from evil. On the other hand seals from sepultures (burials ##555 and 570) with clearly expressed symbols of power and strength were found in male tombs (supposedly), the fact that has to be studied.

Most of the seals were found as components of funeral inventory of the people who were buried in the shaft graves (Table XIII). But the most impressive ones were found in sepultures.

From the 8 seals, found in the sepultures, three were silver ones, three bronze, one - gypsum and one - stone cylindrical. From the eight silver seals four were found in the shaft graves, three, as it was mentioned, in sepultures and one – in cist.

<i>Funeral inventory in the pits</i>		
Material	Number	%
Bronze	70	62,5
Gypsum	17	15,2
Fiancé	11	9,8
Silver	8	7,1
Limestone	2	1,8
Lead	1	0,9
Stone cylindrical	3	2,7
Total	112	100,0

Table XI

<i>Distribution of the burials, where the seals were found, by sex of buried</i>		
Sex of buried	Number	%
Female skeletons	66	60,6
Male skeletons	14	12,8
Cenotaphs	4	3,7
Unknown	25	100,0

Table XII

Table XIII

Types of tombs, where the seals were found

Type of tomb	Number	% from the total number of seals	% from the number of all types of tombs, where some remains were found
Shaft graves	90	82,7	4,4
Sepultures	8	7,3	14,9
Ordinary pit graves	6	5,5	2,7
Burnt pit graves	1	0,9	2,1
Cists	2	1,8	
Unknown type	2	1,8	
Total	109	100,0	

Metal seals

As it was shown in the tables, there were bronze, silver seals and once – a lead one (Fig. 150). All of them were produced in the technique of compartment seals and in general were decorated with geometric designs mainly in the way of crosses and their variations (Fig. 151, 152). The most artistic of these had on their reverse side additional engraving that stressed some characteristic details of the main personages. Thus, in plundered chamber tomb #570 between bricks a seal covered with silver and cast in the technique of compartment seals was found. It represented a female winged deity dressed in a typical Sumerian dress “kaunakes” with arms crossed at the waist. It was seated on a panther whose neck was decorated with “brackets”, a detail more characteristic of the decoration of dragons. The Goddess's face was turned in profile; her long hair reached the shoulders and one curl fell on her neck. The Goddess had a long, slightly humped nose, her plump lips and large almond-like eyes suggests a certain ethnic type. This image closely resembles the silver seal found in North Gonur in the “lamb's tomb” that had been later transferred onto a pin (Fig. 159). The only difference was that the latter seal was wingless and the hair instead of being loose was arranged in a sort of a braid around the head. Apart from the



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150. Lead seal from the burial #238.

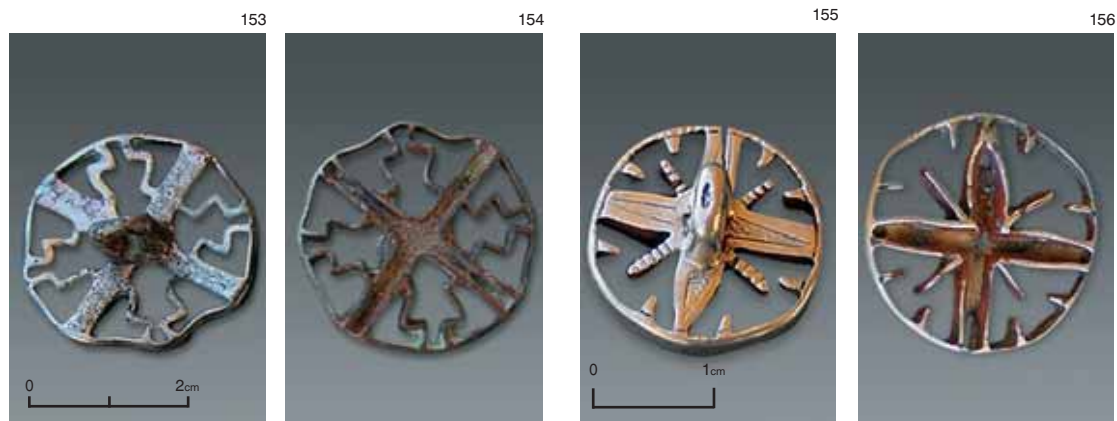
151, 152. Silver seal from burial #2655.



151



152



stylistic and iconographic differences they were united by a general “Semitic” type of face numerous repeated on the composite statuettes mentioned above.

Winged female deities sitting on monsters were found in Kerman (Amiet, 1986, fig.183) and on bulls – in Syria (Schaeffer, 1949, fig.14). Such stylistic detail as a braid laying on the breast was used in Shahdad (Hakemi, 1997, N 3520) and Elam (Amiet, 1977, fig.418). In general this composition was rooted in the Sumerian traditions.

Female winged deities seated on animals were rather widely represented in the BMAC pantheon. These “mistresses of animals” had a Syro-Anatolian origin and spread as far as Elam and now have been found in Bactria and Margiana (Sarianidi, 1998, A). The Elamite influence of the female personage from the “lamb’s tomb” has already been shown (Klochkov, 1997; Sarianidi, 1995) and we have every reason to suggest the same origin for the female winged deity under discussion. Both images came from the intermediate point of Elam and reflected the Akkadian culture that was definitely linked with the Western Semite traditions. It is not possible to assume that the seals prove import from Elam, because both seals were made in the cell technique typical of Central Asia and unknown in Elam and even more so in Mesopotamia.



157



158

153, 154. Silver seal from burial #2412.

155, 156. Silver seal from burial #1824.

157. Silver seal from burial #2029.

158. Bronze seal from burial #1770.

This deity was very popular in the mythology of the ancient Margush people, and finding of the third such seal (burial #1710) testifies to this observation. Though that grave was plundered, robbers missed the seal because it was placed not in the usual position at the head, but at the pelvis of the corpse. The seal was made of low quality silver in the ordinary cell technique with raised details on its reverse side (Fig. 160-162).

At the center of this narrative composition the same female Goddess of Elamite type was sitting, portrayed in profile with her hair arranged in a sort of a braid. In front of her there were two other and much smaller figures. Presumably a man in long dress (below his knees) was shown at the upper part offering a goblet to the Goddess. Below him a figure was sitting looking like the Goddess but being much smaller. Faces of both women closely resembled the winged Goddess described above and especially the Goddess from a "lamb's tomb". Similarity is not



159

159. Silver seal from North Gonur Palace, burial of lamb.

160-162. Silver seal from the burial #1710: general view (160), drawing (161), fragment (162).

163. Bronze seal from the burial #2029.

164. Bronze seal from the burial #1725.

165. Bronze seal from the burial #1207.

166. Bronze seal in a shape of a standing goat from the burial #392.

167. Bronze seal in a shape of a standing goat from the burial #855.

168. Bronze seal from the burial #351.

169. Bronze seal from the burial #237.

170. Bronze seal from the burial #2528.



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162

only in style and iconography, but in physical-anthropological type of their faces as well. The latter may probably depicts a common Semitic type.

Special attention attracts a highly stylized seal with a centrally located figure of a man holding a bird and an hare (grave #2300). An hare was a rather popular image in the Hettite art. There we find fantastical monsters that hold a pair of hares (Boehmer and Cutterbock, 1987, Table V, N 47).

Another seal, covered with silver, was found in burial #555. In its center was a figure in a heraldic position that was torturing a pair of snakes. Its short beak leads one to suggest that it was either a kite or a falcon. Another composition with the identical scene as subject was shown on a compartment seal from burial #1207 where a falcon was replaced by an eagle in the heraldic pose fighting two snakes (Fig. 165). The motif of an eagle fighting a pair of snakes was rooted in the Mesopotamian myth where a shepherd's ruler Etan ate a snake (Porada 1965, p. 42, Fig. 16). Strange as it may sound, it is only in the territory of the BMAC where this subject was so widespread in the local art (Sarianidi, 1998, A, nn. 127, 172-175). In Mesopotamia itself in identical compositions eagles torture mainly different animals or birds but never snakes. On the other hand, in Elam a unique image of an eagle that was torturing a pair of snakes was found (Ward, 1910, p. 33, N. 72), a fact which points to the existence of one common place of origin with subjects similar to the BMAC sphragistics.

E. Porada has noted that an eagle was a heavenly creature, while a snake was a khtonic image and that they reflected the idea of the struggle between good and evil, between light and shadow. We do not meet this subject in Mesopotamia, Syria, or Iran on the cups of the third-second millennium B.C. In contrast, in Bactria and Margiana at the same period it became very popular (Porada, 1989, p. 18).

Two more seals stand apart among those produced in cell technique. One has an image of a hero-



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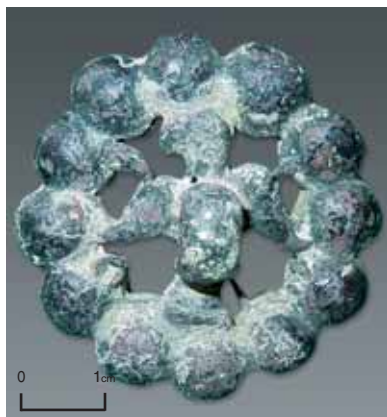
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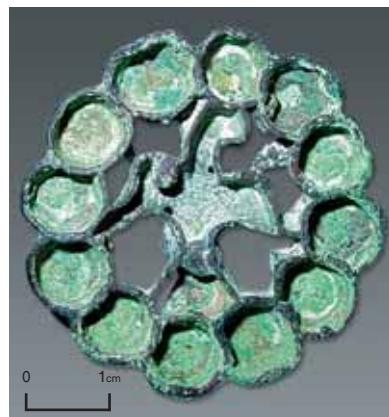
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171, 172. Bronze seal in a shape of eagle in heraldic pose from the burial #2412.

173, 174. Bronze seal in a shape of eagle in heraldic pose from the burial #2328.

175. Bronze seal from the burial #425.

176, 177. Bronze seal from the Area 5 of North Gonur, room #18.



177

serpentfighter portrayed in typical “primitive style” (burial #2029; Fig. 114a), another one depicts the same composition and a swan (burial #1725 -Fig. 114b). The Gonur necropolis yielded seals with centrally placed figures of goats (from burial #855 came a figured seal in the shape of a standing goat – Fig. 167), birds (Fig. 168-170) (including eagles in the heraldic pose – Fig. 171-174), with scorpions, plants (supposedly a poppy bud) (Fig. 175).

A seal with an image of a marching man and “defeated mountain goats” (Fig. 176, 177) was excavated in the area 5 at North Gonur.

Silver and stone seals in the shape of four or three loops (grave #1080) (without the beginning or the end) show direct analogies with those from Asia Minor (Ozguch, 1959, Pl.V). And it seems not accidental that the bronze mace-head from the “lamb’s tomb” in the north Gonur has the same four loop design.

Some compartment seals from Mari (Syria) very closely remind the seals from the BMAC not only by the shape but by the metal composition as well. This quite definitely speaks in favor of their import origin (Beyer, 1989, Fig.3) which is not at all surprising if we remember the Central Asian findings in the Tod treasure in Egypt.

In general though the BMAC seals find their prototypes in Syria and Anatolia their direct analogies were found in Mesopotamia.

Stone, gypsum and “faience seals” like the copper-bronze ones on their facial side had engraved, mainly geometric designs (crosses and their variations) and on the reverse side a loop-handle. Frit seals with gently curved designs were found in burials 808, 812, 926 and some others (Fig. 178). In general, gypsum and faience seals closely resemble the Harappan ones.

In ancient hills made of earth thrown out of tombs besides seals there was found a fragment of a stone amulet of black stone with double-faced engraved images.

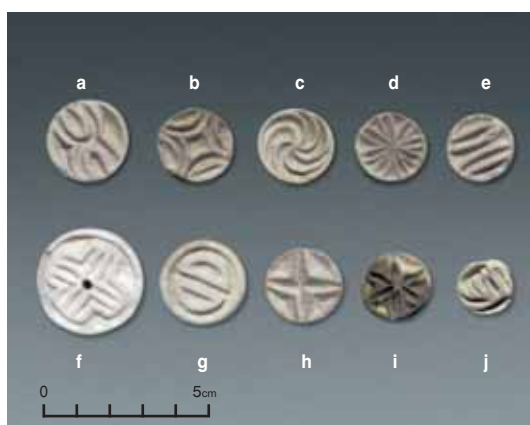
Cylinder seals

Of special significance were three stone cylinder seals: one from a chamber tomb and the other from shaft graves. A seal of white stone (burial #23) was found on the present-day surface over a chamber grave in the earth thrown out by plunderers (Fig. 180). In the center was a seated female Goddess with legs hidden under a fluffy skirt and plant shoots of probably a poppy coming out of her body. A crawling snake and a horned goat seated on the "base" add to the general picture.

So far, similar compositions with a Goddess of vegetation (enthroned, not seated on the ground) in the company of goats are known in Tepe Yahya and Shahdad (Hakemi, 1997). Now they have been found in Margiana as well and all together they can be treated as a general image of an Eastern Iranian Lord of the good Tree, Ningizida, who had an Akkadian and Syrian prototypes (Schieffer, 1949, Fig. 35) and came to these areas through Elam (Amiet, 1997, p. 124). The same opinion seems to have S. Salvatori (2000, p. 134) but his supposition of a female deity seated on a snake on the Margiana cylinder seal needs additional proofs. The style and iconography of these Goddesses differ immensely from all other Near Eastern images and can be determined as an "inter-cultural" style. This led E. Porada to draw a parallel between these images and an identical one from the Tod treasure (Egypt) where it went from the East Iranian area (Porada, 1982, p. 291).

It seems logical that in Shahdad as well as in the Gonur necropolis such cylinder seals would be found in tombs. The Sumerian sacred hymns describe Ningizida (Lord of the good Tree) as someone connected with the afterworld and his house was represented as "...a dark cella that evokes fear, sacred trembling" such terms referring to his underground house (Leick, 1991, p. 131). The khtonik (afterworld) aspect of Ningizida is stressed by the emblem in the shape of a snake which by the way was depicted on a Margiana cylinder. For centuries trees were idolized in Syria and Palestine. They looked upon them as female deities (Keel, 1998, p. 16), the fact that should be taken into consideration while speaking of motif mentioned above.

A second cylinder seal with a hole for hanging (Fig. 181) comes from a female burial (#1393). It was also made of light coloured stone and had two rows of engraved images. In the center of this clearly



178. Faience seals from the burials: #333 (a), #2202 (b), #397 (c), on the necropolis' territory (d, e, f), #821 (g), #358 (h), #812 (i), #527 (j).

179. Faience seal from the burial #2359.

180. Cylinder seal from the burial #23.



179



180

mythological composition there were two horned bird-androcefals (one of which had wings turned upwards) that faced each other with their tails turned in opposite directions. The difference between the personages was that one of them had a beard turned forwards and that besides a tail it had also braids with curled ends “rising” out of his body. They stand in fighting position and probably the eagle in the heraldic pose placed above them symbolised the idea of victory. Above one of these bird-androcefals a small crawling snake was depicted. Further on one could see an image of a man with two eagle heads placed inside a coiled two-headed snake and behind it stood a bird with the head turned back.

The second row showed two people seated on the ground with crossed legs.

One of them had a ball in his hands and the other had a vessel. A wedge-shaped item that can be interpreted as a small altar is situated between them. Long fluffy hair fell down on their shoulders and they had protruding noses and heavy jaws. Behind them was a seated bull whose head was turned back and whose tufted tail was carried high. Next to the bull was a bird also with its head turned back and the whole composition was finished with what has been called the “architectural facade of a temple”.

It is remarkable that all the personages of the lower row were rather realistic whilst those in the upper row such as bird-androcefals, a two-headed eagle, two-headed snakes and so on, were mainly fantastic ones. These latter details lead to the suggestion a general Near Eastern origin of the seal though its “intercontinental” style may be determined to be Eastern Iranian with one or more characteristics of BMAC glyptics. A person with two eagle heads was depicted on the famous Bactrian axe from the Metropolitan Museum (Pittman, 1984, Fig.36). Too, the subject of the “architectural facade of a temple” was well known in the art of many areas of the Near East (Delouyaz, 1960, Pl. VI). On the other hand the iconography and types of people seated on the ground with crossed legs, hair falling on the shoulders and “heavy” jaws were typical of Eastern Iranian art. This can be easily shown by the images of people on the “standard” from Shahdad (Hakemi, 1997, p.649).

In Mesopotamia bird-people were known already in the third millennium B.C. (Muller-Karple, 1974, Taf. 241, N. 8) but Mesopotamian iconography and composition differed decidedly from those on the Margiana cylinder. For this reason the whole composition on the Elamite cylinder mentioned above is determinative. There beside a horned Goddess there was depicted a seated bull with his head turned back and a tail

181. Cylinder seal from the burial #1393.



carried high. Next to it was an eagle in the heraldic pose but with the head hanging down which was probably not accidental. Generally speaking these images (Glock, 1988, N. 124) were identical to those on the cylinders from the BMAC. Another cylinder seal, probably Mitannian (1400-1200 B.C.), iconographically and especially stylistically, strongly resembled the principal images on the Margiana cylinder seal described above. There also, two personages were depicted facing each other and one of them was a bird-androcephal (Glok, 1988, #88).

In the second half of the second millennium B.C. the image of bird-androcephals (including some bearded ones) facing each other became more and more popular in the Near East (Ravn, 1960, #10), especially in Luristan (Haerinck and Overlaet, 1999, ill. 151). To a certain extent this explains the connection between this image and the one on the Margiana cylinder seal. On the other hand, the above mentioned comparisons help one to understand the “sudden” appearance of bird-androcephals in the new Assyrian period in Near East. Their numerous images practically always depicted them in a fighting position. Very representative were designs of braids as if “growing out” of animal bodies. The braid ends were curled (Sotheby's Antiquities, 1992, N. 97) which was a stylistic method for depicting bird-androcephals on the Margiana cylinder seals. In this connection we may refer to compositions on the Greek pottery of the middle of the first millennium B.C. The designs of birds with human heads standing in clearly fighting positions may speak in favour of their common Mesopotamian origin.

On the whole one may note that in spite of the link between the cylinder seal from the Gonur necropolis and the Mesopotamian prototypes, they had a clearly expressed local origin. Once again this fact shows that in the territory of the BMAC, a special trend of ancient glyptics with its own style and compositional concepts existed.

A fragment of a lazurite seal from eastern Iran also attracts our attention. It depicted people seated on the ground in the company of animals, including a zebu. Though the image of a zebu probably reflected the influence of the Harappan civilisation (Collon, 1995, Fig. 52) the general style of the seal was identical to the seal compositions mentioned above.

Of great significance was a dolomite cylinder seal from the grave #2550 (Fig. 182, 183). According to N. Kozlova from the Hermitage who read the seal it bears a standard Sumerian inscription that dates to about the XXII c. B.C. Only one word “urdu” (“slave”) can be clearly read on it. According to T. Sharlach

182, 183. Cylinder seal from the burial #2550.



182



183

from the Pennsylvania University (Philadelphia) the seal from Margush closely reminds of the Sargonian one with a standard composition of a fight between a pair of heroes and a lion and a bull. It may be dated by the time of the rule of king Naram-Sin about 2250-2200 B.C. T. Sharlach thinks that seals of this type could belong to men from the king's surroundings, only to those who were close to the king's court.

The inscription consists of three columns, the upper part of the inscription has almost completely obliterated but analogical to similar seals one may think that this too carried the name of the king and his titles. The second column of the inscription preserved the name of its bearer and his position: “[L]u-KA-x[S]agi arad-z[n]” that means: “Lukaks, bearer of the cup and a slave”. According to T. Sharlach this was a high position often connected with sacrifices in one or another way. At present we know only one such seal (or more precisely, its impression) with the inscription that mentions the same position.

Ignoring the way this seal got to Turkmenistan for us it is clear that in the end of the third millennium B.C. Mesopotamia had direct links with the ancient land of Margush and sent official representatives of high rank to this faraway country .

2.7. Stone artifacts

Margiana had no natural stone deposits and stone was imported from the Turkmenian-Khorasan mountains. This can explain not only the limited number of stone objects but their value as well.

Stone mace-heads

The few excavated mace-heads were made of various types of stone. They were round and had holes that could be used for fixing on the wood base. The craftsmen used different natural pigments artistically and produced objects evidently valued for their beauty (burial #1063; Fig. 184). Almost all of them were well polished (Fig. 185, 186); only in some cases their surfaces were rough (burial #1443). In singular cases one end was smooth while the other was decorated with a ring in relief on the rim of the hole. One mace-head of black stone, polished almost like a mirror, is of special interest. It came from a plundered grave.

Staffs were found only in male burials. The limited number of these finds does not prevent us from making general conclusions. Definitely the “staffs” had a certain prestige meaning, most probably connected with official ceremonies and different rituals. This can explain the fact that in some tombs they were found next to obvious cult objects such as “miniature columns,” lead rings and so on. Only three “staffs” were intact whilst in several tombs only fragments were found. As a rule all of them were over one meter long and made of black schist.

In burial #500 a “staff” was found with a lead mace-head in a form of a grooved cone that widened upwards and in burial #510 also a round lead mace-head (Fig. 187-190) that vaguely recalled lead mace-heads from Tell Brack (Oates et al., 1997, Fig.129) and especially from Shahdad (Hakemi, 1997, p. 291, #1334) was found. The lower ends of the “scepters” were slightly effaced (but not because of walking) and one of them had a severely flattened end (more or less 3 centimeters).

The “staffs” were most probably used by priests as rods or scepters during various religious ceremonies. In the Kabul antique shops one can find quite a number of them, usually with round stone tops.

Occasionally, tops were made in the form of a crescent which recall identical ones from Shahdad (Hakemi, 1997, p. 626). Basalt “rods” with lead mace-heads were also found (Christie's 2000, N. 4, Fig. 679).

Another “staff” came from burial #1500 where it was found in a set of other clearly cultic objects. Unlike the ones described above, this “staff” had a thickening up to 9 centimeters in the middle and showed direct and clear parallels with similar ones from Bactria (Pottier, 1984, Fig. 7, Nos. 31-32). Both ends were rather narrow and preserved signs of frequent use. One should also note that “crooks”, “miniature columns” and “weights” were often found in graves in fragments, and most probably they were deliberately smashed before being placed in a burial.

184. Stone mace-head from the burial #1063.

185. Stone mace-head from the burial #167.

186. Stone mace-head from the territory of necropolis.

187-190. Schist “crooks” (staves) with bead heads from the burials: #500 (187, 188) and #510 (189, 190).



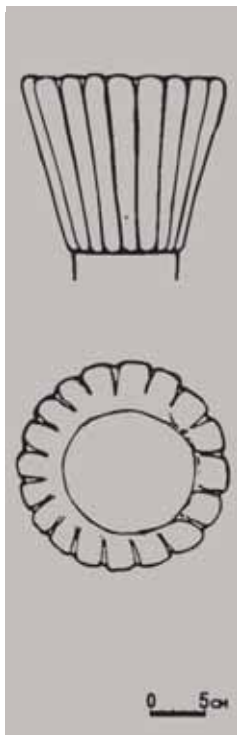
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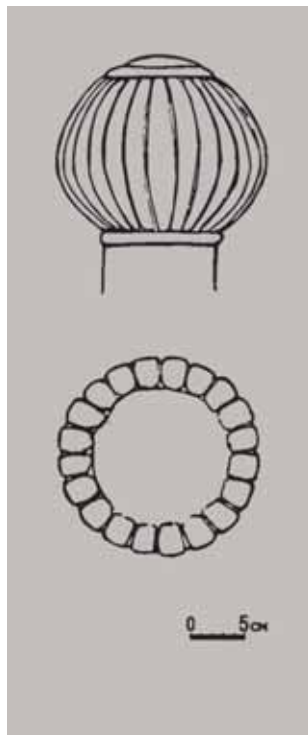
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Discs

This is a conventional name for round stone objects that were represented by only few examples. The hollow line along the diameter recalls identical hollow grooves of “miniature columns” and were therefore most probably ritual objects. Additional support for this statement is that one “disc” was excavated in burial #1500 together with a “miniature column” and a “scepter” that most likely belonged to a priest (Fig. 191). In this connection we may recall finding of such “discs” with a handle and through image of a cross in the Middle Bronze layer (Namazga IV), ancient farming settlement Ulug Depe in South Turkmenistan.

Miniature columns

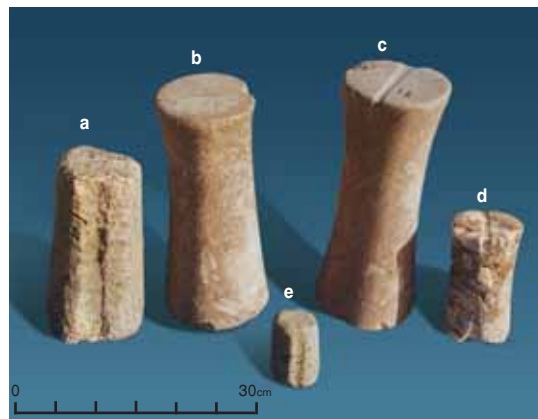
Miniature columns were cylindrical objects of a clearly religious meaning and were evidently used only in the territory of the BMAC. All “columns”, 25 in number, were found in male burials when it was possible to determine this (f. ex., graves ##1500, 1650, 1682, 1768, 1821, 1921, 2056) of the Gonur necropolis, some of them in plundered burials and one along the robbers' route (Fig. 192). As a rule they were 30-35 centimeters high (in singular cases about 0.5 m); their diameters vary from 15 to 20 centimeters. They were made of different stones, including marble-like limestone. Their middle part was usually narrower and rather often the upper part had a smaller diameter than the lower. The edges of round surfaces bore clear signs of being effaced; these signs were less obvious on the top surface than on the lower one. Many of them, though not all, were decorated with grooves that stretched from top to bottom. Some examples had these hollow grooves only in the upper and lower parts; some had none at all. The hollow grooves did not seem to be effaced.



191

191. Stone disk from the burial #1500.

192. Miniature columns from the burials #1768(a), #1821 (b), #2000 (c), #1826 (d), and a stone model from the burial #1912 (e).



192

The surface of “miniature columns” was polished. Stone model of a “miniature column” (10 cm high, diameter 6 cm) with preserved vertical grooves was found in the burial #1912.

The exact origin and purpose of these columns remain unknown but according to P. Amiet they possibly had a common Egyptian origin. This was proved by the images on the Syro-Anatolian seals (Sarianidi, 1992). Later E. Antonova proved that miniature columns from Egypt, Syria and possibly Palestine could first reach Anatolia and then skipping Mesopotamia were introduced to Iran and the BMAC zone (Antonova, 1999, p. 117).

The “miniature columns” were most probably linked with cult libations since on the floors of the Togolok-21 temple alone there were found 30 of them both intact and in fragments. It is assumed that during ritual ceremonies they could drop hallucinogenic juice of the soma-haoma type on their surface which then flowed down along the above mentioned hollow grooves (E. Antonova). In addition to the common “miniature columns” some singular objects were covered with a mosaic layer as the case was in the “priestess burial” in the Togolok-1 temple. But the mosaic layer did not completely cover the surface of the “column,” one side was free of mosaic insertions thus suggesting that it might have leaned against the wall. The presently available review of “miniature columns” evokes certain objections and disputes, as for example the opinion attributing them to the Andronovo culture (Boroffka, Sava 1998).

Stone vessels

Most of the stone vessels were made of light alabaster or marble-like stone with veins and were cylindrical (burial #1155), small cups with a roundish body (#717) and miniature goblets of marble-like stone (burial #1531; Fig. 193) that always had the rim turned outwards. Of some special meaning probably were vases on a tall stem with a disproportionately small reservoir (burial #894; Fig. 196). Also some cups were found that either had no rim at all (#1532) or had rims that were only slightly sculptured (burial #1436). A double vessel made of light



194



193



195

193. Stone vessels from the burials: #1155 (a), #717 (b), #1531 (c).

194. Stone vessel from the burial #2067.

195. Stone vessels from the burials: #788 (a) and #1436 (b).

196



197



198



alabaster with veins was found in a grave destroyed during the construction of the modern canal.

Black steatite was used to produce a cylinder vessel with scratched geometrical ornament (burial #1999; Fig. 200). Vessels of the Late Bronze similar in shape and which is more important in ornamentation were found in Iran and particularly in Hissar (Schmidt, 1937, Pl. XLII) and also in Elam (Potts, 1999, Fig. 44).

The grave #2858 contained another cylinder vessel also of black steatite decorated by two rows of “pipala leaves” (plant very popular in the Indian art) which symbolizes the idea of fertility and long living (Fig. 199).



199



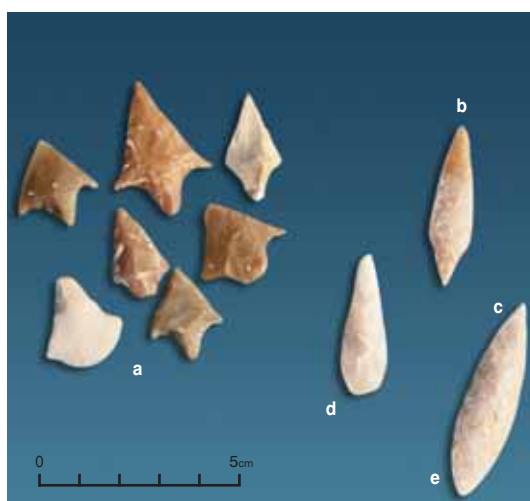
200

Small shallow cups of dark steatite and white stone with simple scratched designs were produced (burial #1654) as well as supposed cosmetic bottles quadrangular in the cross section, some decorated with circles and some with geometrical designs (#1266). An attention attracts a unique two-part vase (a reservoir and a pedestal) which was found in sepulture #1750. It was fully covered with scratched design including an outline of a poppy on the pedestal (Fig. 198).

On the bottom of a singular flacon was a perforation tightly closed with a “plug”. On the side of another flacon was a “door” that reminds similar flacons from Bactria. P. Amiet has long ago noticed that similar flacons often decorated with ring designs were rather popular in Eastern Iran (Hissar, Shahdad, Yahia) up to Elam.

Flint arrowheads

As a rule, flint arrowheads were excavated only in male burials (no more than 2-3 pieces in each) and also in the lambs' burials where they seem to play a symbolic role. In singular cases as for example in the grave #289 there were found 22 arrowheads, in the grave #2900 – 31 pieces arranged in a triangle shape perhaps imitating a quiver (Fig. 201-203).



196. Stone vessel from the burial #894.

197. Stone vessel from the burial #1532.

198. Two-part vase from the sepulture #1750.

199. Black steatite vessel from the burial #2858 at North Gonur.

200. Black steatite vessel from the burial #1999.

201. Flint arrowheads from the burials: #1220 (a), #835 (b), #969 (c), #902 (d), #1182 (e).

202. Flint arrowheads from the burials: #680 (a), #225 (b), #410 (c), #323 (d), #227 (e), Gonur Palace, room 680 (f) and Gonur Palace room 154 (g).

203. Flint arrowheads from the burials: #1912 (a), #2018 (b), #2075 (c), #2142 (d), #2110 (e), #1983 (f), #1911 (g), #1920 (h) and #2066 (i).



203

Mosaics

Most of the mosaic insertions found in the graves of the necropolis were made of gypsum, some of stone and very few of bone. The insertions were covered with engraved designs (Fig. 204). The mosaic art was represented by a mosaic found in a chamber tomb in the necropolis (burial #194). It was a fragment of a box that was decorated with an inlaid mosaic made of white, black and red squares that formed a real picture (Fig. 205).

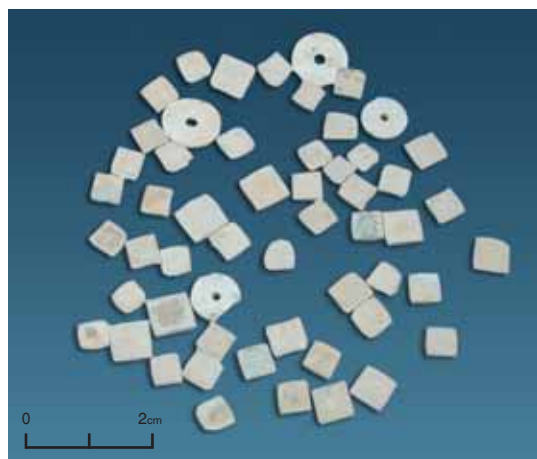
Among bronze and silver vessels, a round case with a copper mirror inside was found (burial #1999). The case was decorated with red, black and white mosaic insertions in a form of squares, almonds and rhombuses, portraying together a large cross at the center (Fig. 206).

In burial #1022 was found a big box (42x32 cm) with a mosaic surface that consisted of hundreds of small circles cut of soft white stone. In the center of these circles there were hollows filled with red and black paint. These circular insertions (the average diameter was 1,3 cm and the diameter of the painted center about 0.8cm) were glued on the gypsum base of the box and gave the impression of a mosaic inlay.

For producing simple mosaic particles instead of stone and bone insertions, the stone-workers used cheaper (though less durable) gypsum in various forms. Most popular were small squares and on their reverse side

there were preserved spots of some kind of glue. Such multicoloured mosaic insertions seemed to be glued on thin gypsum plates (up to 2-3 millimeters thick). After that these plates were fixed on the supposed "boxes" and on the facial side of the insertions, various rather simple designs were engraved.

An especially interesting stone bore insertions with designs that were found in the "complex of funeral rites" of the North Gonur palace. Among them was excavated a rather large stone eye with a pupil. The size of the eye leads one to believe that it belonged to a big human figure.



204



205



206

204. Inlays from the burial #1860.

205. A mosaic from the burial #194.

206. A round case from the burial #1999.

Beads

Beads, pendants and pierings were represented by many dozens and even hundreds of gypsum examples of the most popular and cheap types of decorations (Fig. 207-208). As a rule all the beads were long (on an average up to 2 centimeters and a diameter from 2 to 3 millimeters), cylindrical and very fragile (Fig. 210). Very popular were ceramic as well as large biconical beads of black steatite (diameter up to 3 centimeters) with three scratched circles on each surface. There were also stone barrel-like beads with a round-cross section, their size 3 by 2 centimeters (Fig. 209). Some beads were made of “frit” and had round or rhombic shapes.

Very small round beads were standing apart. They were fixed together in 3, rarely 4 pieces.

A biconical carnelian bead with eight facets was found in burial #1357. In a few cases single pieces of carnelian so called “etched beads” (Fig. 211) were found that were more typical to Harappian civilization. Rare carnelian beads from 4 to 5 centimeters long, slightly widened in the middle were distributed in the territory from the Indus Valley up to Mesopotamia and Anatolia. Also some singular carnelian beads analogous to Harappian ones were found. Few large flat beads (grave #2900) that looked like “an eye with a pupil” were excavated.

Besides the ceramic ones all round, barrel-like and



207



208

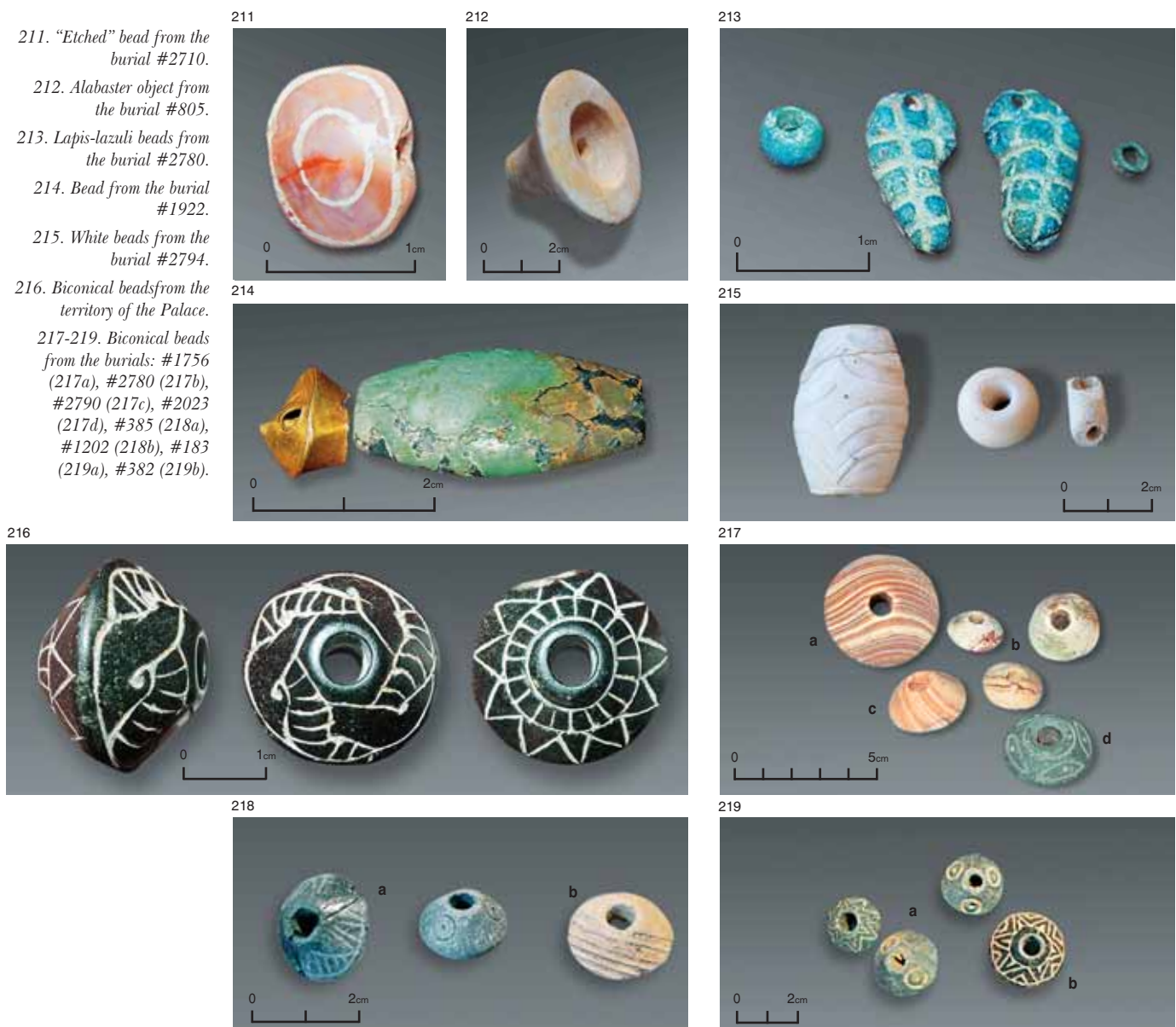
- 207. Pendant from the burial #2794.
- 208. Pendant from the burial #2840.
- 209. Pendants from the necropolis.
- 210. Pendant from the burial #280.



209



210



cylinder beads were made of carnelian, lazurite (Fig. 213), rock crystal, turquoise and other common sorts of stone including simple small river stones (see picture above). The most impressive beads were made of agate in a cylinder shape (with some thickening in the middle) and on both ends thin gold rings were glued (Fig. 214). Identical beads were popular in the Near East, including Bactria. Gold beads were mainly round or cylindrical and as a rule were smooth and in very rare cases were decorated with circles.

Rather interesting is a conical alabaster object with a cut through hole that was found in the grave #805 (Fig. 212).

Among stone beads and pendants there was one unusual pendant (3.5 cm long) from grave #2794 that was made of white stone (Fig. 215). It had a shape of lentil in its cut. On both surfaces of the pendant were unusual designs carved in high relief.

It seems that very popular were biconical steatite beads usually decorated with 3 scratched circles on each side (Fig. 216-219). Biconical beads with other kind of decorations were rather rare.

220



220. Beads from Bactria.
221. Beads from various
graves of the Gonur
necropolis.

221





222

Necklace with two bulls

In the grave #2900 on the neck of a buried warrior were found two strings of beads out of which 15 were made of carnelian, 31 – of lazurite, 11 - of turquoise and 14 - of gypsum (See paragraph 4.2 of this book). The lower string that was made of lazurite cylinders had two similar silver figures of bulls that were inlaid with lazurite, carnelian (or possibly garnet) and turquoise inserts and with clearly modeled eyes. Their horns facing each other probably indicated the fighting position. The reverse sides of the figures were flat without any decoration. A similar pair of gold lions made in the

same technique was also decorated with inserts of semi precious stones (Ligabue and Salvatori, 1980, p.p.194-195). The ends of bulls' tails were inlaid with drop-like turquoises which demonstrate the high technique of the craftsmen and their know-how of very delicate modeling.

The grave #2938 yielded a pendant of marbled lime stone in the shape of an eagle (probably) in the heraldic position (Fig. 222): widely spread wings and a head that was looking straight the viewer instead of being turned to the side (as usually). On its reverse side was a hole for hanging. Next to the pendant there were found paste, gypsum and steatite beads that probably were part of a string for the pendant. On the surface of North Gonur was found a stone mould for an eagle in the heraldic position (Sarianidi, 1998, Fig. 25, N. 9) which testifies for the great popularity of such objects. In the plundered tombs of Bactria there were excavated gold figures of eagles made in the same iconographic style. It seems most probable that this type of objects had their origin in Elam (Ibid, Fig.53, N. 3).

2.8. A Burial of a stone-carver

Burial #1200 that belonged to a young man (20-25 years old) is of special interest since it was a burial of a stone-carver. The burial contained his tools that included a “shoemaker's knife” with a very wide blade, a presumably faience “gauge”, flint heads for making holes, small lead rods, one of which had a forked end similar to the one from Giyan (Herzfeld, 1988, Fig. 276) and finally a bone rod with a slanted end.

It is quite possible that flat figured items made of “faience” with blueish stains (2-3 mm thick) were used as a kind of “moulds”. On their reverse side they preserved traces of some sort of brown glue and were possibly used as inlays for some mosaic panel.



223

There were more than 100 pieces cut from different stones and minerals within this burial – both “wastes” from production and half-finished products, the latter being mostly pieces of beads without through holes for ribbons and insertions for mosaics (Fig. 223, 224).

The analysis of stone objects and of half-finished items made by the petrograph A. Bushmakin showed that they were made of chalcedony, rock crystal, Afghan jasper, quartz with insertions of opal, anhydride, schist, flint, magnesite, pyrophyllite, marble, caoline and granite. Some of these minerals were not found in Turkmenistan but had originated in Iran and Afghanistan. Among the imported minerals were quartz, opal, azurite, malachite, turquoise, lazurite, granite, marbles, chloride schist (Margiana, 2002, pp. 114-117).

Among the products of the stone carver a miniature figurine of a resting duck (Fig. 226) with its head turned back (3,5x2,5x2,2 cm) made of biotite granite – oplitite is remarkable. From the end of the third millennium B.C. up to the Achemenead times a great number of such figurines were known throughout the Near East. But in the territory of Central Asia they were met for the first time. Many of them preserved



224



225



226

cuneiform inscriptions that indicated that they were used as weights.

The same stone was used for the production of a round “maskaron” (2,3 cm in diameter) on whose facial side was a relief image of a human face with rude features (big turned up nose, round “mad” eyes, a bushy mustache) (Fig. 225). The curly hair is the most characteristic stylistic feature of this image. Absolutely the same detail decorates the pin with a human face mentioned above. It seems most probable that in both cases we deal with an image of Kersaspa, a personage from the Avesta. On the reverse flat side of the “maskaron” in the center was a hollow for attaching the object, with a depth of 0.5 centimeters and a diameter of

222. A pendant of marbled lime stone from the burial #2938 (Area 5, North Gonur).

223, 224. Artifacts from the burial #1200.

225. A “maskaron” from the burial #1200.

226. A resting duck from the burial #1200.

0.3 centimeters. There was also found a half-finished seal made of the same stone with a schematically drawn face of the same type as the one on the “mascaron” with a handle on the reverse side.

Three pairs of hands made of white marble, parts of complex statuettes, were found close by. The absence of other details of complex statuettes may indicate that perhaps each stone carver specialised in producing one certain detail according to his abilities. And then another stone carver would assemble the

whole statuette. True, this supposition may not be correct since in the same burial was found a necklace made of beads covered with sheet gold. This work could be done only by a first rank craftsman who knew a wide range of techniques and who was both a stone carver and a jeweller.

A necklace was found near the head of the dead (but not on the neck), and beads were both covered with gold foil and stone ones (made of lazurite, marble-like limestone, porous stone of light colours). At the center of the necklace there was a very large agate piece of beads. The necklace' lock was made of gold plate in a form of a conical button, and all beads were on copper wire (Fig. 227). Five golden tubes were lying near the necklace, and fragments of gold foil were found at pelvis bones.

Burial of a stone-carver once again proves very high level of stone cutting, combined with relatively simple tools. For example, we can cite findings of flat round beads, having 5 millimeters in diameter and with 1 millimeter holes at the center (burial #1999). We may even assume there was already professional specialization, when the most difficult artifacts were produced by masters of the highest qualification while more simple items were made by less skillful masters.

■ ■ ■

It is worth mentioning the plundered burial #2168 with small stone items, including a pod of a haricot bean and a model of a fashion shoe (4 cm long) (Fig. 228). The latter was made with great craftsmanship from black steatite and contained a small marble “dowel” inside. A shoe's surface was decorated with chased “hearts” (as if imitating skin patterns) and an articulated welt was present at the front, as well as three long and widening “bands”. No doubt it is a model of the Gonur aristocracy footwear. When excavating the North Gonur palace, we already found a ceramic model of ordinary shoes, i.e. of a sole with skin ribbons between foot fingers. Generally speaking, the model of this fashion shoe surprisingly resembles styles of modern shoes. Small (up to 1.5 cm high and 1 cm on the base) steatite objects were possibly used as buttons.



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227. A necklace from the burial #1200.

228. Model of the shoe from the burial #2168.



228

2.9 Bone artifacts

Bone cosmetic flacons.

Only one such bottle was found in the burial #421. It was made of an animal tubular bone, a hole on the bottom was tightly closed with a bone plate and the neck was decorated with a “faience” ring with two holes for attachment. In the bottle’s neck there was found a “cosmetic stick” with one thick-ended end and the other in the shape of a slightly curved “small spade”. Absolutely similar bone artifact was found in one grave in Bactria.

Bone pins were found both in male and female burials, in the latter ones twice as often. Most of them were placed by the corpses’ heads and were most probably used for hair. The majority of them were made of animal bones and carefully polished. As a rule one end was pointed and the other one was decorated with sculptured heads usually either in the form of a clasped fist or of an open palm with different finger combinations (Fig. 229-237). Beneath the heads there was always a simple scratched design in the shape of crawling and shaded bands or triangles.

Two bone pins were found in the burial #1799 by the face of the female corpse – one had four-ray head, and another – a head in a form of an open palm. Far more simple pins with conical heads and scratched rings below them were also found, and these pins directly resemble pins from Hissar (Schmidt, 1937, Pl. LXV) and Swat (Stacul, 1987, Fig. 41, C).

Ceremonial bone axes

These objects were excavated only in two graves. They were made of bones of big horned animals and had holes for fixing on a wooden handle (for example, in burial #220). Similar to metal axes the sockets of these were also placed in a slanted position in relation to the butt, a testimony to their ceremonial purpose (Fig. 238).

In general, both axes closely imitate the similar ones, found in Margiana previously (Sarianidi, 1998, Fig. 21, N. 1). Probably a bone axe of the same type was found in a grave in Swat (Stacul, 1997, Fig. 40, C).

A reference to a bone axe from Asia Minor (Hasek Hoyuk) is very important. Likewise the ceremonial axe from the BMAC its bush was also slantwise regarding to the blade (Behm-Blancke, 1992, Hasek-Hoyuk, Table XIV, N. 14).



229-231. Bone pins from the burials: #1816 (229), #1890 (230) and #1854 (231).

232-234. Bone pins from the burials: #1799 (232), #360 (233a), #292 (233b) and #193 (234).

235-237. Details of the bone pins from the burials: #360 (236), #292 (237) and #193 (235).

Ivory Items

One chamber grave (burial #575) had a fragment of four-sided ivory “fortune-teller’s” stick. Because of poor condition only two sides have engraved pictures of circles, straight and broken lines. Similar ivory “sticks” were found during excavations of the palace at Northern Gonur (Sarianidi, 1998, Fig. 21, N. 16-17) and in the BMAC layers of Altyn-Depe (A. Ganialin).

An ivory comb with a bent upper side, an exact copy of those found in Mesopotamia, was excavated from the burial #2228 (Fig. 239) and the burial #1898 yielded fragments of ivory “bars”.

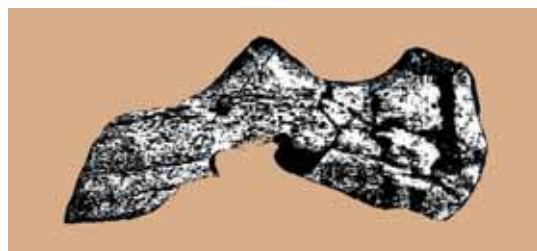
The grave #2900 yielded an ivory comb with a row of teeth only on one side of it. The comb was decorated with circle design and resembles a lot an analogical comb also with a circle design from Mohenjodaro (Marshall, 1931, Pl. CXXXII, N. 13). The comb differs from the one from the grave #2228 by its straight (not concave) back with a scratched design on it. Similar wooden (not bone) combs were also known in north Bactria (Askarov, 1977, Table XXI, 12, 13). The same grave contained a small ivory spoon (10 cm long) with a short handle that ended with a fist.

Also the grave #2900 yielded a rectangular lid (supposedly of a casket) the rims of which were decorated with vertical ivory triangles. On its lid were a sort of several bone “partitions” and in two central sections formed by them a cross like figure was inlaid. 50 bone “partitions”, 73 bone perforated triangles, 16 ivory “hearts” made up the mosaic panel. Besides, 23 small triangles and 42 squares were found in a chaotic position and probably all of these items once decorated the walls of the supposed casket.

Probably the ivory disks found in singular burials of the necropolis were also used for the decoration of similar caskets. They resemble the analogical disks from Hissar (Schmidt, 1937. Pl. LXII)

238. Ceremonial bone axe
from the burial #220
(L=17,0cm, h=5,0 cm).

239. Ivory comb from the
burial #2228.



238

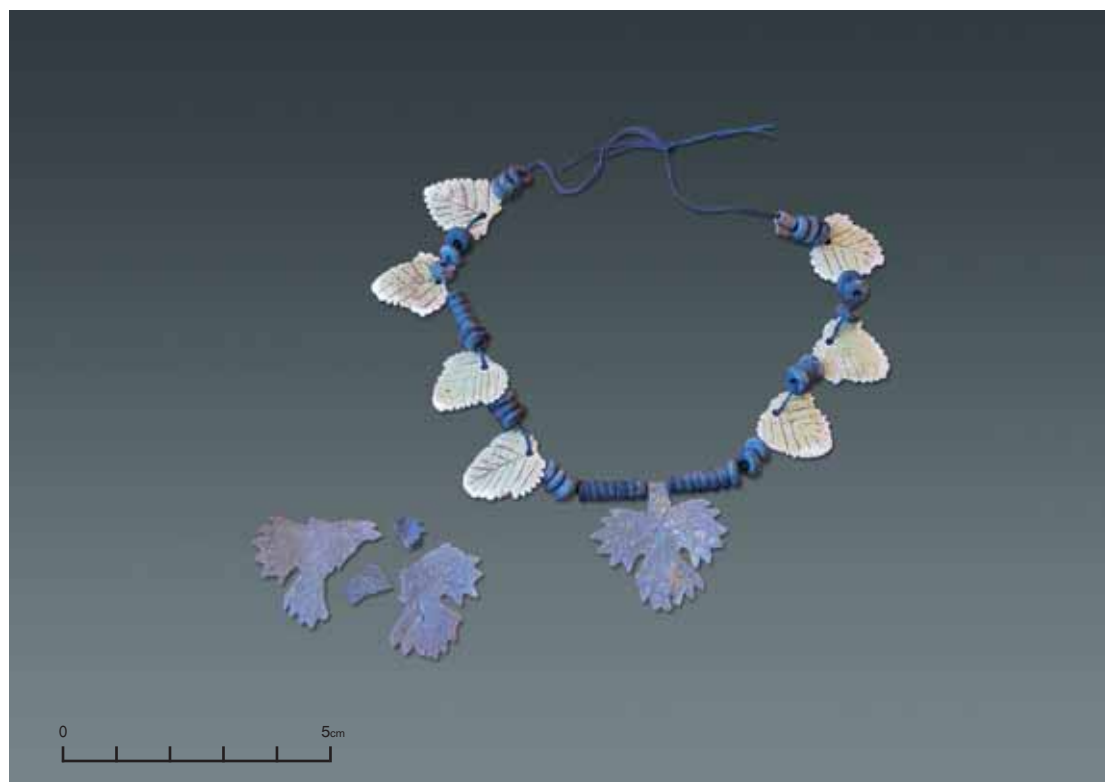


239

2.10. “Faience” objects

“Faience” objects were found in the Gonur necropolis rather often. The faience was usually white with blue stains and was used for producing seals and amulets as well as small decorations such as miniature beads, including biconical ones, small beads that were fastened three or four together (Fig. 240). Empty cones (diameter up to 2.5 centimeters and 1.5 centimeters high) were found with two opposite holes located on the base as well as toothed “small rings.” They could be fixed on dresses and closely resemble the same items of the Harappa civilization (Marchall, 1931, Pl. CXLV), where they were very popular.

Small faience items from graves of the Gonur necropolis have close parallels in burials of Swat (Stacul, 1987, Fig. 43, D-H).



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240. Faience decorations in a form of leaves from the burial #2827.



241

241. An eagle in a heraldic pose from the burial #57, (L=6,0 cm).

Possible use of the small (up to 1.5 centimeters high and 1 centimeter on the base) faience or steatite objects is not clear. They had hemispherical or conical forms with a hole on the reverse side and the latter could be easily used for sewing the object.

Burial #57 yielded a flat figurine of an eagle in a heraldic pose (Fig. 241) made of frit with blue stains that had holes on its wings for affixing. In general, small faience objects were found quite often in the graves of the necropolis.

At the Gonur necropolis there was a single finding of a pearl shell of a bivalve shellfish, originating outside Turkmenistan.

One may note that on the floor of one shaft grave a heap of poppy seeds was found. Biological definition was done in the USA thanks to the courtesy of Prof. K. Lamberg-Karlovsky. It is well known that mint leaves contain volatile oil, still used in medicine as a stimulant or, on the contrary, as a sedative.

2.11. Conclusions

In the end, one general conclusion can be drawn: most of the funeral offerings and personal decorations that were found in the Gonur necropolis had very little in common with the corresponding material of the Early Bronze Age of South Turkmenistan (Namazga IV-V). On the contrary, almost all of them showed different degrees of identity when compared with the corresponding material of East Iran, Elam, North Mesopotamia and Asia Minor. These analogies indicate the origin of the BMAC. The parallels with the Indus Valley (Harappan as well as post-Harappan cultures) appeared after the formation of the BMAC in Central Asia. Indirectly this idea is supported by the Harappan-type finds in Margiana as well as by the finds from the settlement of Shortugai, which was undoubtedly an advanced post of the Harappan civilization in Central Asia near Margiana and Bactria.

2.12 Social order of the ancient Margush country people

Based on different types of funeral constructions and various funeral offerings one can single out three social groups in the Margiana society. Among the funeral constructions three types of graves can be pointed out: 1) sepultures and cists – 4,06 percent 2) shaft graves – 85,40 percent, 3) ordinary pit burials – 10,54 percent.

Three categories of funeral offerings and personal decorations correspond to the three types of funeral constructions. The funeral gifts in chamber tombs and cists are the richest ones and as a rule they include different luxury items made of gold, silver and ivory as well as items of prestige (mace heads, seals and so on). This undoubtedly meant that the owners of these gifts belonged to the elite of the Margiana society.

Sometimes shaft graves almost as large as sepultures contained such pieces of jewelry as gold and silver earrings as well as cosmetic sets but even these rich gifts cannot be compared with those from chamber tombs and cists. Generally speaking one may say that shaft graves, chamber tombs and cists contained more or less identical sets of funeral gifts (Table XIV). But they were found more frequently in sepultures and cists and indicated the various positions held during the lifetime of the buried persons. Thus, for example, the subjects depicted on seals in shaft graves, as well as the material they were made of, were different from those found in

tombs. Thus, the seals in chambered tombs were mainly covered with silver and all the images on them reflected the idea of power and strength (a winged Goddess seated on a panther; a falcon torturing two snakes), which symbolized the power of the Margiana aristocracy. At the same time in shaft graves the seals were mainly made of copper-bronze and their images mostly bore magical characters (different geometrical designs, phytomorphic and zoomorphic subjects).

The same statement is true for the mace heads that were found in both types of graves. Here too we can see a certain difference between them. In chamber tombs they were mainly made of copper-bronze and more artistically produced (burial #555) while in shaft graves the majority of them were simple stone ones with unwrought surfaces. Based on this finding, it may be concluded that those who were buried in shaft graves belonged to the middle class of the Margiana society and could not be compared in richness and importance with the ruling “aristocratic” groups.

One may suspect that in Margiana society the secular power was separated from the religious one. The priests, in spite of all their importance, could not be compared with the local aristocracy in power and richness, and when the priests died they were buried in common shaft graves instead of in chambers or cists. Their funeral gifts showed symbols of a religious meaning and should not be regarded as luxury items.

In the simplest pit graves the dead had a minimum set of funeral gifts (with rare exception, just a few ceramic vessels), thus testifying to their status in the third and poorest class of Margiana society. In spite of the fact that practically all sepulchres and shaft tombs were plundered, the remnants of funeral gifts give the general idea of how the rich were buried there. Most of pit graves were not plundered probably because it was known that they had poor funeral offerings.

Based on observing the three types of burials, one may say that Margiana society consisted of: (1) the rich who were buried in cists and chambered tombs and made up about 4 percent of the population; (2) the middle class – approximately 85,5 percent; and (3) the poor – 10,5 percent. The rich children’s tombs can be used as additional proof of inherited social division in the Margiana society, independent of sex and age. The cost of funeral construction also reflects great social and economic differentiation among certain social classes: the chamber tombs and cists demanded far more material expenses compared to shaft graves and especially to pits. It is natural to suggest that every class had its own subdivisions that at the moment are could be defined only in a very general way.

In general the funeral offerings at the Gonur necropolis undoubtedly prove that the Margush society was a prosperous society that had highly artistic craftsmen whose art level corresponded to the demands of the advanced centers of the world.

Frequency of finding of different types of funeral gifts (Conditional units)

	Pits	Shaft graves	Chamber tombs
Gold items	1	20	100
Seals	1	2	5
Ceramic vessels	1	1,2	3

XIII Table

3

CHAPTER



INDO-IRANIANS AND A DOMESTIC HORSE

3.1. The Burial of a Horse

The problem of determining the place of origin of the domestic horse and the skill of horse-breeding is one of the most important issues in modern historiography of Indo-Europeans and specifically of Indo-Iranians. One can hardly find a map that would designate as the earliest centers of horse domestication such areas of ancient farming as Central Asia, Bactria or Margiana (Antony and Brown, 1991). And yet it was in these farming oases where according to the latest archaeological excavations the earliest domestication took place in the period from the end of the third up to the beginning of the second millennium B.C. or probably even during the last centuries of the third millennium B.C. At this point we shall ignore the problem of the earliest center of horse domestication in Eurasia and try to dwell upon the history of the earliest horse-breeding in Central Asia.

The ancient farming tribes appeared in Turkmenistan as early as the fifth or probably even in the sixth millennium B.C. But until the end of the third millennium B.C. we have no proof that the local tribes were familiar with horse-breeding. It should be added that singular bones of domestic horses were found at some other monuments of Margiana in the layers not earlier than the last centuries of the third millennium B.C. (Ermolova, 1986, p. 117) and that in future it is quite possible to find signs of the same sacrificial practice.

The horse appeared at the end of this period and was used only for ceremonial occasions. That was exactly the time when Turkmenia (and Margiana first of all) was colonized by the related Mesopotamian tribes of the BMAC from farther west. The first signs of a domesticated horse appeared right after the arrival of these tribes.

At about this particular time the local South Turkmenian tribes got to know the domestic horse. This is shown by the find of a terracotta horse head from Altyn Depe site from the BMAC layers (Sarianidi, 1973). It is characterized by high artistic skill: a delicately modelled muzzle with carefully cut mane and a conical sultan between the ears leave no doubt that we have an image of a domestic horse that was used only for ceremonial occasions and in no way for tilling or draught work.

The available material leads us to believe that up until the eve of the turn of the third to second millennium B.C. in ancient farming regions of Central Asia they used camels for draught work and bulls for tilling. Domestic donkeys and horses appeared in the last centuries of the third millennium B.C. at the time of the invasion of the BMAC tribes that most likely brought these animals.

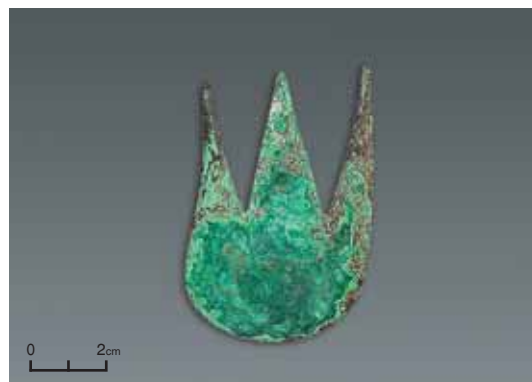
The finds in Bactria are even more impressive and leave no doubt that the migrant BMAC tribes intro-

duced the domestic horse. The best proofs of this are the Bactrian ceremonial axes with sculptured heads of horses from plundered tombs (Pittman, 1984, Fig. 32) as well as copper-bronze mace-heads of scepters of the same type as those from the tomb of a warrior at the Gonur necropolis.

In 2001 a tomb #2380 (Fig. 1) was excavated wherein among such military articles as a copper-bronze short sword and a cup there were two mace heads well known from the collection of Bactrian objects. The simpler of the two had a slightly curved and flattened form (Fig. 2). On the bottom it had a tooth-like ending with an inner pin for affixing it to a wooden handle. The second mace head was artistically done in the form of a horse protoma in a fairly realistic style (Fig. 3). The horse head had ears pointed forward, clearly modeled eyes and nostrils and a neatly combed mane. It should be noted that among Bactrian mace heads of this type there are individual ones in the form of a clenched fist or a firmly bent arm with a clenched fist, which depicted the idea of a strong and willful man. In the tomb there were also a rectangular copper-bronze plate that directly recalls a similar one from the tomb of a “noble person” from the Togolok-1 temple. These finds as well as a model of a “small staircase” wrapped in a cloth together with two mace heads indicate the high social position of the dead (Fig. 4).



1



2



3



4

1. Artifacts from the burial #2380.
2. A mace-head from the burial #2380.
3. A mace-head in a form of a horse protoma from the burial #2380.
4. A “stair-case” from the burial #2380.

5



5. *A burial of stallion from the necropolis.*

The horses had manes that were either carefully combed (Ligabue and Salvatori, 1988, Fig. 98) or accurately plaited (Sarianidi, 1986) which speaks in favour of the fact that a domesticated horse was most probably used for ceremonial occasions. In this respect a special place belongs to a beautiful ceremonial axe from Luristan (Amiet, 1977, Fig. 424) that was decorated by a horse protoma and was probably imported from Bactria.

Thus, we should mention that among the plundered tombs of Bactria there was a skeleton of a full-grown horse, a fact that may recall the horse burial at the Gonur necropolis. At the Gonur necropolis among the usual graves with human skeletons not far from the “tomb of a warrior” (#2380) there was a burial of a stallion (Fig. 5). The skeleton was preserved in part, which was clearly done on purpose. It lacked a head, rump and tail, and thus recalls a similar “burial of a stallion” at the Gonur necropolis that was also separated into three parts (a head, body and tail) (Sarianidi, 1989, Fig. 33).

The burial of a stallion at the Gonur necropolis leaves no doubt that this burial of a domesticated horse was a cult burial. The absent parts were cut off especially during ritual ceremonies. It is a known fact that horse sacrifices were typical of almost all Indo-European peoples. According to J. Mallory in this respect the most representative are the *asvamedha* rituals in India where they were usually connected with the inauguration of a ruler. For our subject it is very important to notice that for sacrifice they used young animals, which are calves. They cut them into parts (usually three) and devoted them to different deities that represented spirit, physical strength and wealth. Much later the recapitulation of this clearly Indo-European ritual were evident in the Roman “Octoberians” wherein corresponding parts of a sacrificed horse were devoted to bellicose Mars. This feast usually took place in September-October, the period that corresponded to the ancient Indian month of *asvayuja* (the month of the horse). The horse was cut into

three parts that included a head, a corpse and a tail (J. Mallory, 1981, p. 218). In the BMAC zone for the cult “burials of stallions” they always used only young animals (up to one year old) and some of them had their heads cut off, a fact which is not accidental. It is interesting to note that among Indo-Iranians fat cattle (calves) and fast horses (foals) served as an indication of wealth and sacrifices of the latter were considered the most valuable among the Indo-Aryans (Anthony, 1998, pp. 105-107).

At present in the whole system of the Near East only at Gonur there was found a ritual burial of a stallion separated into three parts that belonged to the period of time under discussion.

The archaeological material mentioned above testifies to the fact that the BMAC tribes had the ritual of sacrificing young animals (sheep, horses) which to a certain extent recalls the a-s-v-a-m-e-d-h-a ritual. Based on this we may conclude that these animals (and first of all the horse) played a very important role in the ancient society of Margiana and Bactria on the one hand and in the Indus Valley on the other, which finds its confirmation in the Rigveda. In the early Rigveda hymns horse sacrifices take a central place.

Scientists repeatedly noted that the ritual horse burials played a very important role among the ancient Iranian tribes. This fact is revealed by the Yashta of the Avesta where more than once the horse is mentioned as a sacrifice offered for the sake of kings and heroes. Also in the early Vedic hymns of the Rigveda the horse sacrifice was central among the other cult ceremonies. All this gives us additional evidence to consider the cult burials of the horse as a characteristic feature of ritual ceremonies of the Indo-Iranian tribes.

It is worth mentioning that the most ancient burial of a horse in Western Iran was found in Godin-Tepe (1500-1250 B.C.) and the burials in Marlik, Hasanlu, Baba Djan belonged to a later period.

At the time the Altyn Depe horse head was first excavated scholars had assumed that during the time of the Rigveda the horse was a rare exotic animal used during parades and ceremonial occasions of military aristocracy. This assumption was additionally supported by evidence unearthed at the Gonur necropolis where five signal trumpets (three copper-bronze ones, two silver and one faience one) were found.

Four of those five tombs (graves ##1758, 2003, 2060, 2142) had no skeletons and hence can be determined as cenotaphs. It is believed that the tombs belonged to people who died far from their motherland, probably warriors. To a certain extent this supposition is upheld by the content of their funeral sets which completely lacked female decorations and at the same time had weapons (flint and copper-bronze arrowheads, darts, and even short swords), an indication of a “male funeral set” (for more details see chapter 2). In other words when possible to detect, all the signal trumpets were found in male graves that possibly belonged to warriors.

Thus in the grave #2003 (a cenotaph) such signal trumpet was found in a typical “male funeral set” together with two ceramic cups, a clearly ceremonial axe and flint arrowheads. Grave #2142, another cenotaph, also plundered, had yielded three ceramic vessels, two flint arrowheads and a silver signal trumpet. Grave #2060, the third cenotaph, also destroyed, in addition to a ceramic vessel contained a copper-bronze signal trumpet that was clearly unnoticed by robbers. The trumpet was decorated by a sculptured human head with a complex hair-do and a large nose. Grave #1758, a huge plundered shaft tomb yielded a copper-bronze signal trumpet of a usual type found next to vessels and flint arrowheads. And finally in another plundered shaft tomb (grave #2511) for the first time there was found a gypsum/faience signal trumpet instead of a metal one. The trumpet was next to a stone flacon and a copper-bronze cup of a semi-spherical shape and separate animal bones. It is difficult to determine whether it was a “male” or “female” grave.

The finds described above suggest that most of the signal trumpets were found in cenotaphs and in

presumably male burials lead us to believe that these dead once belonged to high levels of the military aristocracy. This supposition is particularly upheld by the funeral set of the grave #2003 where a ceremonial copper-bronze axe was found, probably indicating a high position of his owner. Further proof is the plundered grave #77 that was excavated by the expedition of the Ligabue Study and Research Center. Besides a silver signal trumpet, the Italian archaeologists found such obviously prestige items as a “rod” or “scepter” and a “miniature column” (Rossi-Osmida, 2002, p. 86).

The first gold, silver and copper signal trumpets were found in Iranian Khorasan (the so-called Astrabad treasure) and Tepe Hissar and Shahdad. Quite a lot of them were excavated in the plundered tombs in south Bactria and at present all together there are known about 50 signal trumpets which became the object of a thorough and special study of Lawergren B. (Lawergren, in press). They look like almost exact copies of the Margiana samples, especially those decorated with sculptured heads with absolutely the same hairdo as the Margiana ones (Sarianidi, 2001, Pl. I, N. 9). Having analyzed all the known theories concerning the use of such trumpets the author comes to the conclusion that they were used during hunting. Yet, more real seems the supposition of R.Girshman who speaks about their use for the horse training and also for rearranging the troops order during their march. In connection with this, a well known “Kikkuli treatise” from Mitannia which contains rules for horse training, is also noteworthy. It used Indo-Iranian terminology and names of the Indo-Iranian and Aryan deities. A special place that a domestic horse occupied among the Margiana and Mitannian tribes speaks in favour of their historic and cultural identity.

It should be added that we have evidence that at least at the end of the second millennium B.C. in the BMAC zone there already existed two-wheeled chariots that were most probably used as military ones. This is shown by the fact that on the surface of the Namazga Depe site there were found singular terracotta models of single-axle chariots (Kuftin, 1956). Another proof of this statement is a well known cylinder seal with an image of a two-wheeled chariot from the Hissar III layer (Schmidt, 1937, Fig. 118). which is not only synchronous to the BMAC but belongs to the same culture. All these facts may prove that single-axle chariots (perhaps military ones) as well as a domesticated horse have appeared in Turkmenistan at the time when the Aryan tribes arrived there from the far west.

3.2. A Horse in Margiana

There is no doubt that the sculpted horse protoma on the ceremonial axes of Bactria as well as mace heads from Bactria and Margiana indicated the prestigious position that the dead once held in the elite society of Bactria and Margiana. In the whole Near East (except probably for Egypt) in the third millennium B.C. there was no such ancient society in which an image of the domesticated horse would have taken such a high position in art (Maringer, 1981, p. 180). Only the well-known silver vessel from Koban would be an exception, but it is still unclear whether its image of a horse belongs to a wild horse or a domesticated one. Evidently the scepter heads from Bactria and Margiana as well as ceremonial axes with horse protoma are the most ancient and most representative in the whole Near East. They indicate the exceptional and probably idolized role that this noble animal played in the BMAC tribes before their arrival in Central Asia.

Signal trumpets of a Margiana type were found in Bactria as well, and among their most ceremonial ones some items that were decorated with sculpted human heads can be singled out.

In the whole Near East the high position of the horse among the BMAC tribes can be compared only with the role it played in the ruling society of the Mitannian kingdom. The latter statement is demonstrated by the well-known “Kikkuli treatise” devoted to horse training where one can find Indo-Iranian terminology and names of Aryan deities. This does not seem to be a mere coincidence. On the contrary it reflects the fact that a horse played a very important role in the life of these two peoples. In spite of the distance between them their cultures were so close that in ancient written sources they were both mentioned under one common name – Aryans.

It was mentioned above that among the Aryans cult burials and sacrifices of a horse played a very important role: it is always mentioned among the animals offered to rulers and heroes (Boyce, 1989, p. 151). The same statement is true of a horse burial at the Gonur necropolis.

Besides Margiana horse burials were also found in North Pakistan in the Swat necropolis where they were determined to be cult burials (Antoni and Stacul, 1972). If one takes into consideration the almost completely identical basic funeral gifts at the necropolises of Gonur and Swat and also the chronological priority of Margiana then one can conclude that the Swat dead were those people of the BMAC who once dispersed in a general eastern direction and reached Swat.

It is quite possible that the BMAC tribes moved farther in the eastern direction and reached north India. The burials excavated at the necropolises in the Himalayas yielded horse corpses and harness (Agrawal et al., 1995, pp. 550-551) but their exact chronology is not quite clear. G. Stakul and other authors believe that the local ceramics are analogous to the Swat pottery. This allows us to assume that these necropolises appeared in the central Himalayas in the second millennium B.C. and belonged to the prior-Vedic Indo-Europeans who came here from the West (Agrawal et al., 1995).

Lately in Chitral there were found burials identical to Swat in which the dead were determined as Indo-Aryans who penetrated into North-Western Pakistan (Ali et al., 2002, p. 649). This find enlarges the area of Indo-Aryan settling in the Indian subcontinent.

It should also be noted that the latest excavations in the north of China in the basin of the Tarim river revealed traces of the Indo-European migration. In the second millennium B.C. the local tribes practiced burials in brick graves (Kwang-tzue Chen and F. Hiebert, 1995, p. 259, Fig. 7). An axe or scepter top found there was decorated with a sculpted head of a ram and had direct analogies with the ones from Central Asia and especially from Bactria as was rightly noted by E. Bunker (E. Bunker, 1998, p. 609).

In the unanimous opinion of scholars the Swat valley was the most convenient route of the Indo-Aryans (or whoever they were) to the Indus Valley. The parallels between the necropolises of Gonur and Swat lead one to believe that the most probable candidates for the role of Indo-Aryans were those BMAC tribes that started their migration from Central Asia and finally reached the Indus Valley. This supposition radically contradicts the very important misconception, which is most widely supported by the specialists both in Russian as well as in Western literature. According to it the Aryans were not farmers but nomads of the so-called Andronovo tribes. The authors of this idea believe that in Margiana (and probably in Bactria as well) there was quite a number of typical pastoral settlements of the Andronovo culture. These tribes are regarded as possible candidates for the role of first Indo-Aryans who penetrated the Indus Valley and put an end to the Harappan civilization.

The specialists (Lamberg-Karlovsky, 2002) needed archaeological proof for this idea and probably in this connection the Turkmen-Italian expedition in Margiana has made a special effort to find traces of tribes with steppe ceramics, pastoral tribes of the Andronovo culture. As a result the expedition has man-

aged to find in the ancient delta of the Murgab river (Cattani and Gento, 1998) 34 sites of this type with 336 ceramic fragments of the Andronovo culture (Cerasetti, 1998, p. 67). One wonders what methods were used to separate the Andronovo culture fragments from those of the local ancient farming one. Was it only the incised coarse ware or plain handmade (not wheeled) pottery as well? The fact of the matter is that the latter type of pottery is hard to separate from the kitchenware of the ancient farming sites of Margiana. However, it is probably not accidental that the same fragments of the incised coarse ware of the Andronovo culture are published in the works of different authors (Cattani, Cerasetti) though as it is stated the number of this category of pottery amounts to 300 fragments.

Almost all new-found fragments of the Andronovo pottery were found in the comparatively late oases of Margiana (Auchin, Togolok, Takhirbai) and the most ancient of them, the vessel from the Gonur temenos (Sarianidi, 1998, Fig. 11, N. 6) was found in the stratified layers on the floor of the room that was used for the preparation of the hallucinogenic drink of soma-haoma type.

Future studies will help in solving this problem but even now it is clear that three or four hundred of the Andronovo fragments cannot compare to many hundred thousand fragments of the local pottery of the ancient farming type.

Insignificant number of steppe ceramics in opposite the agricultural one in the Central Asia and especially in Margiana was truly marked by F. Hiebert (Hiebert, 2002). Author unjustified dates of the appearing of steppe ceramics here just by 2200-2000 B.C., referred to the discovery by him of two unornamented textile impressed ceramic fragments in the stratigraphical pit at North Gonur. However this pit was large ash-dust bin, which hadn't stratigraphical sequence.

The same way the author dates "early steppe ceramics" (which was found by me at Togolok-1) by 2000-1800 B.C. Although single, but doubtless iron artifacts were found at that site. (Here needs to mention, that the subscription to the Fig 15.6 of that article [Hiebet, 2002] – "shaded areas indicate location of steppe ceramics" – should be considered as a misunderstanding).

F. Hiebert determinates the vessel from Gonur "tower" as "tazabagyab" one, but this position doesn't found confirmation by Russian archaeologists (Prof. M. Kosarev, for example). Also dating of the Takhirbai period by 1800-1500 B.C. is represented, unjustified, because some early Achaemenid vessels there were at the South outskirts of Takhirbai-3.

In general it is necessary to draw attention to the periodisation of the Margiana history which author suggested just in 1994 and repeated many times and in this article too. This periodisation seems to be excessive categorical and needs factological evidences. F. Hiebert suggests that the main characteristic of the first period of Margiana history (2200-2000 B.C.) is the differences in its architectural traditions in comparison with foothills of South Turkmenistan. At the same degree that is true and to all other material.

Probable but not proved are affirmations that during 2200-2000 B.C. "involved the creation of a large-scale irrigation systems" and that BMAC "sharply different from the foothill cultures in their rather complex administrative systems," what contradicts with the real data.

The second period (2000-1800 B.C.) is characterized by the similarity of Bactria and Margiana (BMAC) and at the same time differences of both countries from the South Turkmenistan culture.

At least, during the third period (1800-1500 B.C.) the individual oases took on separate identities and the attributes of administrative apparatus and material richness disappeared (Hiebert, 2002, p. 241). However that suggestion was not confirmed by any facts.

The large-scale excavations at North Gonur with the documental precision show the belonging of all his archaeological layers – from 2200 till the end of the second millennium B.C. – to BMAC. It gives the large base to speak about artificial in a large part character of three periods scheme of Margiana history and to ask author to give a fundamental evidence of his periodisation.

At present one can definitely state that the contacts between the ancient farmers of Margiana and the neighbouring pastoral tribes of the Andronovo culture cannot be identified earlier than the middle of the second millennium B.C. Also, these contacts were not as intensive as they are claimed to be by the supporters of the Andronovo origin of Indo-Aryans. The available material shows that these were the usual cultural and economic contacts characteristic of the tribes that inhabited the same contact zone.

Here it should be noted that contrary to the available archaeological material many scholars still hold the erroneous opinion that the settled farming centers of Central Asia were conquered by the Andronovo nomads. A well known specialist in physical anthropology of Central Asia T. Kiatkina who payed a special attention to the study of an Andronovo component among the population of the southern areas of Central Asia could not find any traces of its presence there (Kiatkina, 1987, p. 52). It is worth mentioning that among about 3000 excavated graves of the Gonur necropolis (as well as in the nearby palace of the same period) there was found not a single Andronovo skull (anthropologists O. Babakov, N. Dubova, G. Rykushina). The same can be said about hundreds and thousands of ceramic vessels among which not a single ceramic fragment of Andronovo type was found.

3.3. Indo-Aryans Came from Here

As it was metioned, according to the unanimous opinon of specialists the Swat Valley in North Pakistan was the most convenient route for the Indo-Aryans (irrespective of whether they were BMAC farmers or Andronovo cattle breeders) to go into the Indus Valley. Based on the parallels mentioned above between the Gonur necropolis and the Swat graveyard – and also taking into consideration the chronological priority of the former site – we may conclude that the BMAC tribes were the most probable candidates to be identified as Indo-Aryans. These tribes moved slowly outside the limits of Central Asia, invaded the Indian subcontinent and established direct contacts with the tribes of the Harrapan civilization in the Indus Valley. In this respect the opinion of D. Mallory is interesting. He says, “The BMAC graves in Iran and Quetta-Mergar on the way to the Indus Valley determine BMAC as one of the candidates of the Indo-Iranian expansion.”

As it was already said this theory decisively contradicts the old (and still most popular) one that states that the Indo-Aryans were the Andronovo nomadic tribes and not the ancient farming ones. These nomadic tribes are believed to have come from the steppes of Central Asia and to have invaded the Indus Valley where they put an end to the Harrapan civilization.

In recent decades this old theory finds quite a number of new promoters. Among them is E. Kuzmina who gives new evidence in support of this theory in one of her latest articles published in Russian (Kuzmina, 2000) and in English (Kuzmina, 2001). It should be noted that foreign scholars accept her interpretation of the archaeological material found in Russian territory without any criticism since they cannot read the original Russian publications. This fact made it necessary to dwell upon the latest discoveries in Margiana in

order to understand what kind of contacts there existed between settled farmers and cattle breeders.

Indeed, over ten years ago it was stated that on the Indian subcontinent in the second millennium B.C. there were found no archaeological material that would testify to the presence of Andronovo tribes there (Sarianidi, 1989.a, p. 99). More recently the same statement was more convincingly supported by the example of Iran (Hiebert and Lamberg-Karlovsky, 1992; Hiebert, 1998, p. 153). This archaeological fact has a fundamental significance and nowadays should be accepted as axiomatic though it is still not clear whether this influence came from the territory of Central Asia (Hiebert, 1998, p. 153) or from Mesopotamia (Sarianidi, 1998). The latter seems more probable after the discovery of a cylinder seal with a Sumerian inscription in one of the graves at the Gonur necropolis (Sarianidi, 2001, Pl. 10, N. 7).

The promoters of the Indo-Aryan origin of the Andronovo tribes seem to overlook the complete absence of any traces of this culture on the Indian subcontinent. In support of the idea of the Indo-Aryan origin of the Andronovo tribes, J. Mallory has set forth the theory according to which the ancient farming oases of Bactria and Margiana were invaded by the Andronovo tribes that absorbed the achievements of local BMAC tribes and then brought their skills and technique to the Indus Valley (Mallory and Mair, 2000, p. 131). The corresponding proofs of E. Kuzmina lack convincing arguments and seem rather artificial (Kuzmina, 2001, p. 19).

She believes that horse-breeding appeared among the BMAC tribes under the direct influence of nomads of the Andronovo culture. Based on the latest material from the half-destroyed Zardcha Khalifa grave in the Zeravshan Valley, she rightly states, as well as the author of these excavations S. Bobomouloev (1999) that the funeral set belongs to the BMAC culture. She makes an exception for the “pin” with a top in the shape of a horse and psalii, which she determines as an item of the steppe nomadic tribes. She comes to the conclusion that horse-breeding and chariots were introduced to the BMAC zone from the territory of the South Urals (Sintashta), a statement which needs new facts to support it.

However, the fact is that the whole funeral set of the Zardcha-Khalifa without exception is a standard BMAC set of funeral offerings. It includes a “cosmetic stick” and not a pin since its blunt (and not sharp) end made in a drop-like shape was convenient for applying cosmetics on the body. Its top in the form of a horse being unknown in the Andronovo culture was rather popular in Bactria. It is true, psalii of this type have not been found in Margiana yet but the excavations of the Gonur temenos have yielded a bone plate with a center hole, that closely resembles psalii.

The Tugai site is the second one that serves as evidence that the Andronovo tribes belong to “the first wave” of the Indo-Aryans. Among its Andronovo pottery were found six ceramic fragments, which in one case are determined as wheel-made ware (Kuzmina, 2001, Fig. 3) and in the other as hand-made pottery (Kuzmina, 2000, p. 16). Regardless of this fact the shape of these six fragments is so simple (one could even say primitive) that it is really difficult to determine the technique of their production and hence their cultural provenance. Still, based on these six unimpressive fragments from Tugai and with practically no evidence from the Zardcha-Khalifa site, some very important conclusions were reached: “For the time being, the discovery of the Tugai settlement and Zardcha-Khalifa grave makes it possible to synchronize the farming sites of the Sarazm-IV type and the BMAC of the Djarkutan period with the early Andronovo sites and postulate the migration of some tribal groups from the Urals to the South that brought along the skills of metallurgy, horse-breeding and psalii for harnessing horses to chariots” (Kuzmina, 2000, p. 18).

It is not quite clear why the “metallurgy skills” were introduced by the Andronovo tribes since met-

allurgy was known in the territory of Turkmenistan from the turn of the fifth to the fourth millennium B.C. The funeral gifts of Margiana already at the end of the third millennium B.C. demonstrated real masterpieces of artistically made bronze items equal to the best specimen of the advanced world centers of the time. There are no direct facts that would prove the spread of metalurgic skills in connection with the invasion of the Andronovo tribes. The horse-breeding traditions of BMAC are rooted in the advanced centers of Near East rather than in the nomadic steppe.

I. Dyakonov believed that “the horse was known in the Near East not only through the whole of the third millennium B.C. but even earlier than that. This is shown by the Sumerian logogram “mountain donkey” (Dyakonov, 1970, p. 41). Opposing this opinion E. Kuzmina, underestimates the role of horse-breeding in the ancient East and states that it played no role there (Kuzmina, 2000, p. 14). At the same time without any real evidence she exaggerates its role among the nomads and believes that these were the tribes that brought the horse to the ancient farming centers of the East. And yet horseback riders, according to P. M. Mecquenem, were known in Suza in the thirty-fourth century B.C. (Mecquenem, 1934, Fig. 25, 38) and in the early Akkadian period they were known in Mesopotamia (Littauer and Cronwell, 1979, pp. 35, 41). The earliest known horse in West Asia (J. Mallory, 1991, p. 39) comes from Tal-i Iblis in Iran (3500 B.C.) and Selenkayeh in Syria (2400-2000 B.C.).

The first generalized image of a rider was recorded on a seal that possibly belonged to the ED-III period while a presumable harness of the Akkadian period was found in Tell Madhur (Mesopotamia), though one should note that the paleozoological determination was not done (Littauer, Crowell, 1979, p. 44).

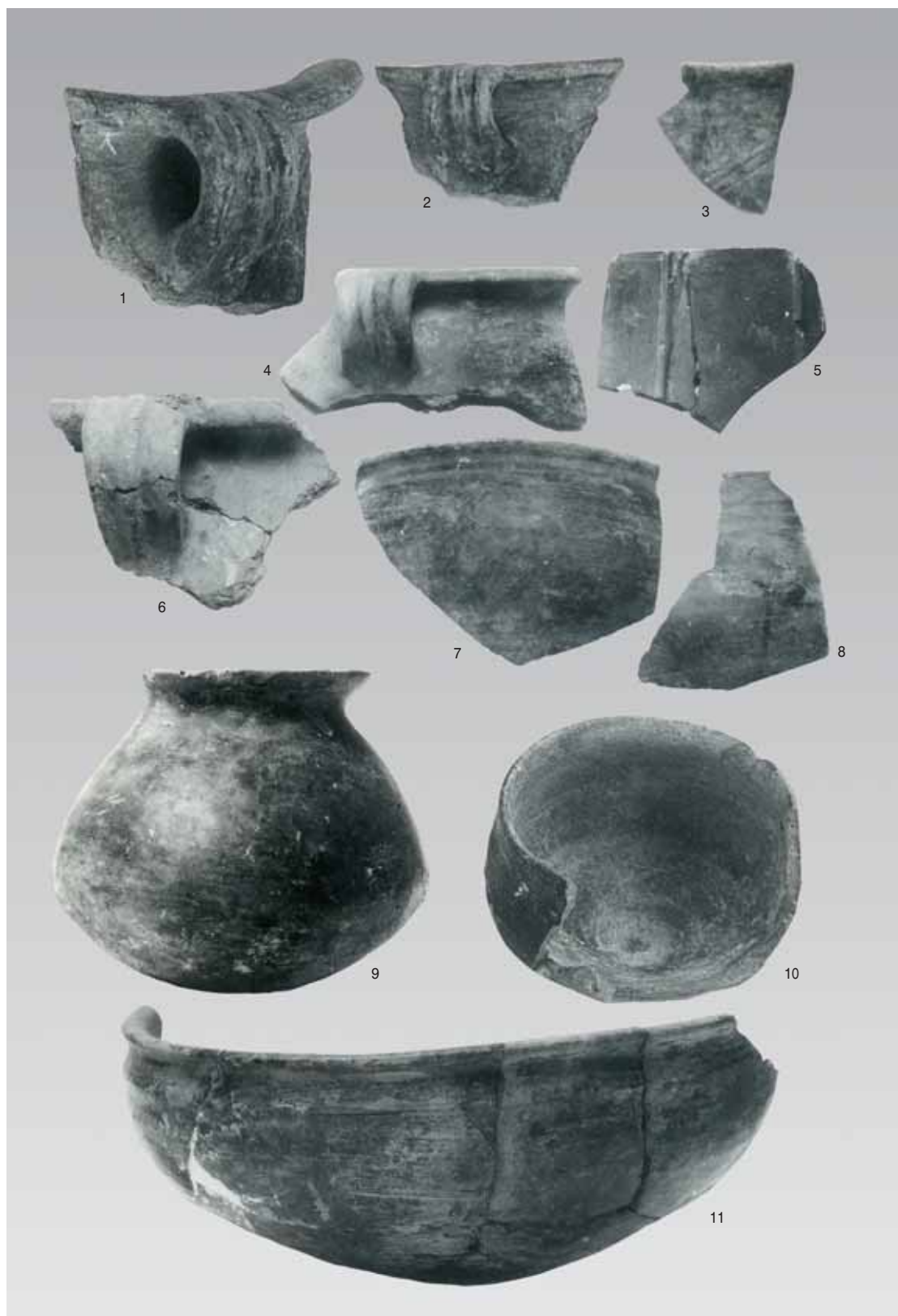
As is clear a domesticated horse was known in Mesopotamia as early as the middle of the third millennium B.C. and from there it was introduced into Central Asia including the ancient farming oases of Bactria and Margiana at the end of the third millennium B.C.

The most characteristic paleoethnographic feature of Andronovo pottery is its hand-made production. This is considered easily the most important evidence in favour of the Indo-Aryan origin of the Andronovo culture. But the same paleoethnographic feature is equally characteristic for another archaeological culture of settled farming tribes rather than of nomadic ones. This is the so called “Yaz-I culture” which is ascribed to the early Iron period and is spread throughout Margiana (Yaz Depe), Bactria (Tillya Tepe, Kuchuk Tepe), Afghanistan (Nadi Aly, Mundigak) and Baluchistan (Pirak). This rather mysterious culture was discovered a hundred years ago and still neither its origin nor ethnocultural provenance can be satisfactorily explained (Sarianidi, 1989; Sarianidi, 1998, pp. 162-166).

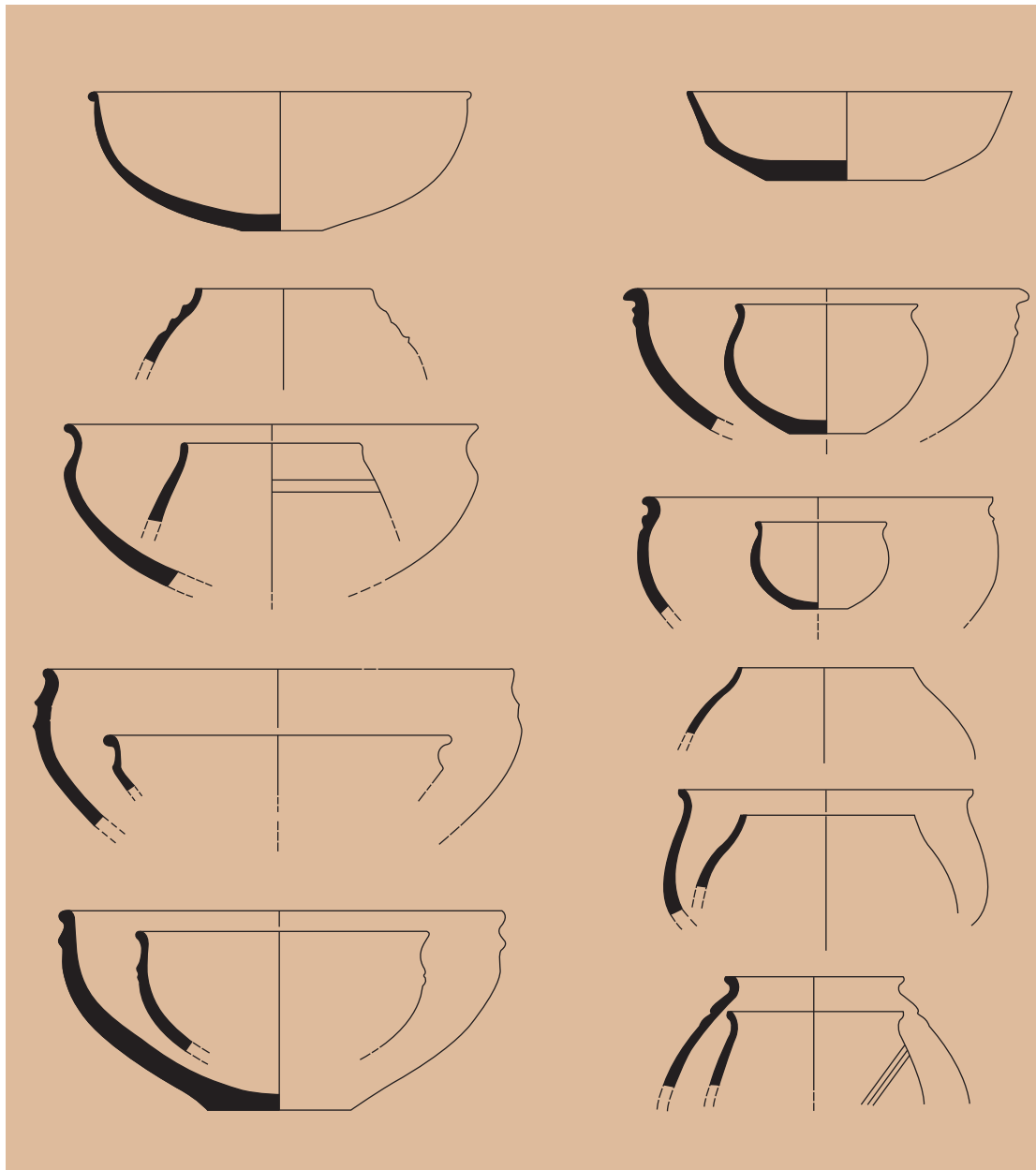
The characteristic feature of all these sites is not only the hand-made painted pottery but also monumental structures used as palaces and temples and built on top of especially elevated brick platforms. Such structures were found at the Yaz Depe site in Margiana, Tillya Tepe and Kuchuk Tepe in Bactria and Nadi Ali in South Afghanistan, a fact that leaves little doubt in their common origin and close links.

The numerous attempts to determine the center where the “Yaz-I culture” could have originated did not help the scientists come to a unanimous answer on this problem and still represents one of the intriguing mysteries of Central Asian archaeology (Frankfort, 2000).

At the same time it should be noted that in the ceramic complex of Tillya Tepe there is a small and highly representative group of hand-made black polished pottery which is made up mostly of deep open plates decorated with sculpted circles along the rim (or in some cases with short slantwise marks). In addition it has goblets (without legs, some of them with scratched ornamentation) and simple pots



6. *Black polished pottery complex of the Tillya Tepe.*



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with corrugated handles and rims turned sharply out and down (Sarianidi, 1989, Tables XLIX-LIV). The shape and technique of the production of this pottery differs decidedly from those of the BMAC clearly revealing its “imported” character (Fig. 6, 7).

A similar but less impressive group of gray ceramics was found on the Yaz-Depe site in Margiana and gives one the impression that it was part of a dying tradition of black polished pottery that probably reflects a late stage of the black polished pottery complex of Tillya Tepe.

Closer to the Tillya Tepe pottery seems to be the black polished ware from the second layer of Pirak and one might assume that these are two branches from the same root. In the Indian subcontinent this ceramic group of the second layer of Pirak is definitely determined as the “imported” one (Jarrige and

Santoni, 1979, pp. 409-410). The same can be equally applied to the Yaz-I culture in Margiana and Tillya in Bactria (Sarianidi, 1989).

It is quite obvious that the solving of the problem of the origin of the black polished ware of Pirak second, Tillya second and Yaz-Depe I could have helped in solving the general problem of the origin of this culture. At the present stage we can only state that the complex of the black polished (gray) pottery under discussion is comparatively close to the pottery of the sites from the Priurm area and Iranian Azerbaijan of the early Iron Age of the Geoy Tepe "A" type (Burton-Brown, 1948, Fig. 35, 36, 38). This certainly does not help in solving the problem of the origin of this culture but still is important since indirectly it points out the route of migration of the Western Iranian tribes in a general eastern direction. True, this supposition needs additional proof but it is rather characteristic that the intermediate point between the Priurm and Central Asian settlements is occupied by settlements of the Atrek Valley with its close and almost identical archaeological material.

It should be added that in the Indian subcontinent (Pirak, Djungal culture) as well as in Central Asia (Tillya, Yaz-Depe) the complex of the black polished and gray pottery is directly linked with the appearance of the first iron objects in these areas, a fact which according to the correct opinion of Jarrige and Santoni (1979, pp. 394-395), was connected with tribal migration. Now this list of sites can be increased by adding such sites as Tillya Tepe and Mundigak in Afghanistan, Yaz-Depe and Kuchuk Tepe in Bactria and Margiana (Sarianidi, 1989).

It is not accidental that settlements of the Yaz-I culture were located next to the ancient farming sites of the BMAC type. Thus the farthest west of the known sites are the Atrek sites of the "Yaz-I culture" which are located next to the ancient farming settlements of Tepe Djan (Riccardi, 1980, pp. 58-59), Yaz-Depe and BMAC in Margiana, Tillya-Tepe and BMAC in south Bactria and Kuchuk Tepe and BMAC in north Bactria. And finally, in southern Afghanistan these are Nad-i-Ali and Godari Shakh and Pirak and Mergar-Sibri in Baluchistan with Mundigak as an intermediate point between them.

These locations are characteristic of the BMAC tribes and the culture of painted pottery in the vast territory from Iran to the Indian subcontinent is not at all accidental and most probably testifies to the fact that there existed two routes of migration that originated in one common center (possibly the modern Kurdistan and Priurm areas). The first wave of migration (BMAC) is dated to the last centuries of the third millennium B.C. while the second one (The Yaz-I culture) took place almost a hundred years later. But they both moved along the same route and in the same common eastern direction until they reached the fertile oases of Central Asia, that is from the Atrek oasis to Bactria and Margiana and from Nad-i-Ali to Pirak which is practically in the Indian subcontinent.

Likewise their ancient predecessors, the tribes of both cultures, peacefully coexisted in this new place. But already sometime in the beginning of the first millennium B.C. the tribes of the painted pottery culture of Yaz-I gradually assimilated with the local population of the BMAC and little by little lost their paleoethnographic features and characteristics. This supposition can be shown by the gradual disappearance of painted pottery, which by this time was almost all wheel-made and had also lost the paleoethnographic markings of the Yaz-I tribes.

Some other specifically archaeological signs can serve as additional direct evidence for our supposition. Thus, not only at the sites of painted pottery of the early Iron Age but in the BMAC zone at the Mirshade settlement, stone objects that looked like highly polished "bobbins" were found (Sarianidi, 1989, Pl. LVIII).

Other objects found in Pirak as well as at Tillya Tepe (Sarianidi, 1989, Pl. III, N. 5-10) are small copper-bronze strainers with numerous holes, which recently were also found in grave #2460 at the Gonur necropolis. We conclude that they were characteristic of different cultural and historical settlements. The same type of objects but in a much larger amount were found in the Bronze Age graves of the first half of the second millennium B.C. in Syria, Anatolia, Palestine and Iraq. As a rule they were found in graves (as was the case in Gonur) inside big vessels. It is believed that they were used for straining small plant particles from liquid such as wine or beer (Oats et al., 1997, p. 116; Mallowan, 1936, p. 99, Pl. XIV). It is significant that in Central Asia so far such strainers were found at the sites with painted pottery of the early Iron Age and now the Gonur find testifies to their much wider dispersal.

It is quite evident that materials and studies mentioned above are not enough to solve the problem of the origin of Indo-Aryans but they help to set new directions in the solving of this old problem. And though at present we cannot be sure where Indo-Aryans came from we should cross off from the list of possible candidates the steppe nomadic tribes of the Andronovo type since they have never been either in the Indus Valley or the Iranian plateau and for this reason cannot claim the role of Indo-Aryans.

In light of the find of a tube-strainer at the Gonur necropolis, the excavation of identical tube-strainers in Tell Brack palace, the largest site of north Mesopotamia (Oats et al., 1997, p. 116, Fig. 235) acquires a special importance. Besides the graves with these strainers (Mallowan, 1937, Fig. 21-22) the excavations of Tell Brack have yielded an undoubtedly Mitannian temple with an altar that has the shape of a "blind window" that was so characteristic of the altars of the palace and the fire temple at North Gonur (Sarianidi, 1998, Fig. 63). Also in Tell Brack there were found fragments of ritual vessels with sculptured animal figures along the rims direct analogous to the cult vessels of BMAC.

Based on the fact that the Mitannian ruling elite belonged to Indo-Iranians (or more precisely to Indo-Aryans) it would be quite appropriate to compare the parallels mentioned above, especially the similarity of the altars in the temples of Tell Brak and Gonur. One might rightly assume their common historical and cultural provenance. It is a fact that cult beliefs, objects and especially religious buildings remain unchanged for long periods of time and this conservatism testifies to the strength of inherited cult traditions. In our case the identical type of altars in Tell Brack and Gonur most probably testifies to similar religious beliefs and cult ceremonies. This in turn suggests that the BMAC tribes were Indo-Aryans who started from the Near East and finally reached the Indus Valley via Central Asia. In this connection Swat can be looked upon as the most probable intermediate point on the route of Indo-Aryan migration from Central Asia to the Indus Valley. Certainly the Swat material has clear parallels with that of the BMAC. In other words from the point of view of archaeology it seems quite possible that the BMAC tribes were the first Indo-Aryan migration wave which reached the banks of the Indus river and settled there and then established close contacts with the Harappan civilization.

The second migration wave is documented by the painted pottery of the early Iron Age (Yaz-I culture, sites of the Pirak type) which some philologists (E. Grantovsky and G. Bongard-Levin) would like to identify with Indo-Iranians. In this connection it is worth mentioning that some specialists think that in the Indian subcontinent candidates for Indo-Aryans could be tribes of "painted culture of copper treasures" (2000-1400 B.C.) though their anthropological type does not differ from that of the local people. The same supposition is set forth for the "cemetery H culture" though it dates back to the period after the decline of the Harappan civilization.

4

CHAPTER

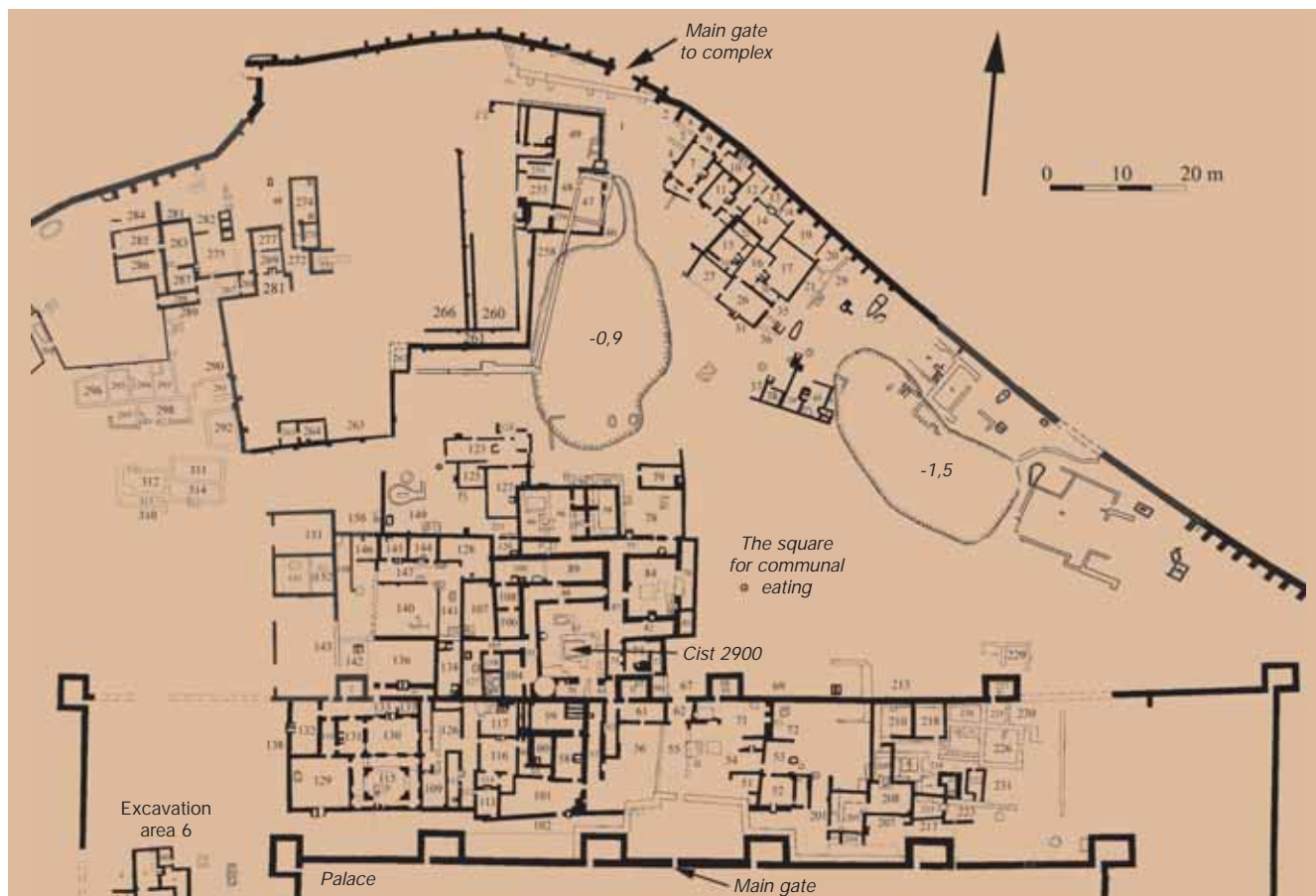


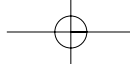
NEW EXCAVATIONS AT THE NORTH GONUR AND HISTORICAL PERSPECTIVES

4.1. "Communal Eating"

After the works at the Gonur necropolis were completed, in 2002 the excavations were resumed at the North Gonur in the section that was located right in front of the central northern facade of the palace (Area 5).

It was discovered that a monumental construction sided with the northern façade of the palace. This was most probably a temple dedicated to the preparation of the hallucinogenic drink of the Soma-Haoma type (Fig. 1). This supposition is based not only on the planning of the construction but also on





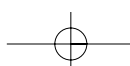
a characteristic set of findings among which there were stone grinders, ceramic strainers and supporters, in other words, all these items were connected with the preparation of this drink (Fig. 2).

The central part of the temple was occupied by two vast “courtyards surrounded by corridors” with two ceremonial entrances. They were decorated with rabbed corners, which are believed to be a decorative element used in the especially official rooms. Next to it was a small but very important room where at one of the walls there was a brick platform with big vessels dug into it and fixed with it by a thick gypsum layer. These architectural blocks are characteristic for the so called “white rooms” of the Margiana temples (Gonur temenos, Togolok-1 and Togolok-21) that were indisputably connected with the preparation of the holy hallucinogenic drink. The cult ceremonies dedicated to this drink took place in the “courtyards surrounded by corridors” (Sarianidi, 1994).

The excavated rooms yielded small and carefully made rectangular “hearths” that were burnt inside and which sometimes were placed on low (2-3 layers of brick) platforms. Similar to the “hearths” that were found in the Alallakh temples and determined as real altars (Wooley, 1955, PLX) these too could have served the same purpose. Besides sacrifices to Gods ancient Iranians made regular sacrifices to the fire when they put pieces of meat right on burning coals. “In Zoroastrian Iran, it seems, no blood sacrifice was ever made without the fire receiving this allotted portion, and the practice undoubtedly goes back far into pagan times” (Boyce, 1989, p. 153). The rectangular hearths-altars on brick platforms mentioned above seem to serve this very purpose. One of them has preserved small carbonized bones. It is worth mentioning that outside the Gonur temenos very close to it was a “hill of ashes” up to 3 m high that consisted only of black ashes, animal bones and ceramic fragments. The western section of Gonur (outside the surrounding wall of the “ruler’s residence”) was fully covered with a layer of ashes of the same kind. It seems most possible that in both cases these hills were formed of ashes from the hearths-altars mentioned above. All these facts may testify to the widely practiced sacrifices to the fire used among ancient people of Margush. As an additional proof to this supposition were the brick containers located next to the “hearths” and filled up with white ashes. They resembled the ones from the nearby fire temple where they were determined as “containers of sacred ashes”.



1. Plan of the Area 5.
2. Ceramic stays from the Area 5.



Besides, in the central rooms and especially in the square of the “courtyard surrounded by corridors” there was found quite a number of small pits filled with carbonized animal bones. One may suggest that these small pits had a special rather than every day life purpose since they had no traces of fire on the inside surface. Absolutely analogous pits (of a bigger size) with carbonized animal bones were found in temples of Avaris (Egypt). Such pits were found only in temples and sacred places and never in ordinary rooms. Quite possible such strongly carbonized animal bones were remains of sacrifices to the fire when pieces of meat with bones were placed right into the flame of the altar of fire.

Almost all the walls of the temple were built right on the virgin soil which fact proves that it was either constructed right after the building of the palace was completed or simultaneously to it. In other words we may suggest that the palace and the temple were built by the first colonists who inhabited the delta of the Murgab river. Their “architectural memory” saved the know-how of the cult buildings construction and in their new country they continued the same building traditions. In this case one may suggest that the first inhabitants of the Murgab delta following the memory of their old traditions continued to build temples devoted separately to the drink of the Soma-Haoma type and to the fire. Later on, as it is witnessed by the temples of the Gonur temenos and Togolok-21 both cults were united in one temple.

About 120 meters away from the northern façade of the Gonur palace there was found a brick wall round in the plan (Fig. 3). The coal that was taken from the hearth made underneath of this wall in the virgin soil

gave the date 3930 ± 70 B.P. (Hel.-4618 – See Appendix 4 of present book). Being only not more than 1,5 m wide it obviously couldn't be used as a defensive wall of the ancient city of Gonur and served only as a kind of a partition wall that separated the sacred section from the rest houses and living quarters of common people. In other words it was a kind of a reservation that included a central palace surrounded with temples. To a certain extent this planning can be compared with the one of the ancient town of Mari with its palace and temples. Choga Zambil in Elam is the most representative monument of the second millennium B.C. The main difference between this monument and those of Gonur and Mari was that the first had a zikkurat while the latter had palaces surrounded by wall and passages (Roaf, 1999).

3. North part of the encircling wall of the North Gonur (Spring 2002).



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So, the general plan of the Gonur represented a “reservation zone” that looked like a sacred place with a palace in the center and temples sided with each of its outside facades. This huge complex of a palace and temples occupied the square of over 5 hectares and was surrounded with a blind wall with passages.

One passage with a brick laid surface was located just across the central entrance to the palace. On both sides from this passage there were ordinary rooms with the inside walls very carefully plastered. Some of these rooms had double hearths always located in the eastern wall. It seems logical to suppose that they were used for cooking sacrificial food (meat, most likely). As a rule the “furnaces” in these hearths were smaller and deeper and more strongly burnt inside than the “burners” (Fig. 4-6).

Besides this type of double hearths there were much bigger pear-shaped ones with a low partition wall that divided the hearth in two unequal parts found (Fig. 7). The bigger and deeper part was used as a “furnace” while the smaller one as a “burner”. Through several horizontal round holes in the partition wall the heat from the “furnace” got inside the “burner” where the meat was cooked. Both types of hearths were constructed in such a way that the flame could not touch the meat and prevented it from carbonizing.

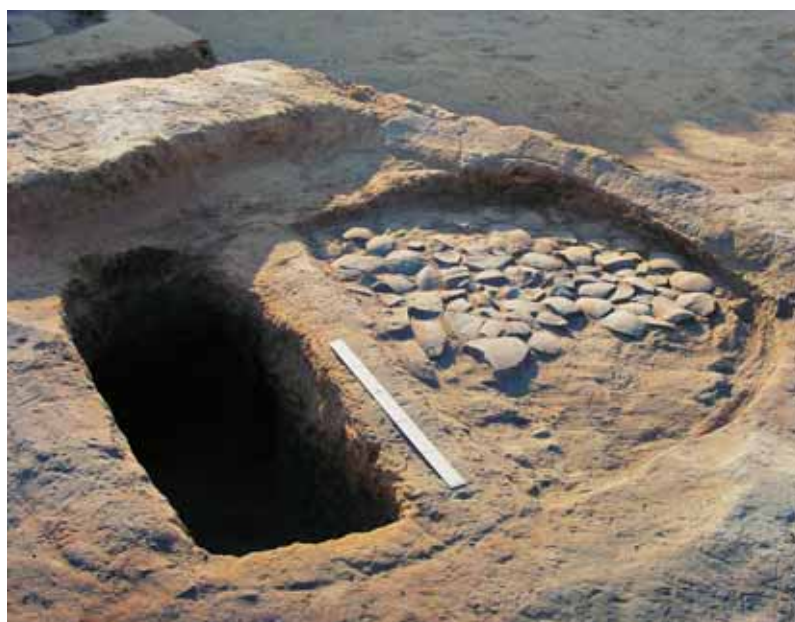
Yet, in hearths described above (either double or pear-shaped) the furnaces were constructed exactly in such a way that the meat could be only cooked (not carbonized) which didn't correspond to these requirements. It should be noted that in the small hearths of the first type the bones of sheep and goats were found while the bigger pear-shaped ones yielded



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mostly the bones of neat cattle including skulls of bulls or cows. In spite of the absence of direct proofs we can still suppose that these were parts of animals used as sacrifice during “communal eatings”.

In the area between this complex with hearths and the temple of cult libations mentioned above there was excavated a vast free square fully filled with animal bones and food remains. It is quite remarkable that not a single brick structure or an altar was found there. The food remains were alternated with horizontal sand layers, which were probably laid for the preservation of bones from decomposition. To some extent this reminds us of the analogical measures that the Palestinian essays undertook during their communal eatings; they: “...buried the bones in order to preserve them from the dogs that could take them away and eat” (Magness, 2002, p. 120).

4. Double-hearth at the Area 5, room #7.

5. Double-hearth at the Area 5, room #11.

6. Double-hearth at the Area 5, room #15.



7. Pear-shaped hearth in the room 40 at the Area 5.

8. Burials of a child (#2920) and a dog (#2872) at the North part of the encircling wall of the North Gonur.

9. Aerial photograph of the Palace and Temenos.

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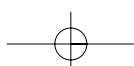
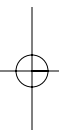
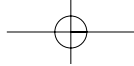
In Iran (*i z a*) as well as in India (*i d a*) the Zoroastrians followed a ritual when the sacrificed meal preliminary separated into seven portions was distributed among the worshippers and eaten during the “communal eatings”. An essential part of all rituals is... “the communal eating of the *i d a* , that is an especial part of the sacrificial food regarded as the ‘blessing of the sacrifice’” (Boyce M.).

It seems logical to suppose that the excavated Area 5 was that very place where ritual “communal eatings” could take place. It is very significant that the square was located in the center and that on the north there were located furnaces for preparing sacrificial meat and on the south was a small temple of Homa-Saoma where the hallucinogenic drink was prepared.

According to Humbach “The Avestan word *i z a* etimologically identical with Vedic *i d a / i z a* appears to be used in this same way by Zoroaster himself.” He believes that bloody sacrifices (meat) together with ritual libations (Soma) can symbolize the death of a God and that this act can be associated with the “Christian ritual of sacrifice”. However, this was doubted by M.Boyce who thinks that ... “The *i d a* is the divine power present in the food when eating; there is no question of the death and eating of a divinity” (Boyce, 1989, p. 165).

From a passage in the surrounding wall one could get inside the palace through the area of “communal eatings” and a special passage. This can be interpreted as an additional sign of the fact that the planning of the northern complex of Area 5 was carefully thought of and that there was a close link between the palace, temple and surrounding wall of the reservation.

After the temple and square of the “communal eatings” lost their original purpose they were first reoccupied by the poor, and then neglected completely and finally a small graveyard appeared on this place. Its graves were cut through the defensive wall as well as the walls of former rooms (Fig. 8).



4.2. A Burial of Noble Warrior

During the earlier excavations it was found out that over 200 burials were made in the ruins of the North Gonur palace and of those eighty percent contained children's corpses. The rest were usual pit burials with corpses mainly north-oriented and placed in a crouched position. Also three brick cists were found on the ground level in the ruins of the former palace that was turned into a graveyard. Like the cists on the Gonur necropolis these also belonged to the people who during their lifetime belonged to a high level of Margiana society. This is evidenced by a bronze mace-head found in the cist (Sarianidi, 1998, Fig. 24, N. 13).

The Margiana tribes seemed to have a special place for burying babies and children. They were buried either in simple pits or inside large vessels. Contrary to the Gonur necropolis here the grown-ups were covered with the earth (traditional way of burial in South Turkmenistan) and these tombs belonged to the tribes that migrated from the mountainous areas of the Kopet Dagh. Unlike the Gonur necropolis this graveyard showed no traces of plunder, which can be a sign of its later origin.

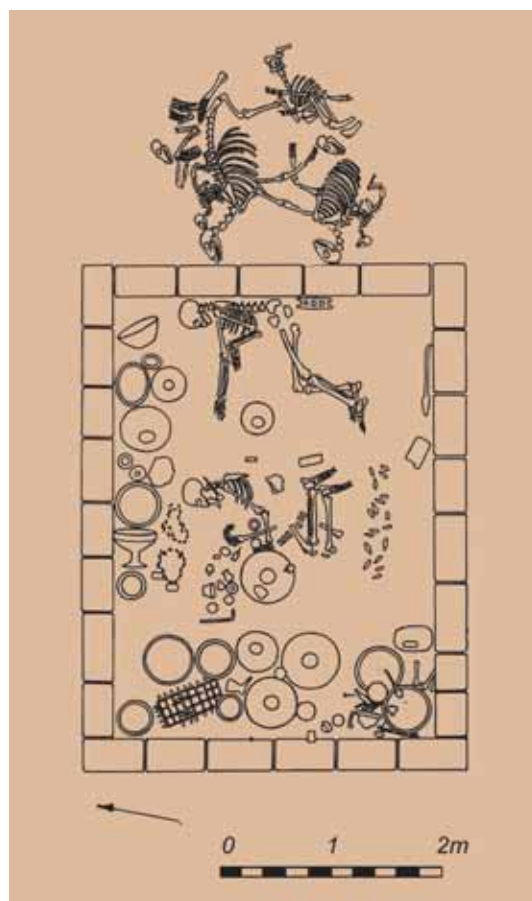
Area 5 at the North Gonur also yielded small graves that were dated to the final period in the life of the place. On its western outskirt right behind the former by-pass wall of the ruler's site there were found several graves of this period. Many of these burials repeat the types used at the necropolis such as shaft and pit graves as well as cists. These late burials were simplified and for example the side chambers in the shaft tombs were not as deep as they ought to be, the bricks were simply placed on top of the corpse instead of being used for closing the entrance to chambers (graves ##2857, 2866 and other).

Intact grave #2845 (near the west part of the encircling wall) stands out among these late burials. It was made in the shape of a rectangular cist with an inner partition along the long line. In one of two parts there was a lamb's skeleton (up to one year of age) on its right side and a north oriented head. Along the northern wall of the cist was a brick "pillow" where funeral offerings including 16 ceramic vessels were placed. In





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the niche in the center of the northern wall was a red clay vase on a high pedestal. Besides the pottery the grave yielded three flint arrowheads, a miniature copper-bronze knife, a bone pin, fragments of a copper pin, stone “polisher”, fragments of a curved lead plate with perforations and a round stone (Fig. 10).

To a certain extent this grave reminds of a “lamb’s burial” that was earlier excavated at the northern wall of the palace: both graves contained miniature knives that apparently had a ritual (not an every day life) purpose.

In the Area 5, an adult man (30-35 years old) who was heavy ill and looked like a hunchback, was buried inside a hearth with strongly burnt walls (#2871; see Appendix 2). No funeral offerings accompanied him. In another pit grave (#2872) made inside the destroyed wall there was preserved an intact skeleton of a headless dog in a right anatomical order. This burial can be compared with those of headless animals found in Margiana.

We can clearly trace the continuation of old burial traditions only on this late stage of life on the site of the north Gonur the funeral offerings were so poor that can’t be compared with the rich funeral sets of the Gonur necropolis.

Among the ordinary burials of this graveyard a brick tomb #2900 (Fig. 11-12) attracts one’s attention. It clearly belonged to a person of high rank who lived in the period when Gonur was almost completely neglected, when its inhabitants moved to new places and the remainders were very poor. The C 14 dating of samples from this burial is: 3350 + 70 B.P. or 1600 B.C. cal. (See Appendix 4).

The deads were buried in the central part of the former temple where they made a rectangular underground cist made of brick and that missed any plaster on its inner walls (it was 3 by 4 meter and dug on

10. Artifacts from the burial #2845.

11. Grave #2900 at the Area 5. General view during the excavations.

12. Grave #2900 at the Area 5. Scheme of the grave.

the depth of 1 m from the surface level). Before the construction of this tomb they made a huge “bedding” of a thick layer of corn (up to 10 cm thick) and since the bottom level of the wall of the grave in some places cut through this layer one may suggest that this layer had some special purpose.

On the floor of the cist there were found two skeletons. Centrally located was a male skeleton of a person more than 60 years old (this as well as the rest of anthropological determinations belong to N. Dubova). The skeleton was in the right anatomical order in a crouched position, on the right side, with north oriented head and hands in front of the face. Many years before the death the man was injured by some sharp object (perhaps, in a military battle) and as a result his frontal bone and the right cheek bone were badly cut.

Under the male skeleton was a lamb skeleton (up to 1 year old) in a right anatomical position. It testifies that a man and a lamb were apparently buried together, one above another.

At the eastern wall of the tomb was the second skeleton of a woman (over 60 years old) in the right anatomical position, crouched, on the right side, with a north oriented head and an arm stretched in the direction of the male skeleton.

All the funeral offerings were placed near the male skeleton (Fig. 13-17, 19-21) while the woman had none of them. These offerings were mainly placed near the head and consisted of 27 ceramic vessels and various copper-bronze objects including: one cosmetic flacon with an applicator inside of it (Fig. 22), 6 vessels of different shapes (including a sooty cattle (Fig. 24), that probably the dead used during his military marches), two mace-heads supposedly (Fig. 23), two miniature mirrors (6 cm in diameter; Fig. 25), one object in the form of a model of a “small stairway”, one chopper with a broken handle, that was found nearby (Fig. 27), one massive top of a spear (Fig. 26), two rods (up to 25 cm long) of an unknown purpose and two rectangular plates (Fig. 18).

13. Bronze artifacts from the burial #2900.





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14, 15, 17, 19. Bronze vessels from the burial #2900.

16. Silver goblet from the burial #2900.

18. Bronze plate from the burial #2900.

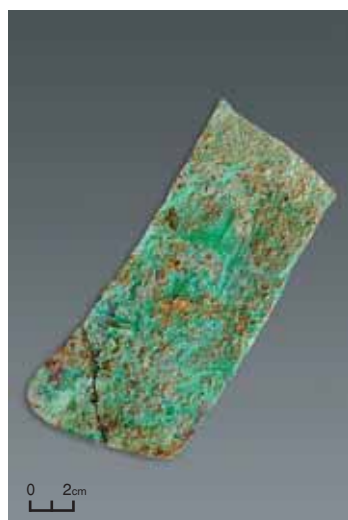
20. Small bronze shovel

21. Silver applicator from the burial #2900.

22. Bronze cosmetic vessel from the burial #2900.



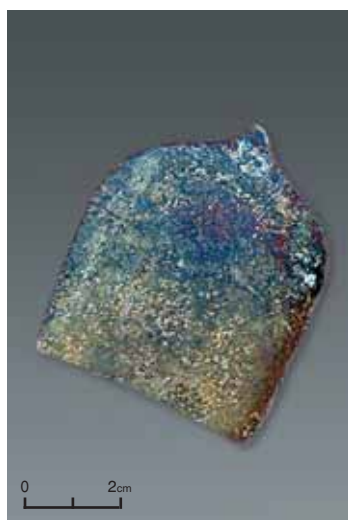
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The silver objects found in the grave included: one “small cowl” of an unpreserved item, one “small shovel” in the shape of a miniature “scoop”, one conic plate inlaid with semi precious stones (Fig. 28), one plate twisted in a tube, one goblet, a bracelet, and a pin with a camel-like top (Fig. 30).

Special attention is drawn to a thin double necklace made of semi precious stones with a centrally located silver pendant in the shape of two similar bull figures that were facing each other (Fig. 29). The bulls were decorated with inlays of semi precious stones such as turquoise, cornelian, and lazurite.

Stone decorations were represented by a double string of beads (turquoise, cornelian, lapis lazurite and other) and a separate big and flat bead with a large orange “pupil”. Out of 31 flint arrowheads the 11 were found inside a ceramic vase, two on top of the body of a vessel and the rest by the feet of the male dead (Fig. 31). Also there was excavated a big biconical bead made of steatite with a ring design scratched on it.

Among the bone objects there were: a game board (presumably of a box) with a lot of ivory inlays of different shapes (Fig. 32-33), an ivory comb with ring like design (Fig. 34), a small ivory spoon with a handle in the shape of a fist (Fig. 35) and three arrowheads (one of them was found together with the flint

23. Two bronze mace-heads from the burial #2900.

24. Bronze cattle from the burial #2900.

25. Two small bronze mirrors from the burial #2900.

26. Bronze top of a spear from the burial #2900.

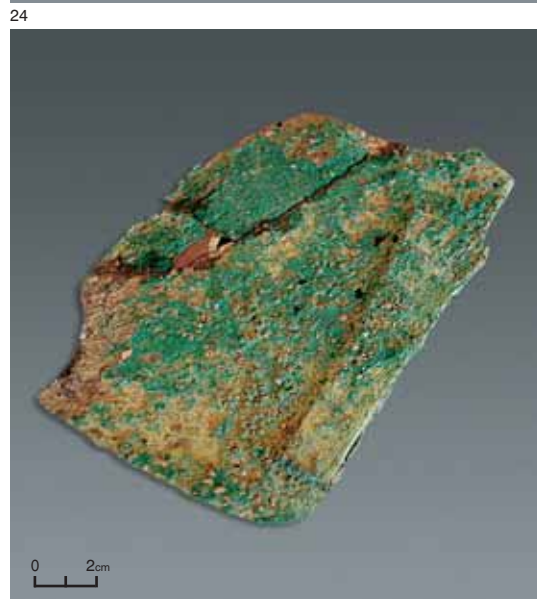
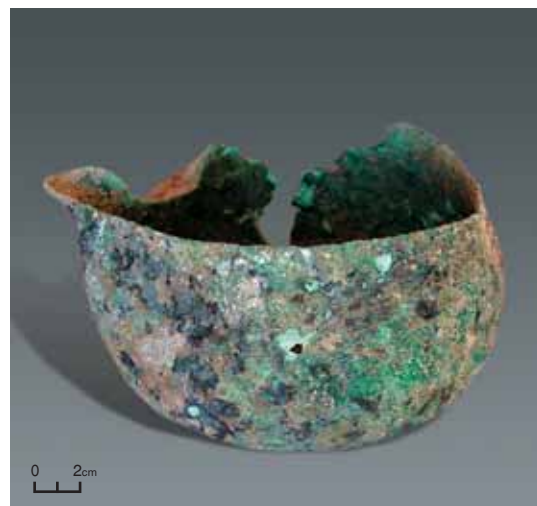
27. Bronze chopper with a broken handle from the burial #2900.

28. Silver cone from the burial #2900.

29. Silver pendant from the burial #2900.

30. Top of a silver pin from the burial #2900.

31. Flint arrowheads from the burial #2900.

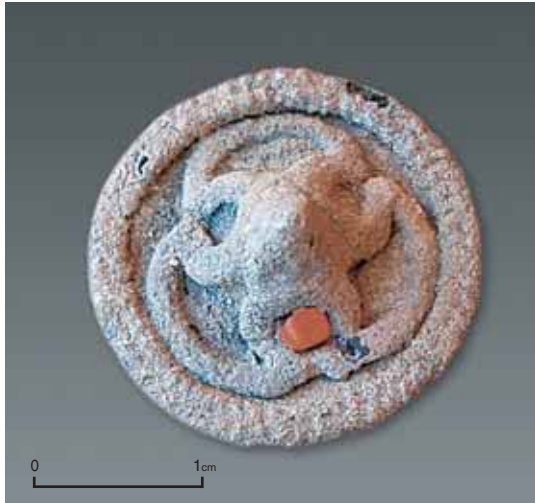


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arrowheads and the rest two inside the vase). A model of an ornamented tortilla shell, a miniature vessel (Fig. 37) and two bracelets (Fig. 36) were made of a sort of faience. A silver bracelet as well as two faience ones and two copper-bronze tops of the “rods” were all found under the bottom of a ceramic vessel.

And finally, in the south-western corner of the grave separately from all the finds mentioned above there were collected the items of the so called “cult set” (Fig. 39-40) that included a stone composite statuette (Fig. 38, 39) and such copper-bronze objects as a big triangular item of the unknown purpose



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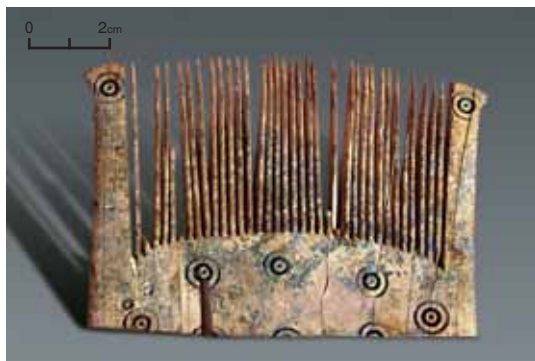
32, 33. "A game board" with a lot of ivory inlays from the burial #2900; during excavations (32) and after the reconstruction (33).

34. Ivory comb from the burial #2900.

35. Ivory spoon from the burial #2900.

36. Faience bracelets from the burial #2900.

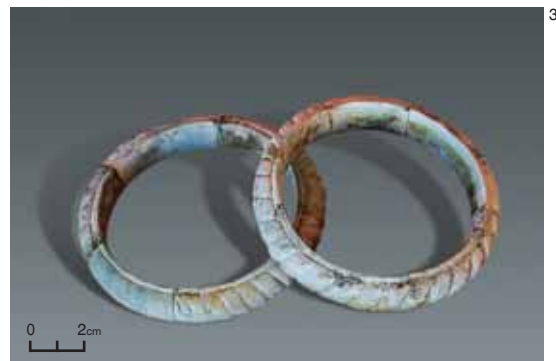
37. Faience tortilla shell and vessel from the burial #2900.



(Fig. 41), a miniature kidney-like vessel (Fig. 42), a strainer in the shape of a funnel (Fig. 43), a knife (Fig. 44), an applicator, a flat miniature plate (Fig. 45) and a flacon with a lid.

Such set was excavated for the first time. Kidney-like vessel as well as a strainer that served for separating the alkaloid liquid from chaff speak in favour of the cult purpose of the set. Compared with simple strainers that had semi spherical reservoir this construction of a strainer has an important preference: it allowed to pour the liquid into small vessels with narrow necks like for example into a small flacon with a lid found among the other items of the "ritual set".

In this connection one can remember the treasure of bronze objects from Tell Asmar, which besides bronze items, included four strainers and a long perforated copper tube used for the ritual consumption of cult drinks. The treasure looked like a "...complete service for the banquets of ritual purpose" (Frankfort, 1934, Fig. 32-35) and on the whole resembled a lot the "ritual set" from the



Gonur grave. Such sets most probably were used for the preparation of ritual as well as alkaloid drinks.

It is quite possible that this was the burial of a priest-military leader rather than a common warrior which is evidenced on the one hand by the model of a “small staircase” (Fig. 46) and his weapon, and on the other, a ritual set characteristic more of a priest than a warrior.

In the eastern part of the cist a collective burial of animals was excavated. It consisted of a pair of rams that were placed in a “muzzle to muzzle” way and the upper extremities of one ram were put on top of the upper extremities of the second one (Fig. 47). Their heads were west-oriented. There was a lamb behind the back of each of them and at their lower extremities a dog was placed. A lower jaw of a horse was found behind the back of the ram that was buried in the northern part. Though at the Gonur necropolis there have been excavated some cists with a ram or goat buried next to them it should be noted that this is the first case of the collective burial of animals.

At the same time the general funeral set of this elite burial is much poorer than the offerings of the Gonur “aristocracy” who were buried in chamber graves and cists of the necropolis. This may testify to the fact that by this time the main population of Gonur had abandoned it and moved to the southern oasis with a good irrigation system.

So, the old burial traditions were clearly traced first at the Gonur necropolis and then, on a later stage – on the site of North Gonur.

In Central Asia before the excavation of the grave #2900 not a single collective burial of sacrificed animals was found side by side with the main human grave. However, in Mesopotamia and Syro-Palestine this type of burials was known as early as in the third millennium B.C. Also, the excavations in Avaris in Egypt in the delta of the Nile have yielded brick cists and tombs of warriors with donkeys and (in rare cases) rams-goats buried by the outside walls of these graves. Though most of these graves con-

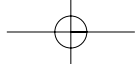
38, 39. A composite statuette from the burial #2900; during excavations (38) and after restoration (39).



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40, 41. Cult set from the burial #2900; during excavations (40) and after restoration (39).

42. Bronze triangle from the burial #2900.

43. Bronze kidney-like vessel from the burial #2900.

tained only one donkey in some cases up to 5-6 donkeys were sacrificed at a time. People in the main graves were buried in a crouched position (instead of being stretched as was typical for aborigines), had swords of a Syro-Palestine type and on one scarab the inscription bore the word “Asian”, a very significant fact. All this indicates that those buried in these graves were not aborigines but came from North Syria (Bietak, 1996).

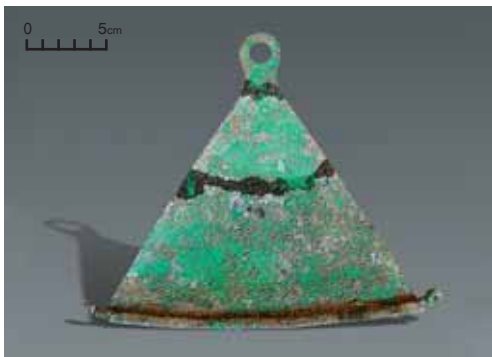
Perhaps it was not accidental that sacrificed animals were found buried next to human graves. Thus, in the case of the grave #2900 we met a collective burial of rams, grave #1315 of the Gonur necropolis and the graveyard of Togolok-24 (Sarianidi, 1990, Table LIX) yielded sacrificed rams buried in the same way.



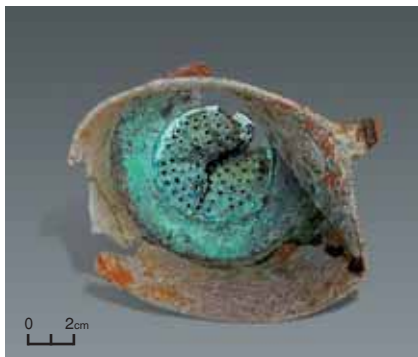
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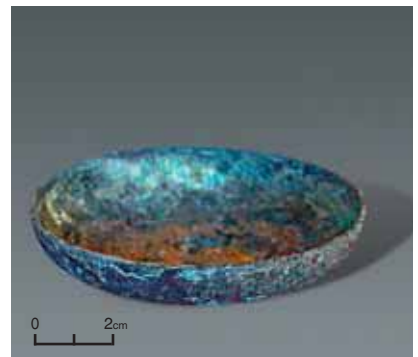
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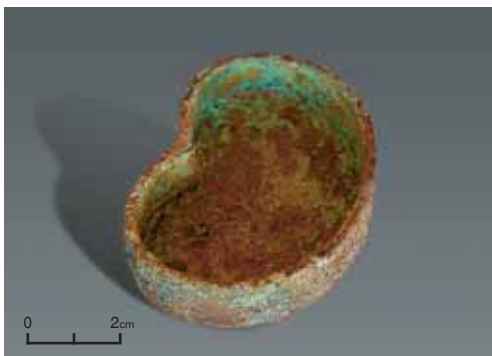
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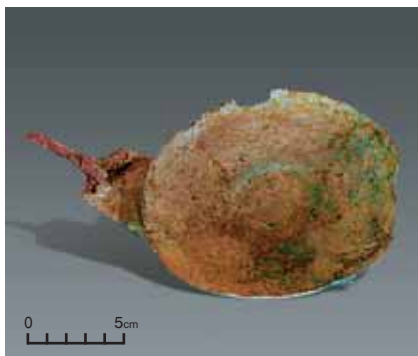
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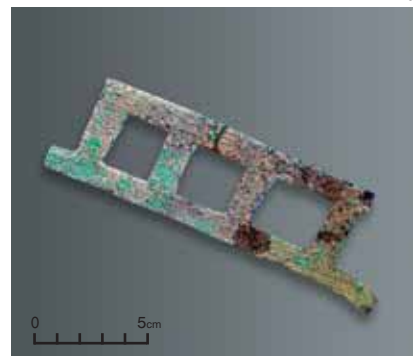
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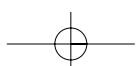
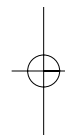
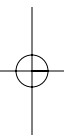
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For us it is very important that for these graves they dug rectangular pits with semi-vaulted roofs and the inside walls lined with bricks. Their construction closely reminded the way in which sepulchres of the Gonur were built. It is significant that in Avaris we met both one-chambered graves as well as double chambered ones. Like the similar constructions at the Gonur necropolis these graves too had an intermediate wall along the long axis, which was necessary to create an arch. Though entrances in the Avaris graves were not mentioned still since some of them contained up to 5 skeletons one may speak about successive burials ritual. In Avaris besides tombs they had also cists with singular burials that likewise the Gonur ones were built on the height of 5 bricks and their vaults were formed by two bricks inclined to each other and a horizontal brick as a sort of a “lock” between them. All this may prove the existence of analogical funeral rituals between Avaris and the Gonur necropolis.

In Avaris there were excavated tombs, which were adjoined with graves that contained skeletons of young women. They were placed not in a crouched but in a stretched position, the fact that makes one to suggest that these were concubines violently killed (Bietak, 1996, p. 41). It is worth mentioning here that a woman from grave #2900 missed any funeral offerings or personal decorations. Possibly this speaks of the humiliating position she had in her lifetime and that she died as a result of a violent death.

The list of similarities between the ancient cultures of Avaris and Margiana may be enriched by the plans of the temples of Avaris (Eigner, 1985, p. 19) and of Margiana (Togolok-1 and 21 and the Gonur temenos). They have one common principle of a “courtyard surrounded by corridors” (according to Eigner “Mittelsaalhaus”), which is rooted in the Syrian architectural traditions (Sarianidi, 1994, pp. 388-397).

Based on the fact that in Egypt (Avaris) and in Margiana (Gonur necropolis) the migrated tribes appeared almost simultaneously and had common ritual and funeral traditions one may come to the conclusion that their common North Syrian origin seems to be most probable.

44. Bronze strainer from the burial #2900.

45. Bronze knife and plate from the burial #2900.

46. A small bronze plate from the burial #2900.

47. “Staircase” from the burial #2900.

48. Animal burial near the cist #2896.



4.3. BMAC and Eastern Mediterranean World

Early on, the first Bactria and Margiana seals and amulets showed indisputable links with those of Syro-Anatolia (P. Amiet, D. Kollon, A. Parpolla). Not only their striking similarity but additional evidence as well made it possible to include the Aegean world in this zone (for more details see Sarianidi, 1993, pp. 137-150). One can hardly doubt the existence of common motifs between the Aegean world and Anatolia. The common iconographic traditions such as the heraldic poses and other features (Grovely, 1989) are the best support for this statement. As has already been noted in Mesopotamian art, the deities never sit on dragons, they either stand on them or sit in thrones placed on such monsters. Only in Mycenae and Bactria were they depicted seated on these fantastic animals. The similarity between these two centers is not limited only to glyptics and sphragistics but in view of the new archaeological materials from the BMAC zone, it includes the plans of the monumental architecture as well.

Winkelman has already noticed (2000, p. 78) that in Minoan Greece deities of the Potnia Theron type had the same details as those from the BMAC (doves, snakes, bulls) as well as similar facades of temples where people were depicted in the pose of adoration and so on.

On our part we can note that the central entrance to the Gonur palace with two passages divided by pylons and decorated with rabbits almost replicates the entrance to the throne hall of the Knossos palace in Crete (Evans, 1928, Fig. 448).

This similarity added to other architectural blocks is so striking that there is no possibility of it being accidental. For example, one of the characteristic features of the monumental architecture of the Greek islands was the construction of passages with wide, low thresholds and centrally placed columns that rested on stone disk foundations. Absolutely the same architectural detail is found in the audience hall of the Gonur palace. The palaces of the Eastern Mediterranean such as Alallah and Ugarit with similar thresholds occupy an intermediate position between ancient Greece and Margiana. Besides the similarity in plans, the audience halls from Alallah and Gonur have some other common features such as corner niches in the form of a “swallow's tail” and floors covered with white lime (or gypsum).

Also the Gonur palace reveals parallels with the famous palace in Mari: corner niches in the form of “swallow's tails,” “blind windows,” and a niche for the throne made in the corner of the room instead of the center. One may conclude that the palace in Mari combined the architectural traditions of the Crete palace and those of Mesopotamia (Lampe, 1968). Following this reasoning, we may suggest their similarity with the Gonur palace.

The central section of the Margiana temples (Togolok 1, 21 and the gonur temenos) is represented by a “courtyard surrounded by corridors” which finds its direct analogies with the planning principles of such monuments as Mari and Ugarit in Syria and Avaris in Egypt.

It could also be added that the plan of the supposed altar of the first half of the first millennium B.C. in Tillya (Anatolia) with its five “blind windows” and a ritual hearth (Summers, 1998, Fig. 8) is a copy of the altar from the fire temple of North Gonur (Sarianidi, 1998, Fig. 63). The palace in Tillya completely differs from the Babylonian buildings while revealing at the same time features similar to Iranian architecture (Summers, 1998, p. 405).

As far as ritual vessels of the BMAC are concerned, it is very noticeable that similar vessels with sculptured figures of birds and animals along the rims were found only in the Anatolia and Mediterranean world

and nowhere else in the whole Near East. In this connection one should mention the obvious ritual vessels in the form of models of temples from Cyprus (Karageorghis:) that earlier were known only in the Aegean world. Now in the antique shops of Europe and America one can find such “Cyprian vessels” that were found in East Iran (including Keram) - that is, in the BMAC zone (Sarianidi, 1998, Fig. 10, N. 10).

The Gonur necropolis yielded ritual vessels with spouts in the shape of bull's heads that exactly repeat the same in Anatolia (Kanish, Inandick, Alacha and others). Such vessels reflect the cult of the bull that was so popular in ancient Greece.

Though ceremonial axes are considered specific only to the BMAC, still it may not be accidental that according to O. Dalton, the axes with sculptured images of boars find some parallels with the Minoan ones from Mallya. Add to the list of similarities some specific images on the seals and amulets of the BMAC, for example, two standing lions with one head recall the “lion gates” from Mycenae, also bird-people, owls, and Medusa-gorgon. A deity portrayed either with defeated animals (Potnia Theron) or seated on a lion-like monster reveals parallels with the Aegean world and more specifically with the art of ancient Greece (Fig. 49, 50). Rather significant is a new find from Site 5 of north Gonur: a seal with an image of a man with two defeated mountain goats, a composition that recalls similar ones from Crete (Caube, Karageorghis, Yon, 1981, N. 112, 1377).

A rare motif in the shape of a four-petal band without the beginning and end popular for the Minoan seals (Schiering, 1981, Abb. 11, N. 4) was found not only on seals and amulets but on the copper-bronze mace-head of a scepter in the “lamb's grave” at north Gonur (Sarianidi, 2002, p. 229).

Besides different images and motifs the glyptics and sphragistics of the BMAC were decorated with subjects and compositions that were indisputably inspired by the art of the Mediterranean world (Fig. 52-53). Thus, a plundered tomb from Bactria yielded a seal cast in the shape of a horned deity fighting a five-headed snake, a subject that recalls the Greek myth of Hercules and the Lernean hydra. The snake-like dragon that is eating a man brings to one's mind a Greek subject and composition from Jason and the golden fleece.

The images of humanized lions (or Minoan genies) in the scenes of libation from the early palaces of Festa can be compared with a similar composition on a cosmetic flacon from Bactria (Sarianidi, 1992).



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49. Seal with “Miss of Animals” from Bactria.

50. Seal with “Miss of Animals” from Greece.

51. Aerial photography of the Palace and Temple ensemble.

52. Schemes of Bactria-Margiana and Greece-Asia Minor motives distribution, acrobats jumping over the bulls.

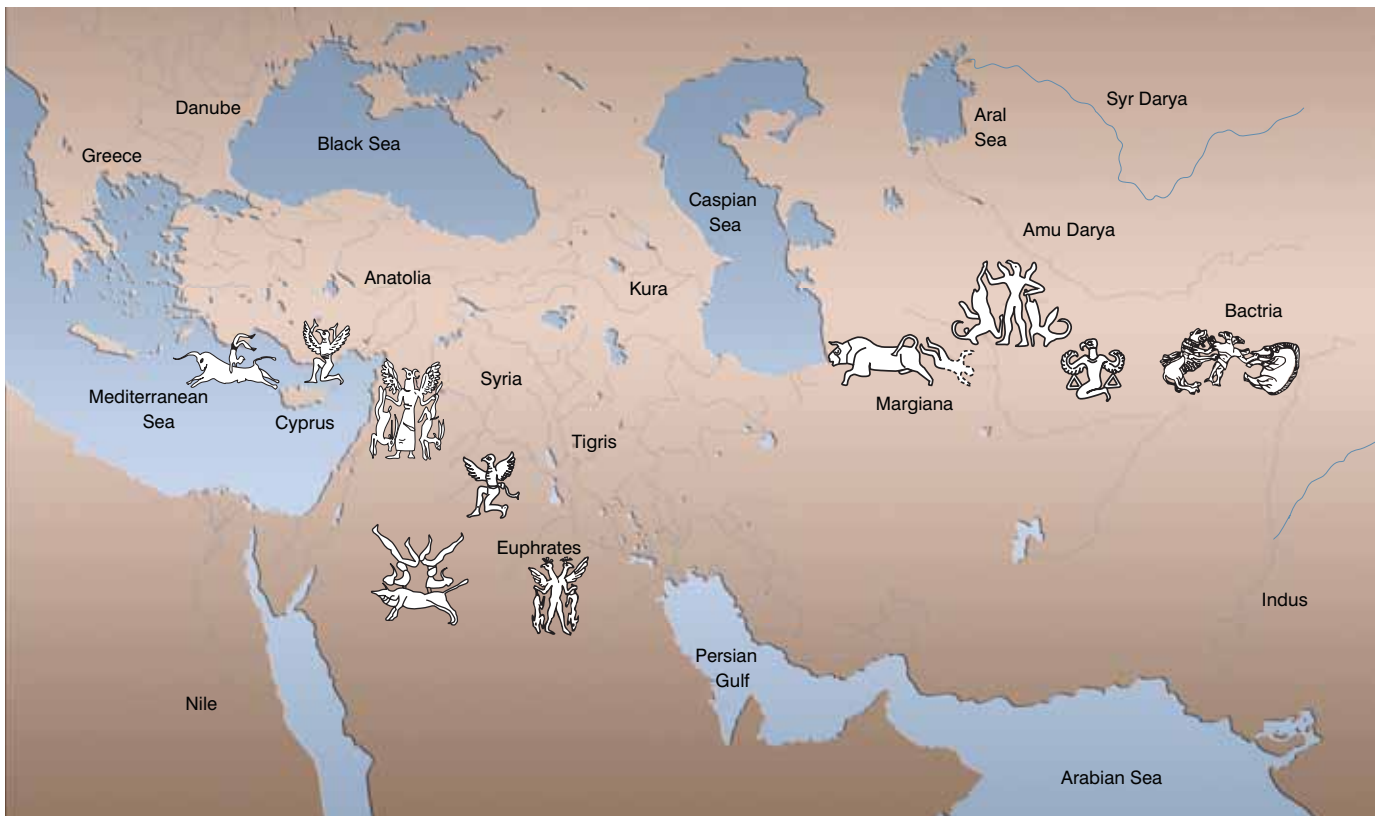
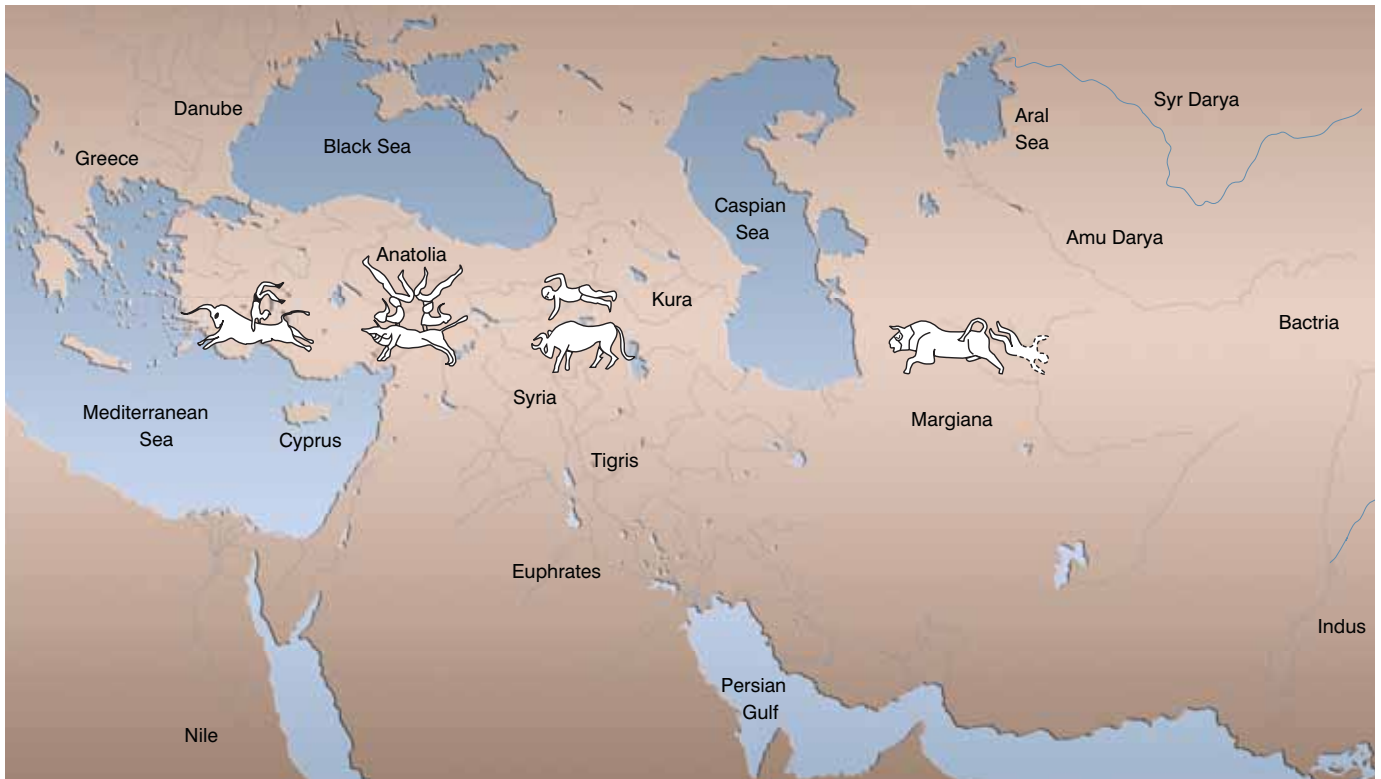
53. Schemes of Bactria-Margiana and Greece-Asia Minor motives distribution, bird-men with the plunged animals.

A cylinder seal from Margiana that depicts a running bull and an acrobat who is jumping over it recalls the scenes of taumachia that were so popular in the art of ancient Greece. Besides being popular in Greece, the scenes with a jumping acrobat were also popular in Anatolia (Inadik Tepe and others) and in the Eastern Mediterranean. In the BMAC zone they jump not only over a bull but over a pole, which in this case can be interpreted as a scene from ritual festivals.

Besides the common subjects and images stylistic parallels were also common in the art of ancient Greece and the BMAC. P. Amiet was the first to call attention to the stylistic links between the Creto-Mycenaean and Bactrian antiquities. In a personal letter of 18 December 1998 he wrote that on a silver goblet from Bactria a scene of hunting closely resembled the "Mycenaean style." Another scholar, a well known specialist on India and glyptics and sphragistics of the Harappan civilization, A. Parpola has noted the similarity between "Nestor's goblet" and a Bactrian vessel that was also decorated with birds that had open wings and long tails (Parpola, 1995, Fig. N. 1-2).

Summing up the data mentioned above we may conclude that some of the tribes that invaded Central Asia were familiar not only with the Eastern Mediterranean culture of the Alallah-Ugarit type. They also knew the art of the Greek islands and brought its traditions to their new lands. In the final analysis, the language, religion and funeral rites were the factors that distinguished one ethnic group from another at that time. At the same time quite a number of cultural achievements of Anatolia, the Eastern Mediterranean and Syro-Palestine were common for all of the ethnic groups inhabiting these areas. At present we have no proof of direct links between the BMAC, the Mediterranean and the Greek islands but the existence of indirect contacts seems quite possible.





5

CHAPTER

FUNERAL RITES AT GONUR



5.1 Zoroastrian Funeral Rites

At present it is quite obvious that the “Iranian paganism” that many specialists have been looking for all over the world was located within the territory of the BMAC (Sarianidi, 1998; Grene, 1987; Gnoli, 1989). The archaeological material gleaned during the excavations of the Gonur necropolis has given additional support to this statement.

Funeral rites are believed to be the most conservative and traditional ones. It is common knowledge that the first world religion, Zoroastrianism, could appear only on the foundation of “Iranian paganism.” The funeral rites of the Gonur necropolis demonstrate the origin of funeral traditions that later in a reformed way were included in Zoroastrianism. Linguists long ago have come to the conclusion that Zoroastrianism was based on a complex system of funeral rites, the central idea of which was to save sacred Nature (first of all the earth) from profanation by decomposed corpses. The funeral customs revealed at the Gonur necropolis fully correspond to the known Zoroastrian rites. There, the “unclean” dead body was moved away from the living ones, then it was “cleaned” to avoid “profanation” and to restore the state of “ritual cleanness.” The special funeral complexes inside the North Gonur temple served this main purpose of cleaning the dead body and making it acceptable for future burying. There were formal exceptions in isolated fractional burials, but one should remember that they contained bones cleaned of flesh and so could not profane the earth. In other words, the desire to minimize contacts between the corpse and the earth is one of the most typical characteristics of the funeral rites at the Gonur necropolis. “Avesta forbids the burying of corpses; Zoroastrians look upon a burial as a major sin, as a profanation of the earth, Videvdāt foresees punishment for burying corpses of dogs or people” (Meitarchiyan, 1999, p. 101). By the way, quite similar burial rites were found at the Swat burials, where their construction had two levels, or “floors”, and where the lower part was empty, being not filled with earth, and the corpse was put in this upper part.

One can presume that to avoid profanation some kind of isolator, including sand, was used. It seems that such a suggestion appears in Videvdāt and in this connection we should remember that the soil at the Gonur necropolis consisted of sand with layers of clay. The dead in cists, sepultures, shaft tombs and pits, as well as in “dakhma”, were buried in such a way as to avoid direct contact with the earth. In fact, in light of all this archaeological material it is hard to restrain oneself from seeing a link between the rites at the Gonur necropolis and those of the ancient Iranians and, first and foremost, of the Zoroastrian

funeral traditions. General idea of the latter was to avoid profanation of “pure elements” – earth, water, air, fire – by decomposing corpses.

No doubt that the rite of the preliminary burning of some shaft and pit graves which were used for burying the “unclean” dead served the same aim of preserving the pure nature of the earth. There is an opinion that since Iranians worshipped fire so much they would not have used it for such a purpose but up until recently the Zoroastrian funeral rites reflected their dual attitude toward the elements of nature (Snesarev, 1960, p. 101). Obviously, the rite of cleaning with the help of fire started in the times of the “Iranian paganism” when fire (judging by the Gonur necropolis) was clearly the main method of cleaning.

This is documented by three graves strongly burnt inside and used for two corpses of dwarfs and one bathrocephalic child (for details see Appendix 2).

It is not accidental that in one of them beside the dwarf’s corpse on the ash layer there were bone remains and a jaw that paleozoologists identified as that of a large dog like a Central Asian sheepdog.

Below we shall compare more than once the funeral rites of the Gonur necropolis and the Zoroastrian funeral traditions and therefore it seems useful here to make some preliminary remarks.

Linguists demonstrated that there was a great variety of funeral rites at the moment when basic doctrines of Avesta, sacred book of Zoroastrians, were canonized. In order to codify and systematize these rites it was necessary to edit Avesta, fixing “right” and condemning “not right” funeral rituals. It is even assumed that compilers might have unified different texts in one written document, Videvdat. So, “one can not exclude that the code of ritual purity, existing at present, includes recommendations with opposite meanings” (Krukova, 1997, p. 215). This view is of the most importance to us, since comparing written texts of Avesta and archaeological materials may show they do not fully coincide, or even sometimes contradict one another. Nevertheless the latter does not mean that Avesta and archaeology provide mutually exclusive propositions. In other words, not all funeral rites, formulated in Videvdat, should precisely concur with those funeral rites that existed during the period of “Iranian paganism”, including their forms at the Gonur necropolis.

Let us now turn to comparing the necropolis materials (viewed as graveyard of “Iranian paganism”) with data on Zoroastrian funeral rites, as it was fixed in Avesta. In particular, the latter tells us quite a lot about the so called “temporary tombs”.

5.2 Temporary Graves

The most ancient part of Videvdāt already mentioned “temporary graves” - a simple pit where the dead body was placed before reburial. We may also think about the facts, presented above, that in practically all excavated chamber graves and in some shaft and pit graves only “bone crumbles” and single small bones were found, but not full skeletons. This could result from either activities of robbers who, plundering the graves after decomposition of corpses, threw bones out or deliberate removal of skeletons for secondary burials.

“Temporary graves” are not exceptional in archaeology of Central Asia. On the contrary, this practice was identified in some other graveyards of the BMAC zone.

“Temporary graves” were found during excavations of the “Gundhar culture” burials in Swat, where A. Dani describes three main types of burials. For our theme the most important are so called partial, or multiple (according to his terminology) burials. These were the graves in which only few bones (instead of full skeletons) were found, and undoubtedly the bones were buried after being cleaned of flesh. The latter was proved by findings of some graves that were “opened” for burials for the second time (Dani, 1967, p. 25).

The late J. Tucci expressed his opinion about this issue in a more direct way. He mentioned that in Swat there were empty graves with only few small bones: “They are empty except for a few very small fragments. It is probably the evidence of the fact that the dead body was placed inside only for a certain period of time and that later the corpse was taken out” (Tucci, 1977, p. 26). This fact finds direct parallels at the Gonur necropolis.

Obviously, studies of “secondary burials” need to be continued in order to identify these funeral rituals in details, but the existence of “secondary graves” in the period of Iranian paganism, including the BMAC zone, seems quite possible.

Besides Margiana (Gonur necropolis), North Bactria (Jarkutan) and Pakistan (Swat), such rites were presumed to exist in South Tadjikistan as well. In searching for new lands the BMAC tribes from farming oases of Margiana and Bactria moved in the direction of South Tadjikistan. Such graveyards as Tandirjul, Kumsai, Kangurut and others consisted of shaft graves with side chambers. The entrances to them were usually capped with stones. The dead (among the inhumations, “partial” burials were found as well) were lying in a crouched position on the right side and oriented southeast. Tombs with “partial burials” were looked upon as “secondary” wherein the dead was buried after either having been preliminarily exposed on a “dakhma” or having been buried in a temporary tomb (Vinogradova, 1996, p. 176).

Almost surely in South Tadjikistan this type of grave was introduced by the tribes that at the end of the second millennium B.C. left the territory of the BMAC and moved North where they contacted the steppe Andronovo tribes. This is illustrated by excavation of the graveyards of the Tandirjul and Kumsai type where the funeral gifts undoubtedly showed a generic link with the cultures both of the BMAC and Andronovo (Vinogradova, Piankova, 1990, p. 110; Vinogradova, 1991, p. 77).

Some cases of “temporary tombs” were found in South Bactria (Dashly-1 and Dashly-3), in North Bactria (Djarkutan, burials ##34, 42, 51) as well as in Baluchistan (Stein, 1931, pp. 77-82; Stein, 1937, p. 120). These were places that make up the BMAC territory.

Thus, different independent authors based on the archaeological material came to a common conclusion that in the territory of the BMAC – that is, in Margiana, Bactria and Baluchistan – there existed so called “temporary graves”. In the second half of the second millennium B.C., the BMAC tribes moved to the steppe regions and along with their material culture they brought their tradition of burying in “temporary tombs”.

A supposition has been made that the most ancient “temporary tombs” mentioned in Avesta were made under the floors of houses (Krukova, 1997, p. 214) but this has yet to be proved. At least for the period of Iranian paganism such practice was unknown. From the archaeological point of view burials beneath house floors (if it really existed) could have been used at a very ancient stage, but the Videvdāt is dated later.

In the end it is worth mentioning that “temporary tombs” of 3300-3050 B.C. (Mazar, 1990) are supposed to be located in West Palestine and thus they represent the earliest funeral rites of this type found in the Near East.

5.3. Dakhma

Extremely interesting are those passages from Videvdāt where it mentions the reburial of the dead in a dakhma. But before this the corpse had to be brought into the “house for the dead”. Up until quite recently dakhma was considered a rather late phenomenon that had not existed in Iranian paganism. But excavations of the North Gonur palace showed that in the royal residence there was a “dakhma”. Next to it was the so-called “complex of funeral rituals” that to a certain extent recalls the “house for the dead” (zad-marg-hana mentioned in Avesta). The “dakhma” as well as the “complex of funeral rituals” have been excavated in recent years and so far are not fully published. This explains why they are discussed at length in this work.

So, almost in the very center of Gonur, the political capital of the ancient land of Margush, stood the “kremlin” with a centrally located palace. In the middle of the palace a royal residence, isolated from the other sections, was excavated. The king’s residence consisted of three vast courtyards with two ceremonial entrances. They were decorated with stepped corners and had low, very wide thresholds with a column in the center. Such ceremonial entrances with columns suggest the existence of double doors and were only found in special official rooms of an audience-hall type such as this palace. The stepped corners are believed to be a decorative element of especially important rooms and the royal residence under discussion undoubtedly belonged to that class of architecture. It is not accidental that though the two ceremonial entrances were located next to each other, their stepped corners had different orientations: one inside the residence (entrance) and the other outside (exit). A chain of extremely narrow corridor-like rooms divided the residential part into two equal sections: the East section and the West section. Each section consisted of dwellings and one vast inner courtyard. One may suggest that this plan probably reflected the division of the royal residence into male and female parts as is observed in the present East.

In the southwestern corner between the yards there was “hidden” a small micro-complex that consisted of two square rooms and one very narrow room (Fig. 1, 2). They were used for performing the funeral rituals for the dead members of the royal family. The last statement was proved by the find of ten male and female skeletons (grown-ups as well as children) in one of the square rooms. They were found in a chaotic order that testified to the fact that they had been removed from their original place. At the entrance inside the room there was a crouched skeleton on its side in correct anatomic order of the bones but there was no skull. All the skeletons were placed on the floor which had first been carefully covered with clay plaster and then topped by a special ash layer 3 centimeters thick. On some spots of the ash layer, especially along the walls there were water stains presumably caused by rain. In addition, on the floor there was found a ritual small hole filled with animal bones that were first burnt somewhere outside the area.

One could suggest that we are dealing with a usual burial chamber with a successional type of burial where in previous skeletons are removed in order to make room for the fresh corpse. But in such collective burial cham-

bers the removed skeletons were collected at the wall opposite to the entrance and the last corpse was placed in the center. Here we had the opposite picture. The removed skeletons were placed almost in the center while the last corpse was lying at the entrance.

Moreover, even in the poorest Margiana burials (with a few exceptions) there were always funeral gifts that would consist at least of one or two vessels. Here we found nothing but a few animal bones. And we are talking about the dead from the royal family! Certainly one can suggest that they were robbed in ancient times but in this case, some traces of, for example, gold foil pieces would have been found as it was in the chamber tombs. Also the absence of any pins may indirectly prove that the dead were buried without any clothes, a fact that fully corresponded to the Zoroastrian rules which forbade clothes on the dead (8,24. Translation by V. Krukova). Though the present Zoroastrians bury their dead in clothes it is believed that in the old days there was a tradition of burying people naked, a tradition which is still preserved by the Parsees in India (M. Boyce).

The funeral chamber with mixed skeletons was most likely a kind of dakhma where corpses of the royal family were placed. This supposition is substantiated by the ash layer whose aim was presumably to avoid the direct contact of corpses with the earth. In their turn the rain stains may speak in favor of a partial cover that still allowed the sun rays to reach the inside of the chamber.

In Vendidad, the later part of the Avesta, we find two directly opposite descriptions of the dakhma. In one case it is described as a mausoleum, or a tomb that extended above the surface whilst in the other it is described as an open place to put the dead on (Boyce, 1989, p. 326).

Specialists long ago drew our attention to the fact that the Avesta speaks of dakhma as a special construction. The “dakhma” of the Gonur palace most closely corresponded to the definition of a construction that “on all sides is a closed room with a roof” that was equally good for placing the corpses in the open air and for using it as a special mausoleum. There was one detail; the roof probably was not very solid and through it not only the sun’s rays but birds as well could reach inside. In this case the corpses could rather quickly dry out in the sun and then birds cleaned the flesh from the bones. Presumably in the process birds of prey (like eagles or griffins) as well as specially trained dogs could have participated, a fact that was mentioned in the written sources of the antique Bactrian period (Herodotus, Onesikrit, Pompeus Trog), though not all authors agree with this view.



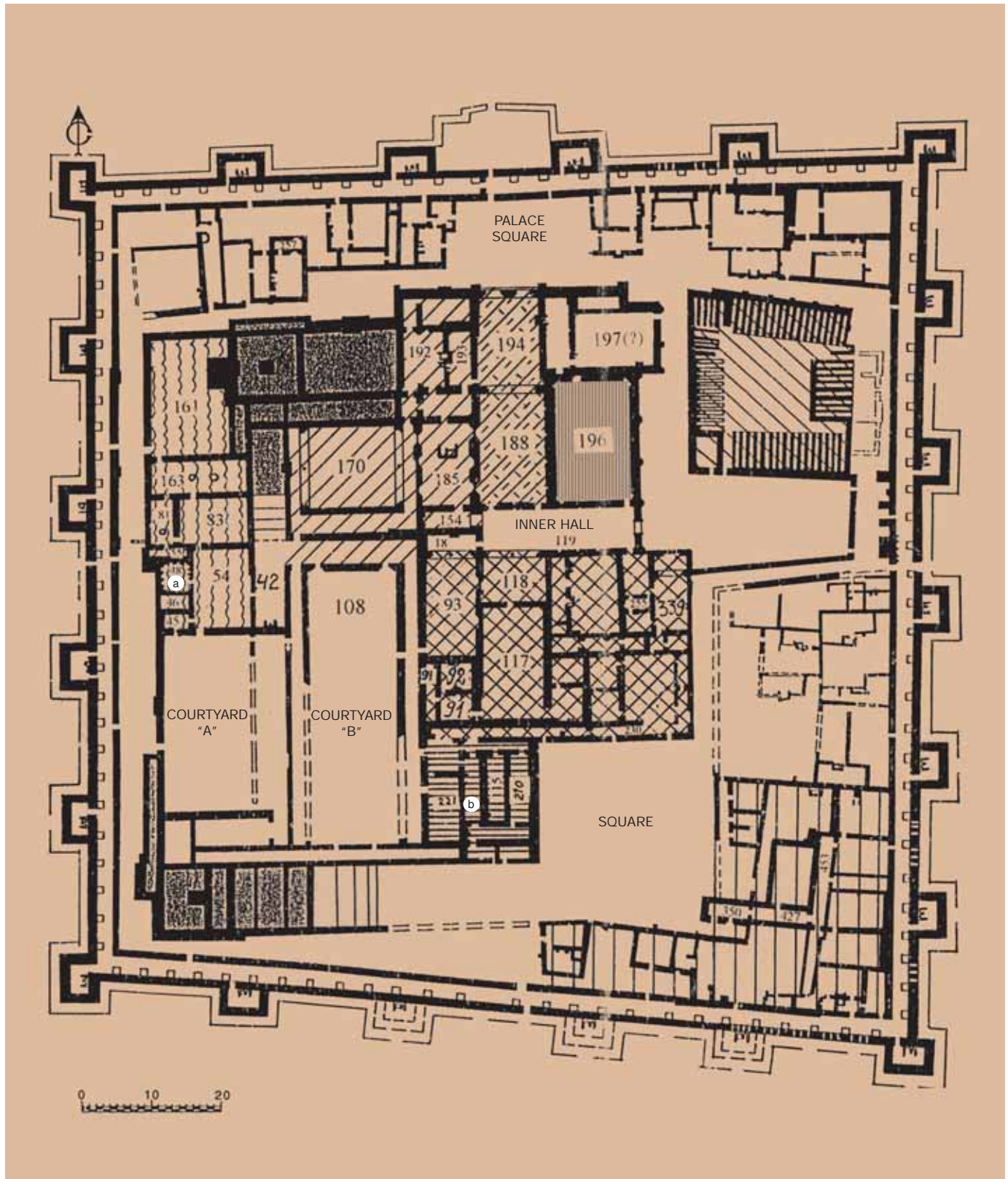
1

1, 2. Complex of funeral rituals (a) and dakhma (b) in the palace of North Gonur.

1. Air-photo of west part of Gonur palace.
2. Plan of Gonur palace.

Additional evidence of this were the seals and amulets of the BMAC that bore clearly engraved compositions on this subject. Thus, on one such amulet from the Kabul museum a man lying on the ground in a crouched position was being torn at by a bird of prey, presumably an eagle (Sarianidi, 1998, a, N.914).

A more impressive subject composition was preserved on another copper-bronze Bactrian seal that belongs to Ron Garner, a known collector and connoisseur of Eastern antiquities who drew my attention to it. This rather complex and unique composition consists of two rows. The bottom row depicts a man in a crouched pose with bent legs (a character-



istic pose of the Margiana corpses) who is being torn at by a large bird of prey either an eagle or a griffin. Another smaller bird is near his head and by the man's legs a crouching dog is seen. The same composition is repeated in the upper row of the composition with the only difference that in this case the figure of the man is smaller, but he is also with bent legs. It is one more portrayal of a dead body being torn at by a large bird (Sarianidi, 1998, A, Fig. 3, N. 11). At the upper row, another smaller bird is near his head and most probably it symbolizes either a bird flying away from a corpse, pecked by it, or a soul leaving a body like a bird. It seems this unique copper-bronze seal presents a scene of clearing dead bodies from flesh by birds and dogs that could take place in North Gonur.

It should be noted that Zoroastrians highly valued birds (as well as dogs) since they were considered the creations of Ahura Mazda. In this connection it may not be strange that the image of a bird was counted three times more often than the image of a dog, since birds were more useful for cleaning of corpses than any other animal (Maytarchiyan, 199, p. 106). On the other hand it is interesting to note that both birds pecked at the heads of the dead.

Here we should step aside to deal with headless skeletons. In addition to the last buried corpse in "dakhma" and to portrayals of griffins, pecking at skulls, one can mention the same situation in un plundered chamber grave (burial #194). It is very impressive that in both cases we see intact skeletons whose skulls were previously cut off, and it is not accidental. In one burnt grave at the Gonur necropolis there was no skull and even no room for it. These observations are not accidental, and this is proved by an intact male skeleton from burial #2123, whose skull was cut off before the skeleton was placed in the grave. This skull was found above the burial, in the earth that filled this grave, but on the skeleton's chest we found a lower jaw from some other female corpse. At the moment we have no satisfactory explanations to these facts, they are by no means accidental. In this respect one may recall the Videvdat that speaks about killing those people who had reached old age and whose heads should be cut off.

One can assume that these images reflect the same funeral rites as those depicted in the scenes of the wall frescoes of Chatal Huyuk (but of a much earlier period) where griffins were shown next to headless people (Mellaart, 1967, p. 169). It is important to note that the head and especially the face of the dead person played a big role in Zoroastrian rituals. The dead person's eyes and nose were not covered by a shroud and the future fate of the dead depended on which eye (right or left) the birds would peck at first (Maytarchiyan, 1999, p. 113).

A copper amulet with an image of a horned monster came from the Togolok-21 temple in Margiana. Ron Garner drew my attention to the monster that was torturing two people lying on the earth with legs bent, the same pose as on the seal described above. This pose most likely imitated the image of a corpse in a crouched position (Sarianidi, 1998, A.n. 1621). Such subject compositions with a scene of torture may to a certain extent be compared to an image of the demon of the corpse decomposition depicted in the shape of a repulsive fly *Nasy* (Videvdat, 7.2), that immediately attacks a man at the moment of death. It is important to note that this monster closely resembles similar ones from the Syro-Hittian glyptics.

As further support for this suggestion, we can mention burial #138 found in the ruins of the North Gonur palace. Here a large pythos was excavated with a burial of a 13-year-old boy. His personal decorations and funeral gifts included beads of semi precious stones and gold as well as a very beautiful clay statuette. All the bones were painted black. Most carefully painted was the skull with a distinguished hairline that even showed the outlines of high temples. Obviously the paint could have been made only after the bones were cleaned from flesh either as a result of their placement in the open air or of boiling, a thing that is less likely to happen.

In this connection one can mention that the Videvdat contains a word "nasyspacya" that can be trans-

lated as “cremation” or “boiling corpses”; the latter seems to be less likely though it may not be related to cannibalism

Also here should be mentioned occasional fractional burials in the Gonur necropolis and especially those found on the altar square of Togolok-21. They look like small pits filled with carefully piled bones topped with a skull (Sarinidi, 1990, p. 128).

The history of the origin of the funeral rites in Iranian paganism is long and complex. The Iranian aristocracy even after the death of their relatives tried to keep them close (M. Boyce, 1989, p. 114). To a degree this can explain the arrangement of a *dakhma* within the limits of a royal residence though it could be inconvenient for the living. However the arrangement of a mausoleum inside the royal residence looks quite possible and it is not at all accidental that Firdowsy in his “Shahname” depicts a *dakhma* as a mausoleum for Iranian emperors.

We shall not discuss this complex problem in details especially since it has been exhaustively done by B. Litvinsky (Litvinsky, Sedov, 1983, pp. 108-115), but it is worth mentioning here that some time ago the term “*dakhma*” was presumed to come from the verb “to burn” though according to some other sources it comes from the verb “to bury” (K. Hoffman, M. Boyce). Based on the supposed “*dakhma*” in the Gonur palace one may get the idea that in the period of Iranian paganism (at least in Margiana) it looked like a walled room where the dead were placed on an ash layer. The room was partly open at the top, which let the sun’s rays and birds of prey (as well as presumably some trained dogs) into it. Even the bad smell of a decomposing body did not keep the royal family from desiring to keep their dead near them.

Tombs for the elite with collective burials constructed inside palaces were known for the same period in other megalopolises of the Near East; the mausoleums (including those in the shape of a house) in the Ugarit palace may serve as examples (Burney, 1977, p. 114, Fig. 91).

The tradition of building funeral constructions in or near palaces and living quarters has been preserved until the present. Thus, until quite recently Zoroastrians made *dakhma* in some densely populated quarters of Karachi and Bombay, and the same did the Zoroastrians in Buchara. According to the opinion of M. Boyce, *dakhma* appeared in Central Asia among the nomadic tribes, a hypothesis that needs additional inquiry.

So far archaeological material has not give an answer to where they placed the bones after they were completely cleaned of flesh. M. Boyce has studied the Zoroastrian rites in Iran on site and came to the conclusion that there were two types of *dakhma*. One of them was divided into two parts and in one they placed the corpses and in the other the cleaned bones. Another type of *dakhma* looked like a tower. She also studied more ancient *dakhma* of the period prior to the migration of Zoroastrians to India. Such *dakhma* looked like a well into which they threw the cleaned bones. So far this type of *dakhma* has not been excavated in Margiana. We may suggest that the bones were preserved there during very long period of time, but a final fate of these bones remains unclear. B.Litvinsky is right when he supposes that *dakhma* was used first for placing a corpse and then for keeping bones like mausoleums (Litvinsky, Sedov, 1983, pp. 112-115).

The last dead buried at the entrance to a *dakhma* was put in a crouched position. In spite of the fact that this was the only corpse found in this position we still have all reasons to believe that in the times of Iranian paganism the dead were placed in a *dakhma* in a crouched position. The matter is that after the birds of prey as well as specially trained dogs cleaned the bones from the flesh the bones were mixed up and no skeleton could have been found in a right anatomic order. As an additional proof of our assumption served the composition on the above mentioned seal with images of birds, a dog and dead people.

5.4. "Complex of Funeral Rituals"

There exists archaeological evidence to support the contention that certain funeral rites took place before placing a corpse on "dakhma". It is proved by a special "complex of funeral rites" that was built specifically for the Gonur palace and that corresponded to the Iranian "zad marg" or a system of premises where Zoroastrians placed the dead before taking corpses into dakhma. It occupied exactly one half of the western wing of the palace and deserves more detailed description.

The area of this complex was equal to 700 square meters and it drastically differed from other buildings in the palace compound (Fig. 3).

All the rooms of the complex that were joined by common passages were covered with white gypsum. Not only the walls and floors of the complex but the façade of the buildings preserved this white paint, a fact that had not been registered in Margiana before. In front of the buildings was a kind of a square covered with bricks. The dead were apparently carried through this square and brought into "the house of dead" through the main entrance that was located in the middle of the façade. This main entrance leads into a row of rooms of various sizes and configurations. Among them some rooms stood out as clearly intended for a special purpose.

Below in the Chapter 6 there will be described a break in the façade wall that was clearly made on purpose and was located next to the main entrance to the building. Such constructional detail played a principal role in the funeral rites of ancient Iranians.

One such small square room was #48 with twelve wall niches ("the room with niches"); on the floor was a shallow round hearth (diameter 70 centimeters and depth 15 to 20 centimeters) with traces of light fire. Inside of it was a strongly burnt raw brick. One remembers immediately the Iranian tradition of placing a brick on the spot where a dead person was lying. This has been done for driving away evil spirits. In the floor in the direction of the passage a deepening was clearly seen and most probably it appeared as a result of often throwing ashes out of the hearth. In the eastern wall besides the twelve niches there was a common (but definitely not a cooking) fireplace with a chimney. Its floor was burnt to a depth of 3 centimeters but the walls were only slightly burnt. One can clearly see three layers of burnt plaster that were the result of three consequent repairs. This "room with niches" most likely played the role of a sanctuary where a slow fire was burning and in the fireplace, the coal, burnt somewhere outside, was smoldering.

Special attention should be paid to the wall niches. This was the first case in the history of Central Asia that in one room so many niches were built. Though the excavations showed that the niches were empty still they recall the niches in some Zoroastrian temples where they were used for keeping the cleaned bones. Whatever their exact purpose, the concentration of so many niches in one room was probably linked with funeral rites of Iranian paganism that are as yet unknown to us. The unusual arrangement of this room was planned. An identical room with 12 niches inside the walls and a fireplace was found in the "palace" on Adji-Kui-3, another site of Margiana, that was partially excavated. Next to this room an extremely narrow room of a storage-room type was excavated (Sarianidi, 1998, Fig. 37).

From this room #48 a passage led into room #54 and then through two passages into the adjoining room #54a where two holes were preserved in the floor and in the western wall was a fireplace with a chimney. A corner passage from room #54 led into the neighboring room #83 where on the floor some stone carved pieces were found which were most likely parts of mosaics. At the western wall was a pit (diameter 75 centimeters) that widened at the bottom. The pit was completely covered with clay plaster

and was filled full of earth. The pit was probably made in the very early period of the complex and at one stage was filled up level with the floor surface.

In the eastern part of room #83 many small pits with an average diameter of 10 to 35 centimeters and a depth of 40 centimeters were excavated. Some of these small pits were empty while the rest were filled with strongly burnt animal bones. After the bones were placed in these pits they were covered with a clay layer on the level of a floor surface. The inside of these small pits bore no traces of fire which means that the bones were first burnt somewhere outside and then placed into the pits. The same type of small pits with the same contents were found in special rooms of the fire temple of North Gonur (Sarianidi, 1998, pp. 13-125) and also in the round temple of Dashli-3 in Bactria. Their cultic purpose is indisputable and it is clear that the pits were made in preparation for filling with burnt animal bones. In the western wall of the same room a heating fireplace was made with a vault in the shape of an arrow-like arch and a sooty flue.

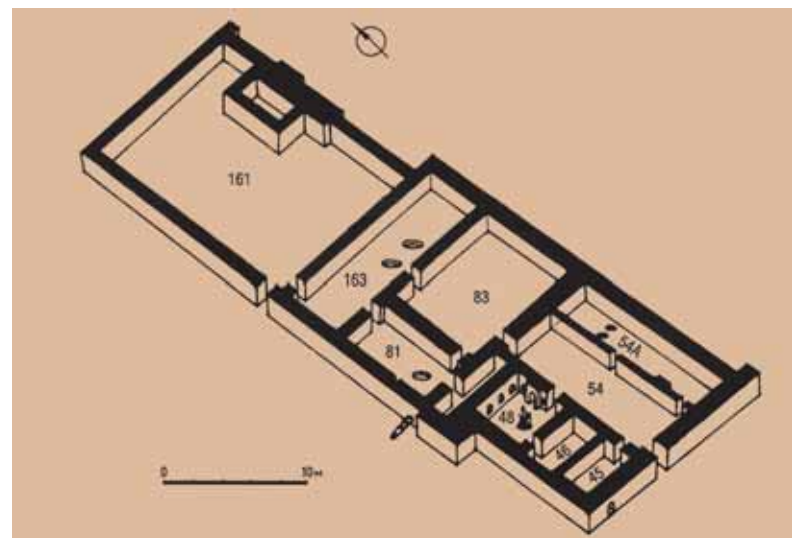
Next to the “room with niches” there was a very narrow “box-room” (room #55) identical to the one that adjoined the “dakhma” in the royal residence. Obviously these are all reasons to believe that they both had the same purpose. These were the rooms where stretchers with the dead and perhaps the instruments necessary for cult ceremonies were placed.

From the “box-room” the passage led to adjoining room #81 where the walls preserved patches of three layers of pure white gypsum plaster. On the floor in the center of the room was a shallow small pit (diameter 90 centimeters and depth 20 to 25 centimeters). It was strictly round and at the bottom one could see sediments from accumulated water. At floor level of the nearby wall there was a hole and through it three ceramic tubes were placed. Apparently they made up the drainage system for letting out wastewater. The sediments from water at the bottom of the small pit as well as the drainage system lead one to suggest that in ancient times this room was used for ritual ceremonies and washing of the dead was part of this funeral rite.

Two passages from rooms #81 and #83 lead into room #163. There two round pits (with the same diameter: 90 centimeters) were located along one axis and both of them had sediments from standing water at the bottom. Apart from the pits, in the southern wall a double fireplace was made that was most probably used for cooking sacrificial food. In the floor there were several small pits filled with carbonized bones. The only double hearth used probably for preparing sacrificial meat intended for funeral ceremonies was found there.

The last room (#161) was the largest in this complex. It looked like a hall with three to five layers of gypsum plaster. No traces of columns were preserved and still the gypsum plaster suggested their existence since they would have been necessary for the roof to rest upon. A rectangular construction was added to the eastern wall but apparently this was done some time after the general building had been finished. This was demonstrated by the presence of bricks with traces of secondary use. This rectangular construction was carefully capped with raw bricks from the very bottom to the top. Usually this was done in the very last stage and only in cult constructions with the sole purpose of avoiding the profanation of the room in the future. It is remarkable that in the whole “complex of funeral rites” no hearth for cooking food was found. This is additional evidence of its special purpose.

3. Axonometry of the complex of funeral rituals.



The “complex of funeral rites” deserves detailed study since it was the only construction dedicated to funeral ceremonies in the whole of the Near East. The main ceremony in the funeral traditions of those people was the washing of the dead, a fact suggested by pits with sediments from standing water at the bottom and a special drainage system as well as by a specialized break in the wall near the entrance.

The ethnographic literature gives a lot of examples that prove that the washing of dead took place among almost all ancient people. This ritual was widespread in Central Asia and in Khorezm they used a special room for this ceremony. According to these data in the place where the washing took place they first made a small pit with an isolating layer on the bottom and then over it some slatted wooden boards were placed. There is an opinion that this ritual was adopted by Zoroastrians under the influence of surrounding non-Zoroastrians in the medieval epoch (Krukova, 1997, p. 224) but the archaeological material gives evidence of its existence as early as the period of Iranian paganism.

It is clear that the washing ritual was not the only funeral ceremony that was performed in the complex of funeral rituals. Unfortunately except for a double chambered furnace for preparing sacrificial meat and a small pit in the floor filled with burnt animal bones very little has been preserved to the present.

The available archaeological material leads one to the conclusion that in the period of Iranian paganism there existed special buildings for the complex of funeral rituals, a type that resembled the Zoroastrian houses for the dead (*zad-i-marg*, according to the *Avesta*) where the funeral equipment was kept and all the funeral ceremonies including the washing process took place. All specialists agree that before placing the dead in a *dakhma* it was necessary under all conditions and independently of the season to bring the dead into such a house for the dead (V. Krukova, M. Maytarchiyan). In such “*zad-i-marg*” near the room where a dead body was kept for 3 days, a fire should burn continuously. This exactly corresponds to our case where in the “box-room” the corpse was lying; and in the adjoining room with niches (room #48) in the center was a hearth where a slow fire was perhaps burning for 3 days.

5.5. Chamber Tombs

For our subject a great interest represent burials in chamber tombs that in the *Avesta* are mentioned under the word “*k a t a*,” which means “a room,” “a storage place” or in other words “a house” a place where the dead were preliminarily placed (Maytarchiyan, 1999, p. 43). These “*k a t a*” were separate chambers used as temporary crypts where the dead were kept without having direct contact with the worshiped nature of the earth (Krukova, 1997, p. 219). The dimensions of these *kata* “should be wide enough and should not touch the head of a standing man, or his stretched legs and arms.” The chamber tombs of the Gonur necropolis correspond to this description and they really look like houses and have the dimensions close to those described in the *Avesta*.

In the previous chapter we mentioned that the majority of the chamber tombs had no preserved skeletons (even disturbed ones) but instead only the bone crumbles that were most likely connected with the ritual of secondary burial. At the same time it was documented that the chamber tombs were used as collective graves with a successive type of burial. Each new burial was accompanied by funeral ceremonies not known to us. But the presence of the models of double-chambered hearths with fire traces and vessels found in them gives one the right to assume that the funeral ceremonies performed therein were chiefly connected with symbolic sacrifices and cult libations. In other words, chamber tombs were in fact some kind of tem-

porary graves, from which totally decomposed corpses were after a certain time removed into another place.

Before leaving this short review of the funeral rites at the Gonur necropolis, we would like to mention one rare but very representative funeral ritual connected with the idea of a death-travel, the tradition of which goes as far back as the Indo-European unity. Shoe models that were found sometimes in the tombs in Greece (Hansen, 1980, p. 35) may serve as a material proof of this idea. In one tomb from the northern Afghanistan site of Dashli-3 (Sarianidi, 1986, Fig. 32) there were found two sun-dried clay miniature shoe models with upturned toes. Another well modeled and fiercely burnt pair of shoes was found in another destroyed grave at the same site.

Not only in Bactria but in a half destroyed grave dug in the ruins of the neglected Togolok-21 temple, a model of a shoe was also found, which testifies to the identity as a burial rite belonging to the BMAC tribes. The idea of travel to the afterlife world seems to be rather popular in Iranian paganism and later it could have been adopted by the Zoroastrians. It is worth mentioning that late Iranian Zoroastrians used to cross the legs of the dead because they had to make an unusual trip to the afterlife world. Quite possibly this custom originated in the very early period of Iranian paganism and in the course of time it has been transformed from placing the shoe model into the grave, it became the crossing of the corpse's legs.

According to G. Humbach three burial types were mentioned in the Videvdat: burials in the ground, on the ground and in a dakhma. The excavations at the Gonur necropolis showed that Iranian paganism knew all these types of burials. The excavated material shows that the most popular burial type was the first one – in ground (shaft and pit graves), the second type (cists and partial chamber tombs) was used much less. Classical dakhma seemed to be used only by rulers. On the other hand, as it was mentioned above, almost every grave in which the body was not covered with earth could be considered an individual “dakhma”.

Such situation seemed to be characteristic only in the very early period of Iranian paganism; it had changed by the time the Vendidad was composed. In the period in which the tradition changed, instead of the whole corpse, they buried the bones of the dead after his corpse was exposed on the dakhma. In other words they used ossuaries unknown before that time in Iranian paganism.

One can consider it is proved that the main part of funeral rites, presented at the Gonur necropolis has generally western origin. But it does not exclude the possibility that some local South Turkmenistan funeral traditions were practiced as well, like in the burials, where corpses in the pit graves were buried under earth.

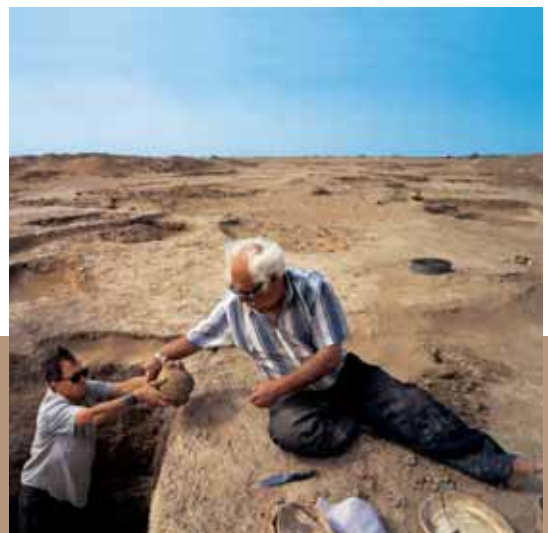
Strange as it may sound, it was the distant Palestine where the earliest and the most analogous burial traditions of this kind were found. There secondary burials were already known in the Aeneolithic period (fourth millennium B.C.) when the corpses were preliminarily exposed in the open air. In the Bronze Age, shaft graves for collective burials were used in this area. These graves were supposed to be completely covered with earth which was then removed for the burial of the next dead. The graves had up to 20 skeletons and contained some wooden furniture such as beds, tables and chairs. The formal similarity between the funeral rites of Palestine and the BMAC is perhaps in fact supported by real historical events, among them the role played by the first ancient migrations in the Near East.

The Early Bronze Age (third millennium B.C.) was characterised by the many variations of funeral rites but among them the practice of exposing the corpse and the secondary burial alongside shaft tombs with three or four catacombs stood out. The chamber tombs were used for singular burials as well as for family, or collective ones (Goner, 1992, p. 139). To a certain extent these rites recalled the funeral traditions of the Gonur necropolis though of a later period.

6

CHAPTER

MARGIANA AND IRANIAN PAGANISM



Extended large-scale archeological excavations of the Margiana temples as well as the present excavations of the Gonur necropolis give one reasons to suggest the ethnic origin of the local people. The lack of written sources in Margiana makes us unable to state definitely that it was the BMAC territory from which Iranian paganism was spread and later served as a base for the origin of the first world religion Zoroastrianism. Still we may refer to some later documents which to some extent may serve as a support to this point of view. Thus, “in Babylonia about 1760 B.C. there is named among the gods... a sun-god Suriias, who is generally interpreted as representing the Indo-Iranian “Surya-s”. Clay tablets from Egypt show that about 1400 B.C. there were various dynasties with Aryan names in Syria and Palestine.” (Boyce, 1989). The tablets from Bogazkey synchronous to the Mitannian records have preserved names of Aryan deities (Mytra, Varuna, Indra and Nasatya). Also it is remarkable that for the first time the Indian names appeared from the areas to the West of Iran. We should mention here that according to the opinion of M. Boyce it was not a mass tribal migration of Mesopotamia and Anatolia but an expansion of separate groups of military adventurers and merchants (Boyce, 1989, 1, pp. 15-17). Usually in a similar situation when no written documents exist, our main source is archaeology, which helps to establish if there was a link between the material, technical culture of a society and religious beliefs that might later be recorded in writing.

If one suggests that Iranian paganism existed in the territory of the BMAC it is logical to expect that the material data of the first world religion that originated on this basis should be found in this area. It is known that Zoroaster did not invent a new religion; he only reformed the then existing ancient Iranian religious philosophy whose roots must have been preserved in Iranian paganism.

At present the old material from the excavations of the Margiana temples was supported with the new data obtained during the excavations of the Gonur necropolis.

The earliest fire temple was built by the first colonists of the ancient basin of the Murgab river at North Gonur at the end of the 3rd millennium B.C. simultaneously with the palace.

These two impressive buildings were joined by a special passage for the use of the ruler's family in getting to the temple without leaving the palace. The fire temple has already been described in detail (Sarianidi, 1998, pp. 120-130) and here a general review of it will be given.

At the central area of the earliest first temple an inner yard was located. The yard was clearly divided into two main parts: the cult one on the north and the subsidiary one on the south. The altar square was located in the main cult part of the temple behind a high blind wall. It consisted of five rectangular chambers, dug in the soils, which were covered inside by bricks with slight signs of fire. Rectangular brick containers, also dug in the soil and covered from inside by bricks with slight signs of fire, were located next to the altars. The containers

were filled with clean white ashes (with no admixtures) that were gradually transferred to these “containers of sacred ashes” from the nearby altars. At the time of excavations these and other “containers of sacred ashes” were tightly blocked by bricks, as it was practiced in Margiana with cult and religious constructions in order to avoid their probable profanation in the future (Sarianidi, 1998, pp. 120-130). The same ritual of separating ashes into several categories according to their presumable importance is still practiced by many Zoroastrians. The cleanest ashes are gathered in one special place, that was represented by the “container of sacred ashes” in ancient times. Everything said above leaves no doubt that the temple is certainly devoted to fire.

The second fire temple, built over the ruins of the first one, also reveals preserved altars of fire and next to some of them the same containers of sacred ashes were found. There two altars were built, one on top of another. When the altar that was built first on virgin soil was destroyed, they carefully sealed it over with bricks and built a second one on top of it. The desire to keep altars in the same special place testified to the important role that fire played in this temple.

Some kind of a “sacred area” was located in the Northern part of the second temple, being isolated from other buildings behind a blind wall. It consisted of a central sanctuary and a few subsidiary constructions, grouped around it. In the interior of this sanctuary five wall niches, or “blind windows” in other words, were preserved. There was no doubt that the niches were used as altar niches. Between two such “blind windows” a double oven was situated, and it was used for preparing sacrificial food. Near to this place but beyond the outer wall of the sanctuary there was either a fire altar or a “containers of sacred ashes”, placed on special rising ground and preserved in a very poor condition (Sarianidi, 1998, Fig. 63).

Finally, when the second temple came to desolation too, the third temple was constructed on its ruins. This one was planned in a different way, compared to the previous ones – its central inner yard was occupied by original “cells” from three sides. But its main cult microcomplex, like in the previous sanctuary, was also represented by premises with “blind windows” and a double oven for preparing sacrificial food, located between the latter (room #70). At the Northern part of the third temple there was a large “yard”. In one of its corners five “altars” of different configurations (round, square, rectangular) were located on rising ground, all having traces of fire but of varying intensity. At the opposite corner of the “yard” a “container of sacred ashes” was located (Sarianidi, 1998, Fig. 65). We can also note that a similar group, consisting of five “altars” with different configurations and varying degrees of inside burning, was found earlier at the altar area of the Gonur temenos.

Only several premises of the fourth temple were preserved. One of them, with a “blind window”, was located on the outer wall of a fort, testifying that this temple was built when the fort became much smaller and when its eastern face wall was already ruined.

Also the “blind windows” in the form of blind walled niches decorated with “teeth” on each side played an important role for our subject. These windows were found only in the rooms with a special purpose, mainly cult activities. They decorated the interior of sanctuaries of the fire temple mentioned above (Sarianidi, 1998, Fig. 63, 64, N. 1), of ceremonial rooms and sanctuaries of the North Gonur palace (Sarianidi, 1998, Fig. 38). They were also found in Bactria in the sanctuaries of two Dashli-3 temples. Farther in the western direction they were found in the Mitannian temple in Tell Brack where the altar niche was represented by a typical blind window. The ruling elite of Mitannian society undoubtedly had an Indo-Iranian origin and due to this the existing parallels between its temple architecture and Bactria and Margiana are very impressive. The identical form of altar niches (the most important and representative temple elements) was additionally confirmed by a such architectural detail as blind windows that in addition to Margiana were found in such far away areas as Midia (the indisputable fire temple of Tepe Nushi Djan) and the Urmian region (Hasanlu, Baba Djan). The fire temple of Tepe Nushi Djan was of a later period than the temples of Bactria and Margiana and was definitely dedicated to the cult tradition of the Zoroastrian religion. M. Dandamaev even suggests revising the present idea that says that in the Zoroastrian religion there were no temples (Dandamaev and Lukonin, 1980). The blind windows of Tepe Gavr already in the fourth millennium B.C. indicated their North Mesopotamian origin as they continued to be used there up to the middle of the second millennium B.C. (Tell Brack) and the beginning of the first millennium B.C. in the Urmian region and in Midia. In the BMAC this tradition of blind windows was introduced by the migrating tribes and their genetic link with North Mesopotamia seems absolutely clear.

It is a fact that the cults of fire and libations of the soma-haoma type were the main ones in the Zoroastrian religion. In Margiana the tribes in Iranian paganism first of all worshipped the fire and cult libations that in the Avesta are called haoma and in the Rigveda soma. In honour of these cults monumental temples were built where a drink of the soma-haoma type was made and used and where simultaneously the fire was burning in altars.

The principle of planning and the purpose of three other temples, Togolok-1 and Togolok-21 as well as Gonur temenos, differed from the fire temple described above. They all had identical planning and were dedicated not to one but to two cults: those of fire and also to the hallucinogenic cult drink of the soma-haoma type. All of them had special so-called white rooms for the preparation of this drink.

Discovered for the first time in world archaeology at such an early historical period, all temples of Margiana yielded remains of ephedra, hemp and poppy pollen (Sarianidi, 1990). Moreover, all the equipment necessary for the production of the hallucinogenic drink were found in Gonur temenos. Very impressive and significant were the pressing stones with half spherical projections in the center of them (in the Avesta “haoma” means “squeezeings”).

All temples of Margiana have yielded stone grinders, mortars and special grinders for corn in such a great number that it obviously exceeded the real necessity of these things in the every day life of people. Rather often they preserved microscopical remains of alkaloid plants on their working surfaces.

In the temples there were found special rooms (in the Gonur temenos about 30 of them) where huge pithos and “small baths” with inner walls plastered with thick layers of gypsum with remains of the alkaloid plants (mainly hemp) were located. These items were obviously used for soaking of plants in the process of preparing of the juice.

Absolutely all the temples had special “white rooms” where the final step in the process of the preparation of the soma-haoma type of juice took place.

For the separation the juice from small parts of the alkaloid plants they used ceramic strainers or some

vessels with perforated bottoms. The ready-made juice was flowing down into small vessels through the strainers that were placed on special small ceramic platforms. Except for the temple of fire all the other Margiana temples contained these artifacts which undoubtedly prove that these temples were used for the preparation of juice of the soma-haoma type.

The prepared drink was first poured into cult cups with sculptured rims and then into small cups used by priests. Such cult vessels with sculptured friezes were found in all three Margiana temples (as well as in the plundered tombs of Bactria). Five small cups used by priests for drinking the prepared juice were found in the Togolok-1 temple. Vessels decorated with sculptured friezes were characteristically found not only in the BMAC but also in Asia Minor and the Aegean world (Sarianidi, 1998, A, Fig. 1). There (Beichesultan) such cups and the opium poppy were known from very ancient times (Merlin, 1984). Worth mentioning were small bone tubes with facial images from Cyprus (Morris, 1985, Fig. 263-268, Pl. 190). They were almost identical to the ones found in Margiana temples and were probably used for ritual drinking too.

The paleobotanical analysis of alkaloid plants from the Margiana temples were made by Professor N. Meyer-Melikyan in the laboratory of Moscow University and the results were published in two special articles (Meyer-Melikyan in Sarianidi, 1998, Appendix). These results were disputed by A. Parpola and F. Hiebert but with hardly any basis. The materials taken for the repeat analysis were exposed to the open air for five long years and naturally cannot be considered accurate.

In both Margiana temples (Togolok1 and 21) in their central parts there were some kind of low platforms that originally were probably located somewhere else outside the temples. The tops of both platforms were fully covered with fragments of broken ceramics. Quite possibly these platforms were used for killing the sacrificed animals whose blood was flowing down along the drainage system that was also excavated there.

So, one may see that the Margiana temples were the only ones in the whole Near East where all the artifacts necessary for the production of the hallucinogenic juice of the soma-haoma type were found. Also, the Margiana temples were devoted to two cults that are the focus of the Avesta and Rigveda and were most beautifully described in them. These were the cults of fire and of the hallucinogenic drink soma-haoma.

There were two different types of altars in these temples that deserve our special attention. One type is represented by typical rectangular altars of the type described above (fire temples of Gonur, Togolok-21 and Gonur temenos). One may have an impression that such rectangular altars were used for sacrifices to fire when the sacrificial meat was placed on the flames of burning coals (Boyce, 1989, p. 153). After that the carbonized bones were put into small pits mentioned above. The second type was represented by two round brick altars constructed on virgin soil and dedicated to different deities. On the present-day surface these altars that were used for cult libations and ritual drinking of soma-haoma drink had preserved only brick fences about 0.5m high. This statement is supported by the finding of a small tube used for drinking this juice and by a "pot" of some dried out liquid found right at the entrance to the altar. The laboratory analysis showed that this dried out pot had most probably contained milk and a kind of fat (prof. N. Meyer-Melikyan, Moscow University). According to linguists' opinions, these were exactly the ingredients used by the Zoroastrians for cult libations. A special entrance to this altar that allowed priests to approach it and to pour the ritual liquid on its surface serves as additional support for our contention.

According to Indo-Iranian rituals the fat liquid that priests poured into the altar ran down onto the smoldering coal which burst into flames that carried the sacrifice up to heaven. Strabon saw how Persians made sacrifices to the fire and one Italian traveler of the 17th century witnessed how in the Zoroastrian tem-

ple of Isfahan the local Zoroastrians threw a fat ram's tail into the fire. These practices seem to be very similar to those mentioned above and especially to those from the Togolok-21 temple. If one compares these written records with the altar construction at the Togolok-21 temple, it is easy to see great similarities.

Indeed, in the temple of Togolok-21 the special construction of the altar in the form of a cup with standing sides and signs of fire in a tiny oven at the bottom (Sarianidi, 1990,) helped the fat to flow easily down to the fire. So it is easy to imagine the whole procedure. Fat, flowing down into this small oven and reaching there smoldering coals, burst into fire, and the high flame rises to heavens, carrying sacrifices to the gods.

Thus, it is documented that Iranian paganism used two different types of altars (one kind for fire and another kind for libation), which can be compared with the ones of ancient Zoroastrians.

The altars in Margiana temples were very low and in this respect differed from the classical altars which usually reached upwards. It has already been stated that "Fire was always present at the Indian and Iranian rites, burning in a low container at a level with the priest's eyes and hands as he sat upon the ground" (Boyce, 1989, p. 167). Thus, Margiana altars fully correspond to the description of altars of the Iranian paganism. According to the studies of G. Lerner the Zoroastrian altars in the beginning of the first millennium B.C. were low (not higher than 0,5 m).

All the known altars of Margiana temples were situated in the open air instead of in closed premises. This fully corresponds to the cult traditions of the Indo-Iranian tribes that already in antiquity were characterised by extremely simple rituals in the open air. "The Indo-Iranian tradition of worshipping in the open air or at the hearth-fire, without temples, images or altars..." (Boyce, 1989, p. 21). Based on this statement the opinion was formed that Zoroastrians knew no temples. But in our opinion, this idea about temples should be revised. And this should be done on the basis of the undisputable fire temple from Tepe Nushi Djan that was mentioned in the Assyrian documents (M. Dandamaev) in spite of its location in Midia. Also

1-10. Various images of Kersaspa.



the fact that rituals were performed in the open air did not deny the existence of temples. The fact of the matter is that all open altar squares of the Margiana temples were situated within the temple limits.

It is very impressive that the altars of Margiana temples were always located in different secret places hidden from the eyes of the uninitiated. Thus, the altar squares of the Togolok-21 temple were built in the corners of this monumental complex and the altar square of the Gonur temenos was located in a special place with a blind fence somewhere in the “back yard” of the temple, hidden from the eyes of the initiated. This situation found its direct parallels with the cult traditions of the Zoroastrian religion.

Next to fire altars of both the Togolok-21 temple and the Gonur temenos, there were two rectangular brick fences which initial height did not exceed one meter. This type of fence, either laid brick or simply drawn on the ground surface is known among the modern Indian Zoroastrians under the name “paviâ”. According to the believers these were the places where Gods were seated and in their honour the fire was burning in the altars (Boyce, 1989, p. 166).

The composition on one cylinder seal from the temple Togolok-1 gives one an impression that in Margiana the ritual ceremonies were accompanied by noisy music (drums) and various dances and acrobatic numbers (Sarianidi, 2002, p. 276).

It has already been mentioned that in the burial #2790 there was found a pin with a facial image of a man. Most probably it reflected the greatest hero Kersaspa who is characterized in the Avesta as a “ferocious”, “savage”, “disgusting” person. The images found in Bactria and Margiana fully correspond to these definitions. (Fig 1-10). One may assume that at the end of the third – beginning of the second millenium B.C. Kersaspa was depicted either as a winged beast with a snake’s tail (Fig. 10), or as an anthropomorphic monster whose arms were represented by aggressive twisting snakes with widely open jaws and unnaturally big severe eyes (Fig. 2). To make him look more ferocious they showed him with hair that stood on end and fluffy whiskers. The whole image of this monster seems to correspond to the description of Kersaspa in the Avesta.

New material that was gathered during the study of ancient burials --mainly of the Gonur necropolis - - should be added to the archaeological data resulting from the excavations of Margiana temples and palaces in the last quarter of the century.

Also it should be noted that the absence of any



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statuettes of deities is one of the characteristic features of the Margiana temples. Indirectly this may prove that the temples were devoted not to a certain deity but rather to some natural substances such as fire or ritual drinks of the soma-haoma type.

Based on the material from the Gonur necropolis we can decide that fire played an exceptionally important role in the funeral rites of Margiana or in other words in Iranian paganism. The fire traces were seen almost everywhere. It was used for purification of graves and pits where people with different physical anomalies were buried. With the same aim, niches with miniature models of ritual hearths with traces of fire (used for ritual sacrifices and cult libations) were found in all the chamber tombs. All the ritual memories were connected in some way with fire and for this reason "small memory pits" filled with charcoal were made in the area between the graves. The double hearths located in the territory of the necropolis served the same purpose.

It is a known fact that according to the Avesta the burial of corpses in the pure earth was strictly prohibited and that the Vendidad foresees punishment for burying corpses of dogs or people since they could cause the profanation of the earth (Maytarchiyān, 1999, p. 101). The archaeological material from the Gonur necropolis documented that this fundamental principle of Zoroastrian funeral rituals was recognized and observed by the Margiana tribes. Almost all the dead were buried without the earth touching the corpses. The only exception was represented by fractional burials, but even in this case the earth covered not the corpse but the bones cleared of flesh. This general motif of minimizing direct contact between the dead and the earth can be traced through all five burial types at the Gonur necropolis (shaft graves, chambered tombs, cists, pit graves and fractional burials). True, each of these types of burial (as for example, shaft pits) was common in Eurasia but such a strong similarity in all five types has not been noticed anywhere else so far. It seems that identical funeral rituals of Iranian paganism and the Zoroastrian religion cannot be explained by simple coincidence but rather testifies to their close, even genetic, links. The basic funeral rites of Iranian paganism seemed to be adopted by Zoroastrianism almost without any change, a fact that had significance for our subject.

The many and various funeral rituals of the last centuries of the third millennium B.C. were traced up to the end of the second millennium B.C., as one may see in the burials of North Bactria, chiefly those of Bustan (Avanesova) and later they were absorbed into the early Zoroastrianism. It gives no ground to question their genetic links.

The temporary graves, one may say, were rather widely used in the BMAC zone and its diaspora. This statement is based on the material from the graveyards of South Tadjikistan (Tandyrioul, Kumsai and others) and Northern Pakistan (Swat). Linguists state that this funeral rite was mentioned in the Avesta more than once, they say that "...if the dead can't be buried immediately after his death then his corpse should be placed into a temporary tomb" (Krukova, 1994, p. 293). It has direct instructions on how to take the dead from the temporary graves and place them in the dakhma for the bones to be fully cleaned of flesh. In the Vendidad there is a detailed description of how the temporary grave should be built: 8.8. "And then let Mazdayans dig a pit here, in this ground, half a leg deep in the hard (soil) and half a man's height in the soft (soil); let them bring here either ashes or (dry) manure and top them with bricks or stone, or dry clay, or litter." In other words they should dig a simple pit and line it with dry material that would serve as a layer for the isolation of the ritually pure earth from the unclean corpse. The main sense of the passage describes a temporary grave (Krukova, 1997, p. 236). It is significant that in the isolation materials they included dry clay (which can imply sand, according to M. Maytarchiyān), a material which made up the soil of the Gonur necropolis.

The Avesta does not condemn -- to the contrary it welcomes -- the digging up of corpses -- and con-

siders it a good action. To the question of “who is the first one to satisfy this land more than anyone else?”, Ahura Mazda answers: “Those who dig out the corpses of the dead people and dead dogs.” According to the new Persian rivayats the corpses should not simply be dug up but exposed in the dakhma.

This gives reason to believe that the custom of burying the dead in temporary tombs practiced by the tribes of Iranian pagans in the third-second millennium B.C. in Margiana (and more widely, in the whole zone of the BMAC) was later accepted by the Avesta Zoroastrians and continued into recent history.

Chamber tombs have been found only at the Gonur necropolis so far. However, in general, the types of graves in the BMAC zone were defined by M. Gimbutas as typical funeral constructions of Indo-European people, including the Indo-Iranians. The excavation of more than 40 chamber tombs (presumably k a t a by the Avesta) left no doubt that the local aristocrats buried their relatives according to the ancient Iranian rites. They used for them stone graves that were made in the shape of simply furnished houses and were located next to inhabited houses. This type of burial seems to find its parallels in the Videvdat: “There the breathless corpse will be left for two nights, for three nights, for a month until birds start to fly again, until plants blossom, the underground waters run and the wind dries the earth. When birds fly again, plants blossom, underground waters run and the wind dries the earth the worshippers of Mazda place the corpse in the sun.” The expression “place the corpse in the sun” may indicated the secondary burial wherein the skeleton was removed from its original place and reburied and in the grave only “bone crumbles” were left.

It would be naive to try to find direct analogies between the funeral rituals of the Iranian paganism and the contents of the Videvdat which are separated by over two thousand years. On the other hand, the archaeological material of the Gonur necropolis yielded secondary burials that were described in the Avesta, the sacred book of Zoroastrians.

Later the theory of M. Gimbutas gained support from other specialists as well (Jones-Bley, 1997). The Indo-European character of this type of burials was demonstrated by Mycenaean tombs that were painted in the shape of houses as well as drawings of burials in the shape of a house are shown on Greek pottery. The expression “House of Hades” (Hadesh was the God of the underground) was used by Greeks when speaking of the world of the afterlife. The same is true for the Rigveda where the expression the “House of Yima” (Yima - the ruler of the underground world) was used for the description of a grave. The Rigveda directly said that a grave was a “clay house” (RV VII, 89.1). Also it contained a recommendation that the grave should be done in the shape of a house (RV 18.11-12). In the Rigveda we meet such an expression “I would not like, O!Varuna! to leave for the earthen house” (translation by T. Elizarenkova), as well as a hymn where a warrior asked to be buried in the ground “as mother wraps her child in the hem of her skirt” (RV.10.18.11).

The Zoroastrian “dakhma” was a special construction (M. Boyce) that according to the Videvdat was not a way of burying but “...was a universal name for any grave where a dead body was placed” (V. Krukova). In this case literally every type of grave in the Gonur necropolis can be looked upon as a dakhma because all the dead in them were buried in a kind of emptiness; that is the earth did not touch the corpses.

H. Humbach was first to suggest that there were two types of dakhma: open squares for exposing the dead in the open air and closed graves in the way of a burial vault. True, according to H. Humbach the second type was not Zoroastrian. On the other hand V. Krukova doubts this contention and finds the proof texts in the Avesta where they speak about “dakhma that were constructed” and “let them build a wall on all the sides” (V. Krukova, 1997, p. 212). From the archaeological point of view the dakhma found in the palace of North Gonur seems to belong to dakhma of the second type, to those built of brick.

In this connection one should mention certain elements of ritual cleaning when dakhma with corpses “were washed with rain water.” Indirectly this can be linked with the traces of rain found inside the dakhma of the Gonur palace. Also this may prove the existence of special roofs (covers) that let the rainwater inside the dakhma.

The linguists still dispute whether the corpse exposure was only a Zoroastrian or a general Iranian custom. The last excavations in Margiana support the second assumption. At present it may be shown that such complex and specific funeral constructions as dakhma were known in Margiana in the period of Iranian paganism. In any case the members of a ruler’s family had their dynastic mausoleums that simultaneously functioned as dakhma. In the course of time the forms of dakhma could have changed but from the eve of the third millennium B.C., that is, from the time of Iranian paganism, its main idea remained unchanged. This concerned the aspiration to protect the pure nature of the earth from contacts with decomposing corpses.

Later the custom of Iranian paganism to build dakhma was assimilated into Zoroastrian funeral rites and turned into the single manner of burial. Along with this custom, it should be noted that ossuaries did not exist at that time and should be looked upon as a later innovation.

The complex of funeral rituals can probably be compared with the “home for the dead” of the Avesta (*z a d m a r g o r, n a s a h a n a*) that no dead body nor the members of ruler’s family could avoid (V. Krukova, 1997, p. 219). Irrespective of conditions and seasons of the year, all Zoroastrian dead should be first placed into the “house for the dead” before exposing the corpses in the dakhma. The funeral complex of the Gonur palace was supposedly devoted to different rituals but we can believe that almost the most important one was the ritual of corpse washing. In order to minimize any contacts of a corpse with the earth the floors of the complex were covered with gypsum layers and the impure water after the corpse washing ran out through a special drainage system.

There is an opinion that the ritual of corpse washing did not exist in Zoroastrianism since contact between the dead and the element of water was not permissible and since the Videvdad does not mention it. It appeared though in the Medieval Ages (Krukova, 1997, pp. 224-225). But the archaeological material illustrates that the process of corpse washing was most important in “Iranian paganism” and the large building of the “complex for funeral rites” was erected especially for this purpose.

Zoroastrian ideas about the contact of water with a corpse as well as the burnt walls of graves reflect the dual attitude of the Zoroastrians to “pure nature”. However, this duality should not be regarded as an absolute argument against existence of such rites in ancient times. It is worth mentioning that Indian Parsees were not allowed to use water for corpse washing but instead used “gomez” (bull’s urine) for this purpose. According to Zoroastrians death is the “triumph of demons” and the purpose of purification was the exile of the demon. In this regard it would be only logical to suppose that Zoroastrians included the ritual of corpse washing for the purpose of exorcising the demon during their funeral rites.

According to Zoroastrians water was of divine nature that helped to cure illness, to overcome death, pain and to exile the demon of corpse decomposition. The gypsum floors in the rooms that were probably used for the washing rituals protected the “pure” nature of earth from profanation by water from corpse washing because the latter could not remain absolutely “pure” after the process. And in order to let this water out of the room they built a special drainage system.

Zoroastrians believed that after the death the spirit was floating near the dead body’s head for three days and nights and during this time a fire was kept burning in the adjoining room (Krukova, 1997, p. 219). They needed the fire to protect the spirit from the evil forces of the demon, and so the fire should be burning all

this time. In this connection one can recall a special “box-room” (an extremely tiny premise in the “complex of funeral rites”) where judging by its size the dead was kept, as well as the adjoining “room with niches” where a light fire burnt day and night. The burning of the fire for three days and nights was a necessary part of the Zoroastrian funeral rites because they believed that it could ease the sufferings and could even “warm up the blood and help to restore the breath to the body” (Maytarchian, 1999, p. 32).

Just in the same way small pits with animal bones that were carbonized somewhere else demonstrate other rituals related to sacrifices to fire that were observed in the period of Iranian paganism.

It is interesting to note that the soul of the dead needs support “just as a newly born baby needs protection and food”, according to the Zoroastrian funeral beliefs (“zenderavan”). It is an accepted assumption that this ritual directly relates to the “pre-funeral repast”- an action, taking place before death when the special food, prepared for the dead, is eaten. In this connection one may turn to the room #161 with a double hearth at the “complex of funeral rites” – the only hearth in Margiana that was so strongly burnt inside. May be it was due to repeated preparations of food for the dead during those three days when they were still on the Earth?

Additional proof that it was funeral rites, taking place in the complex, has been based on one very important archaeological fact, documented during excavations of the “complex of funeral rites”. We remember that in the funeral complex on its facade beside the central entrance there was another one that looked like an opening or a break. The small size of the break (85 by 65 centimeters) was surely not wide enough to be used as a passage but it was large enough to bring in a corpse. This is very important for our subject because it fully corresponds to the Videvat which says that the corpse should be passed not through the entrance of the “house of dead” or “zadimarg” but through a break made especially for this purpose: “...then let the Mazdayans cut out an opening in this house” (8.10, translation of V. Krukova). The main entrance symbolised birth while an opening (the break) corresponded to the idea of death and hence the name “the house of birth and death.” Such a rite was described by Jackson who wrote: “In z a d m a r g – h a n a there were two doors one of which was used for bringing the corpse in and the other – to take it out. This procedure should symbolize the idea of birth and death”. Iranian Zoroastrians carried the corpse from the “house for the dead” to a dakhma, almost the same process as the one that existed among the “Iranian pagans” and which survived almost until our days and can be traced in the present Zoroastrian funeral rites.. It is likely that there was a passageway between the dakhma and the complex of funeral rites, which was used for performing different funeral rituals including the corpse washing. It was probably used for the members of the ruling family and at the end of the process the corpse was brought back to the ruler's residence. Then a brick entrance to the dakhma was opened and the dead body in the usual crouched position on the side with the head generally oriented to the North was placed at the entrance.

Ending reconstruction of funeral rites, it is necessary to note probable participation of a dog in those funeral ceremonies. This point of view is indirectly based on burials of dogs at the Gonur necropolis that with only one exception have been usually made in burnt graves. It is well known that a dog played a crucial role in the ancient Iranian ritual of “sagdid” – “being looked at by a dog”, when a dog was repeatedly taken to the deceased so that the dog's intent look can drive away a demon of decomposition from the dead body. This procedure has been directly described in Avesta. On the other hand, contemporary Zoroastrians bury a dead dog like a human being, and this ritual manifests one more time an important role of this animal. At a first glance, dog burials at the Gonur necropolis also seem to prove that the animals enjoyed a great role in local society. But it has been shown above that the burnt graves of the necropolis were used for burying only “impure” humans (dwarfs, monstrous persons). Besides, at the burial #1939 a dog was probably “thrown down” into the grave though there was

enough room in the pit. Another dog's burial let in the ruins of an encircling wall, was revealed in Area 5.

It looks like though a dog and a man were equated ("common essence of a dog and a human being"), a dog was viewed ambivalently. On the other hand, it was extremely necessary in funeral rites (purifying corpses, ritual of looking at the deceased), and because of this among the living it was arousing emotions of respect and at the same time of disgust. The dogs were valued, but people were also afraid of them and to some extent they despised dogs, - just the same attitudes as to those persons who were washing and carrying corpses. Probably this can explain the fact that dogs had been buried at the same graveyard with humans, but in the preliminary burnt graves. As a rule, the latter were used for burials of the most "impure" dead.

It seems very likely that a dog has played a special role among the ancient Margiana people. On the present stage it is hard to define it exactly and we hope that future studies will shed light on this.

The facts mentioned above may lead to the conclusion that the BMAC belonged to Iranian paganism and that many of its religious and cult traditions in a different form were later included in the first world religion, Zoroastrianism. This is not strange if one agrees that in ancient ideological representations, the funeral rituals were surely the most conservative ones and were the last to be changed.

Summing up archaeological facts and interpretations, presented in this work, we can conclude that, besides the BMAC, at present no other archaeological culture in Eurasia has even a fraction of those features that link it directly to the Indo-Iranian paganism and Zoroastrianism. In other words, the BMAC culture represents the Iranian paganism, which in its turn may contain the roots of the later Zoroastrian religion.

Finding and excavating the BMAC culture means finding the new Indo-Iranian world, where for the first time the roots of the first world religion can be traced so vividly and clearly. It is also true that, along with the fundamental common features, there are certain partial differences between the BMAC culture and the one described in Avesta and Rigveda. Naturally, these dissimilarities require thorough further investigations.

Many of these discrepancies can be attributed to the fact that by the time when the Avesta was codified some rituals and ceremonies, dating back to the epoch of Iranian paganism, had been already transformed during those two thousands years or had failed to meet the new realities and thus had been changed for those forms that survived till now. Besides, at this time there probably existed several versions of the same rituals, and Avesta absorbed only those that were the most popular among ancient Zoroastrians.

But it looks like now the most important are terminological misunderstandings and differences in understanding the same parts from the Avesta. This leads to situation when scholars do not fully understand each other. For instance, G. Fussman in his extremely important report "Fire in temples, temples of fire, and practice of Aryan cults", delivered at the International conference "Cultural Heritage of Turkmenistan" (Ashkhabad, October of 2000), places the time of Zoroaster at a much earlier period than the time when a proto-Zoroastrian fire temple of Togolok-21 existed. But in this case really important is not the exact chronological sequence, but the fact that this temple once belonged to a period of "Iranian paganism", lasting for many centuries a long time before appearance of the new prophet Zoroaster. The role Zoroaster had actually played, according to G. Fussman's correct opinion, was that of just "ritualizing" the already existing rites and customs.

It is obvious that many more cases of such mutual misunderstandings, often of terminological nature, can be presented. But it is really important that now, after finding "Iranian paganism" in the BMAC culture, we can see new perspectives in the studies of history of Zoroastrianism. It seems that for the first time we have an opportunity to control some disputed issues from Avesta with the archaeological materials, tracing them deep into the ages up to "proto-Zoroastrianism" and "Iranian paganism".

EPILOGUE

My present book sums up the 30-year results of field excavations and studies of Iranian paganism and proto-Zoroastrianism based on the archaeological materials of Margiana and Bactria.

Over a quarter of a century ago I was hardly the only one who said that the culture of Margiana appeared as a result of the arrival of new tribes not from South Turkmenistan but from areas farther West, located in the advanced centers of the Near East and more precisely from the area of modern Kurdistan. It took me almost thirty years to prove this idea, to prove that this hypothesis is an archaeological reality.

The problem of the Indo-Iranian origin of the new tribes seems rather complicated. Nevertheless I put forward and formulated a hypothesis on possible Indo-Aryan genesis of the BMAC tribes almost at the start of my archaeological excavations in Margiana. Later this view has been backed up many times by archaeological facts, originating from Margiana (Sarianidi, 1989, p. 52-65). Though this new hypothesis gained no support from other specialists till the latest days, it was very important for me that no one could ignore facts about the BMAC when reviewing the Indo-Aryan problem. In this respect it is important to stress that Prof. D. Mallory (ELEC, 1997), the leader of contemporary European studies, is gradually moving to this point of view despite the fact that we share opposite assumptions about “steppe” or “farming” origins of Indo-Iranians.

As it was cited above, new results of excavations at Gonur and other BMAC sites “have certainly changed the landscape of all current discussions on Indo-Iranian origins”. (J. Mallory).

Also, C. Lamberg-Karlovsky in his last work (2002) writes: “One conclusion can be readily stated: there is not a single artifact of Andronovo type that has been identified in Iran or in northern India. The same cannot be said of the BMAC”.

The excavations of the Gonur necropolis in the last five years gave new proofs to the fact that the BMAC represented Iranian paganism that could have started the Zoroastrian religion. For the first time the data on funeral rituals of the BMAC revealed the Indo-Iranian roots of the future Zoroastrian religion and no other archaeological culture of Eurasia had so distinct features.

In the present work I have tried to present new archaeological facts and conclusions that can be used in a new approach and interpretation of the Indo-Iranian and Zoroastrian problems. It is a fact that the old traditions and ideas do not easily give way to the logic of a new way of thinking. I have no doubt that I can convince my colleagues in the rightness of my theory. But on the other hand I do not doubt that one can ignore the factual material presented in my book and in the works of other specialists on the Indo-Iranian problem as well as the effects these materials could have on the problem of the origin of the Zoroastrianism. None of my present and future critics can ignore the facts that saw the light in the numerous and wide-scale excavations in Margiana and partly in Bactria. These facts make one to present new evaluation and historical interpretation of these largely new and enormous materials.

There is no doubt that the palaces and temples of Margiana were devoted to the fire cult and the cult of the hallucinogenic ritual drink of the soma-haoma type. Add to that the results of the Gonur necropolis excavations where one can clearly trace the cult of the “pure” earth that should not be polluted by a decomposing corpse. Naturally, I accept and agree that these facts can be interpreted from different than my own historical point of view, but these facts cannot be discarded.

None of the future studies on the Iranian paganism and “proto-Zoroastrianism” problem can ignore the materials on the BMAC, and the BMAC phenomena will be studied thoroughly. One does not have to be Clytemnestra to foresee that ideas and conceits of future authors will differ from those proposed in this book. But it is also true that the old theory of the Andronovo origin of Indo-Iranians should be revised in the light of the factual material described above. A new and radically different one should replace it. The main idea of this new theory was given in the present work.

The book has already been written when in 2004 the excavations at Gonur brought to light a royal necropolis with some magnificent tombs decorated with subject mosaic panels. The funeral gifts of these tombs consisted of gold and silver vessels, gold jewelry and stone sculptures. Here are some pictures that demonstrate the beauty of these finds.



11



12



13



14



15



16

Royal sepulture # 3210. Mosaics "Winged Lion in cartush".

11, 15. Royal sepulture #3210. Detail of the mosaics "Pairs of Winged Lion".

12. Royal sepulture #3210. Marble head from the composite statuette.

13. Team of the expedition.

14. Royal sepulture #3210. Mosaics "Pair of Winged Lion".

16. Royal sepulture #3210. Mosaics during clearing.

MY REPLY TO PROF. C. LAMBERG-KARLOVSKY

As I was finishing the work on the second edition of my book “Necropolis of Gonur” the American journal “The Review of Archaeology”, N. 24, 2003 published the review by Prof. C. Lamberg-Karlovsky of my last five books on the study of the Bactrian and Margiana Archaeological Complex (BMAC). The insulting manner in which this lampoon was written couldn't leave me indifferent and though the text showed terrible ignorance of the factual material along with the exaggerated sense of the author's grandeur and exclusiveness I have decided to write a reply.

It should be noted that this is the second time when our respected professor celebrates the beginning of a new year with the publication of moralizing admonitions in which a scientific discussion with colleagues is replaced by the mentor lectures and rhetorical discussions (see, Lamberg-Karlovsky, 2002). On the eve of 2004 Lamberg-Karlovsky has decided to concentrate on “slaughtering” my last five books which have irritated him increadably in the last year (Lamberg-Karlovsky, 2003). Automatically one asks oneself: “who is next?”

Lamberg-Karlovsky is very displeased by the fact that only a few foreign archaeologists are involved in the study of the BMAC and the priority in the study of the problems belongs not to them but to me, the pioneer in the investigation of the Bronze Age of Bactria and Margiana. He complains that the BMAC is little known to archaeologists which is not actually true. In the recent years almost all works on the Bronze Age of Central Asia have references to the BMAC. Special chapters such as “Civilizations of the Ancient Near East” (ed. J. Sasson, 1995, London, vol.II, pp. 1062-1063) and “Encyclopedia of Indo-European Culture” (ed. J. Malori and D. Adams, London-Chicago, 1997, p. 72) are even included in recent publications and encyclopedia.

In fact the whole text of Lamberg-Karlovsky's review clearly shows the signs of his displeasure at these developments. The author can't help but reveal his feeling of bitterness that it was not he or his close “western colleagues” who were the first discoverers of Bactria and Margiana. Lamberg-Karlovsky seems to be unable to forget the fact that I've refused to conduct joint excavations in Margiana – a long ago story when he came to Margiana with Fred Hiebert as an interpreter with the purpose of becoming familiar with the excavation materials. To make the things clear, I should say that such a decision didn't fully depend on me, it was not I who could give permission for excavations in Turkmenistan but the Academy of Sciences of Turkmenistan.

Also I would like to say that sometimes I published the excavated material very early, immediately after the end of the excavation season when it was very “raw”. I did this in order that my colleagues could get acquainted with the factual material as soon as possible and also I offered to all my colleagues this material for publication, the fact that is acknowledged in the joint article by Lamberg-Karlovsky and F. Hiebert (1992).

Now let's put aside the imagines or real offences and deal with the discussion that was forced upon all of us. First of all it should be noted that I get an impression that Lamberg-Karlovsky objects not so much to the text of the books but to their illustrations. In any case it is clear that Lamberg-Karlovsky didn't read

the epilogue of the book published in 2001. I think that if he had read it, he could have avoided many misunderstandings and questions. There I write that BMAC is such an unusual phenomenon that I'm afraid I couldn't prove my point of view in just this one book. Lamberg-Karlovsky belongs in the group to whom I've addressed these words: "the power of old traditions and ideas is much stronger than the logics of the new way of thinking" (Sarianidi, 2001, p. 97). But Lamberg-Karlovsky's review has been published and though there is a saying: "if you try to justify yourself it means that you are wrong", still I think I should react to this article in order to avoid the wrong impression of my works that an unprejudiced reader may have.

ORIGINS. As Lamberg-Karlovsky says the first and the main problem is the origin of the BMAC. I fully agree with him but have only one remark: this was true during the last 30 years until the Gonur necropolis was completely excavated. Before these later excavations, different scientists had various theories, ideas and understanding of this problem. Each author had his own theory. Among these ideas the most popular was the one that suggested the origin of the BMAC from the local archaeological complex of Namazga IV. Dozens of its monuments are located in the narrow area of oasis in the foothills of Kopet Dagħ in southern Turkmenistan. This seemed to be the most logical suggestion since the monuments of Namazga IV and the BMAC are located relatively close to each other and their ceramic complexes have much in common. This territorial and ceramic resemblance makes most of archaeologists to support this suggestion.

Among them was and still is Lamberg-Karlovsky, who ignores the fact that at present the excavated monuments of the BMAC include hundreds of settlements of the Bronze Age that are located in the area from eastern Iran, northern Afghanistan and southern regions of Central Asia (Turkmenistan, Uzbekistan, Tajikistan) and up to Belujistan and the Indus valley. Monuments of the BMAC type are known in the territory that stretches for over thousand kilometers – from the southern areas of the Caspian Sea to the Arab Sea and from eastern Iran to the regions of the Harappa civilization in the Indian subcontinent. And in spite of all these facts the respected Professor of the Harvard University still suggests the origin of all these groups (communities? sites?) from a single archaeological complex lost in the foothills of the Kopet Dagħ?

Besides, the great majority of the BMAC findings have practically no analogies in Central Asia. They find parallels only with those from the advanced centers of the world in the territory from Elam and North Mesopotamia to Anatolia and especially Syria.

But the material from the excavations of the Gonur necropolis which is known to Lamberg-Karlovsky from my book published in 2001 puts the last full stop to this long (and somewhat scholastic) discussion. In the 10-hectare territory of the Gonur necropolis, about 3000 burials were excavated by the Russian archaeologists and specialists from the Ligabue Institute (Italy). Besides simple pit burials (due to their simplicity they are found through all over the world), the most popular types of burials at Gonur were shaft burials, burned pits and fractional tombs as well as cists and chamber tombs. Prior to the excavations at the Gonur necropolis, chamber tombs were unknown not only in Turkmenistan but in the whole of Central Asia. They were found in the archaeological sites from the middle part of the Tigris River area and were also excavated in the ancient city of Avaris (Egypt) which had been founded by immigrants from northern Syria (Bietak).

It is a well known fact that a new type of funeral rites reflects changes of religion and as a consequence one may speak of the appearance of new people. As far as one can observe, from the most ancient times and until the present, the funeral rites prove to be the most conservative element of culture. The Harvard professor seems to ignore this well known axiom and still insists on the old theory of the local origin of the

BMAC (Lamberg-Karlovsky, 2003, p. 12). In addition to the new funeral rites at the Gonur necropolis, the whole set of funeral offerings (ceramics included) finds its parallels outside Turkmenistan farther West, in the advanced centers of the world.

Almost half a century ago the late academician B. Kuftin put forward the idea of a xerothermic crisis that led to the appearance of first settlements in the Murgab delta. In practically all of my works I have tried to offer new support to this idea. Naturally in the course of time this theory was partly changed and corrected but still in general it has been supported not only by Russian but by American geomorphologists as well. Thus, American scientists forwarded a new theory according to which the dynasties of Egypt III collapsed as a result of the xerothermic crisis. At present it is known that the desolation and downfall of many Bronze Age settlements in the Near East coincides with strong solar activity that took place at the end of the third millennium B.C.

I consider this theory to be very fruitful and based on it I suggested that the xerothermic crisis that influenced the majority (but not all) regions from Greece and to India caused a global tribal migration. In light of recent archaeological discoveries, one may suggest that Syria to modern Kurdistan was the center from which this BMAC tribal migration emerged. I strongly believe that at the end of the third millennium B.C. the tribes that came from farther West settled down and inhabited the open lands of Central Asia and brought along their technology and introduced their achievements in the fields of economy, political system and culture.

CHRONOLOGY. The problems of chronology are always very disputable especially when it concerns societies without a written language. This statement is very much true for the BMAC. For example, P. Amiet, influenced by the archaized objects of the BMAC, dated it to almost 3000 B.C., and in my first publications almost 20 years ago I also was wrong when I determined its date as around 1750 B.C. (Sarianidi, 1990). In recent years and especially after the cylinder seal with a Sumerian inscription was excavated at the Gonur necropolis, I've revised my ideas and joined those authors who have long ago referred the BMAC to 2200-2500 B.C. In spite of this Lamberg-Karlovsky, true to his "strategy" to defame the work of the Margiana expedition remembers my old point of view and ignores the changes in my thinking as if they never existed (and at the same time he claims that knows my last books well!).

Lamberg-Karlovsky accuses me of saying nothing about the stratigraphic data and says: "Sarianidi, in virtually all of his publications, treats all BMAC sites as belonging to a single period" (p. 13). But already in my early books I've spoken about three chronological periods: Kelleli (1750-1500 B.C.), Gonur (1500-1250) and Togolok (1250-1000 B.C.) (Sarianidi, 1990, p. 74). I especially stressed that in each of them there were separate stratigraphic layers, and the stratigraphic section at the Togolok-1 can serve as a good example of this (Sarianidi, 1990, p. 36, Fig. 8).

Several times Lamberg-Karlovsky discusses the stratigraphic problem and typology which in his opinion I don't pay enough attention to. This false impression can be explained only by one fact: Lamberg-Karlovsky didn't pay enough attention to the contents of my books and concentrated only on the illustrations in them. But even in this case any unprejudiced reader will be convinced in the opposite, reading for example my book "Antiquities of Margush" (Ashgabad, 1990). Thus, right after the settlement Togolok-1 was found, a stratigraphic shaft (10 by 10 m) was dug and detailed results of these excavations were published in the book mentioned above (Sarianidi, 1990, pp. 34-40, Fig. 8, Table VI-X). A second shaft was made in the center of North Gonur. The objects found there were published in the same book (Sariani-

di, 1990, p. 17, Table XXXVIII-XLIV). In addition, one should mention that the book contains plans and stratigraphic sections of the big altar from the Togolok-21 temple (Fig. 27-28) and plans and a system of brick laying for defensive towers (Fig. 21).

The stratigraphic shafts mentioned above as well as some other (for example from Takhirbai-3) were made in the very beginning of the excavations at Margiana and more recently Margiana temples and palaces were excavated. As a result it has become clear that all of them after being abandoned and losing their initial purpose were later reoccupied by poor people who not only completely changed the old plan but built many storage rooms and household premises. This naturally caused the confusion of the archaeological material when for example the later objects were found on the virgin soil. The ceramic inventory was also mixed. This demands accuracy on our part in the definition of the chronological identity of the findings. In general the problems of stratigraphy are not simple at all. For example when Lamberg-Karlovsky analyzes the layers of Yahia IV and Yahia V he made them more ancient without any reason. Avoiding details, one can just note that pottery decorated with broken lines with “scrolls” that crawl from friezes down to the bottom of vessels from the Yahia IV layer are absolutely analogous to the ceramic decorations from the Namazga IV complex of Southern Turkmenistan.

The author of the “review” complains that there are no typological tables on the ceramics. I would like to draw the attention of the reader to the fact that the ceramic inventory of Gonur is very diverse and rich. Intact vessels alone from the necropolis are numbered in the hundreds and should be studied by specialists on pottery. For this reason I have invited L. Piankova who for almost ten field seasons studied the ceramic inventory on the spot and after thoroughly analyzing it has published several articles on this subject. Also, a constant participant of the Margiana Expedition, the archaeologist B. Udeumurov has prepared and published a typological table of the Gonur ceramics which was published with related comments in my book (Sarianidi, 2001, Fig. 12).

Central Asia in general and its archaeology in particular attract an investigator very strongly. Even a two-day visit to Margiana by the author of the “review” fifteen years ago (on my personal invitation) made a great impact on him and gave him the right to write: “as part of our collaborative excavations at Gonur...it points to the desired direction which future research must take...”. Such a thorough study of the field material by all means gives him the moral right to be very critical in evaluating the work of his Russian colleagues and testifies to his invaluable contribution in solving regional problems.

SOCIAL/POLITICAL/RELIGIOUS IDENTITY. This is the next theme that Lamberg-Karlovsky discusses in his so called review. Having accused me first, he then ostracizes some western scientists (D. Flattery and M. Schwartz) who dared to share my opinion (or rather the opinion of N. Meyer-Melikyan) on Ephedra, considering it as an alkaloid plant used for preparing of soma-haoma. It seems that Lamberg-Karlovsky uses a clever (though not exactly proper) method of discussion – he doesn’t argue with his opponent, he simply ignores his arguments saying that his opponent “states and not proves”. But his most favoured method is to avoid the opponent’s arguments completely. Thus, in the whole of his so called review he doesn’t say even a word about the M. Gimbutas’ theory, who says that tombs in the shape of house models (found at the Gonur necropolis) are characteristic only of the Indo-European peoples. In the same way he completely ignores my supposition that the “burnt pits” at the same necropolis were most likely made for the purpose of protecting the “clean substance” of earth from its profanation by decomposed corpses of physically impaired humans. And the reason for such a behaviour is that neither the theory of M. Gimbutas, nor mine correspond to Lamberg-Karlovsky’s agenda.

But the method of ignoring unpleasant facts is not a form of scientific discussion. And one should add that this method is not the only one in the rich arsenal of proofs that are used by our Professor.

Several times in his “review” Lamberg-Karlovsky mentions the temples of Margiana. In spite of the clearly demonstrable fact that these temples are by no means smaller or simpler than those of Mesopotamia, the Professor, true to his agenda, ignores the fact completely and instead of referring to the structure of Togolok-21 as temple calls it “caravan-sarai” (a sort of a hostel). He doesn’t study the complex plan of the temple and says that it measures 50x60 meters though in reality it is double these dimensions on one side and actually measures 120x110 meters. This discrepancy is explained by the fact that Lamberg-Karlovsky ignores two rows of defensive walls that belong to the same temple. This statement is illustrated by the special “altar squares” that were specially made in the second outer wall and were described in full details in my book of 1990.

Without a second thought Lamberg-Karlovsky makes a “caravan-sarai” out of a regular temple and then speaks about the Gonur “temple” unknown to me “...with protruding rectangular and semicircular bastions” (p. 14). The fact of the matter is that the Gonur kremlin has only rectangular towers. Circular and semicircular bastions appear for the first time at the Gonur temenos and I know of no site that would simultaneously have two types of bastions. From the time of the Gonur temenos to the end of the Bronze Age of Margiana, they built circular and semicircular towers exclusively and this fact among others is used for defining the chronological periods of this ancient country.

Lamberg-Karlovsky intentionally doesn’t speak of some facts, others he simply ignores or rejects without any argumentation and in the end offers some absolutely fantastic hypothesis when instead of a “temple” he uses the word “qala” which in fact means “a fortress” and by no means corresponds to the reality. More than once it has been mentioned that all Margiana temples dedicated to cult drinks of the soma-haoma type have one and the same plan. In the center “a court yard surrounded by corridors” is located and next to them “white rooms” (Togolok-1 and 21, Gonur temenos), a characteristic feature that is foreign to any ordinary building. The use of the same architectural blocks for clearly expressed cult purpose leaves no doubt in the religious character of the buildings themselves. These are simple things that should be known not only to every professor but to every student.

The author mentions numerous citadels of Margiana though I personally know only Kelleli 4 and may be Adji Kui-1 as well. They could have really been residences of provincial regional rulers, but by no means temples.

Lamberg-Karlovsky is virtually “on the hunt” for mistakes but didn’t trouble himself for reading the correspondent text. Thus, the author says that the tables of my book of 2001 do not include all the tombs, though in the Foreword it is clearly stated that only unlooted burials are taken into consideration (Sarianidi, 2001, p. 98). This is explained by the fact that when the first edition of the book was under publication the Gonur necropolis hadn’t been completely excavated and now the second edition of the book covers all the burials excavated (Appendix I). Also Lamberg-Karlovsky complains that the book of 2001 has no typology of axes, but the explanation is very simple: the small number of these objects gives no grounds for classification.

These as well as many other small discrepancies can be merely explained by the age-related absent-mindedness of the Harvard professor. But things change when one reads his provocative statement that I have determined the discovered country to be the fifth center of civilization – one located in Central Asia – as a way to flatter the Turkmenian nationalism and the President personally. Until this present moment, the read-

er could not know that in autumn of 2002, Lamberg-Karlovsky came to Turkmenistan to get the permission for his excavations at Namazga Depe and took part in the conference with only one purpose: to make a flattering speech in the presence of the President!

But let us return to the so called review. Lamberg-Karlovsky puts questions (mainly rhetoric ones) that remain practically without answers. It seems that the main question is the following: what is the BMAC – civilization, state or tribal entity? Long ago the author of this “review” forwarded a theory according to which Margiana in the Bronze Age looked like Central Asia of the last decades of the XIX century with fortresses – “qala” and Khanates, the statement that makes one simply smile. What Khanates one can speak about when the Gonur palace (stubbornly ignored by Lamberg-Karlovsky) testifies to the existence of an absolute royal power! By the way, this may be the reason why he was silent on the subject of the excavated palace of Gonur, which found no place in supporting his agenda. And we speak on the other hand about the first palace complex the meaning of which for the ancient history of Central Asia can’t be overestimated!

I’m deeply convinced by numerous proofs that at the end of the third millennium B.C., migrating tribes brought along their patterns in economy, political system and especially in culture and religion. To a certain extent the situation reminds the one that existed on the left bank of the Amu-Darya river, where migrants from the Indian subcontinent founded a trading station Shortugai and brought along their own culture including seals with clear Harappa inscriptions.

If one tries to study the BMAC with its palaces and temples (capital as well as provincial), its magnificent pieces of craftsmanship (by undoubtedly professional masters) from the same point of view he will come to only one answer. This was an ancient country not inferior by main parameters to any ancient country of the advanced centers of the world. In this respect especially representative is the Gonur palace built exclusively for the ruler and his family with all the necessary constructions including family dakhma-mausoleum and special “houses for dead”, where all the funeral rituals including the washing of the dead took place. Here also were the “house altars” and “sanctuaries” where the ruler with the members of his family could have their every-day cult ceremonies including sacrifices.

After the Gonur necropolis was completely excavated the analysis of its material showed that the ancient society of this particular city consisted of a ruler and his family, a ruling aristocracy (4,06%), middle class (85,40%) and poor layers of population (10,54%), that testifies to an extremely developed and complex social entity. It was counted that only for the construction of the Togolok-21 temple it was necessary to use over one million bricks, which fact proves that it was built by hired workers.

And finally, the burial of a woman-priest with sacrificed bulls and slain cattle-drivers leaves no doubt that in the country of Margush (probably in embryo) slavery existed. All these direct archaeological facts undoubtedly prove that there existed a Margush state headed by a ruler, ruling aristocracy and the institution of priests. The majority of common people belonged to a middle class; at the bottom step of the social staircase were poor and slaves, probably. The percentage correlation in the Margush society may be considered as an optimal for any state.

In other words, we have all the elements that allow us to say that we are dealing with a real state in spite of the absence of written language which according to Lamberg-Karlovsky is an indispensable condition for any civilization. Many scientists though think that “culture” is a synonym of “civilization”. Also there are grounds to believe that there existed some forms of primitive written language if one remembers the “tokens” found at the central gates of the North Gonur palace (Sarianidi, 1998,b, Fig. 41). They were most

probably used for the control of food sent for the needs of the ruler's family. Besides, some kind of control should have existed during the construction of such monumental buildings as palaces and temples. The cylinder Sumerian seal mentioned above in an indirect way may prove that few people may have been acquainted with the writing language. Both the cylinder seal and the "tokens" may give us reason to suggest the existence of some primitive ways of writing in the Margush society.

The society was headed by a ruler and his family who possessed a power which may have been limited to some extent by the people's assembly. The ancient country of Margush having the intermediate position between the "old civilizations" was really a fifth center of the ancient Eastern civilization where different trade, cultural and political lines crossed.

As far as the cylinder seal with cuneiform is concerned, Lamberg-Karlovsky writes that Sarianidi believes that the seal has a local origin. This statement directly contradicts my words. I only said that the material the seal was made of was used by local stone carvers in South Turkmenistan and Margiana as well as in Bactria. I also have specially stressed that these "are so far only suggestions" (Sarianidi, 2002, p. 331).

I can't agree with Lamberg-Karlovsky in his opinion that Margiana was an "illiterate country" and believe that it is almost next to impossible to create such a well developed culture in the country with such monumental buildings as palaces and temples without a written language. But if the author of the "review" denies the existence of palaces and temples in Margiana then any form of discussion is useless.

With great confidence and ease Lamberg-Karlovsky deals with another serious problem of interaction of nomads and ancient farmers of the BMAC. This problem that has gone on for some decades can be identified as an "eternal" subject which needs some new factual material. Now our Italian colleagues are working intensively on this problem trying to solve it.

Lamberg-Karlovsky tediously tries to prove the "asymmetrical" presence of ceramic material between the steppe nomads and farmers of the BMAC. The answer however is simple: the field investigations on the spot should be widened and strengthened. The author states the things that Russian archaeologists have long ago proved: the BMAC tribes have assimilated while they migrated in the direction of the steppe zone. To date it is proved that the steppe ceramics found in the "tower complex" of the Gonur temenos (Sarianidi, 1998,a, Fig. 11, N. 6) represents the earliest evidence of their supposed contacts in Margiana. They are dated to the middle of the second millennium B.C. and not earlier than that. All the main bulk of the steppe pottery is dated to the periods of the Togolok and Takhirbai oases.

Another "eternal" subject is the appearance of a domesticated horse in the zone of the BMAC. Lamberg-Karlovsky states that the horse came to the farming areas of Margiana from the steppe and refers to the identification made by the palaeozoologist Meadow many years ago right in the field. Among the osteological material found in the temenos he identified bones of a camel and an Asian donkey. But in the last two or three years some things were found that prove the presence of the horse in Margiana. These are: a copper mace head in the form of a horse protoma, signal trumpets for training and the most significant – a burial of a horse at the Gonur necropolis. All these objects have so far not been found among the steppe tribes.

To additionally prove his point of view Lamberg-Karlovsky refers to a bronze "pin" terminating in a horse figurine from the "elite" burial in Tajikistan. But it has been proved that such objects have no pointed terminal, their ends are drop-like and that is why they are not considered pins but "cosmetic sticks" or applicators served for applying paints on the body. Such sticks are widely represented in the BMAC and are not found in the steppe cultures.

ETHNICITY AND LANGUAGE. This is another chapter of the “review” dedicated to the Indo-Iranian problem. The author insists that “Sarianidi’s argument” on this subject “is unpersuasive. The interpretation of the data will remain ambiguous”. I will avoid the scholastic discussion and will go straight to the opinion of a really great scientist, renowned in the world, J. Mallory. He has published a special review on my book of 2001. J. Mallory is my opponent and supports a point of view directly opposite from mine on the Indo-Iranian origin of the BMAC. Nevertheless his review is written in a quite tone and is characterized by an unprejudiced manner. He finishes his review with the words: “New results of the excavations at Gonur and other BMAC sites have certainly changed the landscape of all current discussions on Indo-Iranian origins” (Mallory, 2003). This is a brilliant example of how two scientists who share one point of view (Mallory and Lamberg-Karlovsky) can react differently to works of their common opponent. This is the difference between a real knight of the science and a former archaeologist who, sitting in the quiet halls of the Harvard library, stubbornly trying to find mistakes and discrepancies (more fantastic than real) of his former colleagues.

Still more the Harvard professor is displeased by my using the finds that come from private collections and the Kabul bazaar. I would like to note here that different selectors and first of all the American ones (R. Garner, A. Hale and others) helped me in the definition of the most outstanding findings. I would like to repeat that most part of my book (1998A) was written on the material from many thousands of plundered tombs of Bactria. I believe that this is the right and really the only way of making them known to the public, especially if one realizes that most of them have been lost and dispersed into many private collections all over the world (Parpola, 1999).

Lamberg-Karlovsky repeatedly returns to the problem of antiquities markets and shows his negative attitude to them. I would like to clear up the situation. In the beginning of 1980s the antiquities markets of Kabul and Peshavar were literally flooded by the endless stream of beautiful objects from many plundered tombs of South Bactria that were finally acquired by different connoisseurs of Eastern art. It is difficult to overestimate the harm that the illegal excavations did to archaeology. At the same time it does the French Archaeological Mission in Afghanistan credit for their effort to save these findings. At their request M. Potier (1984) took pictures of these objects and published the bulk of them in her book. I too have managed to take pictures of some material from the illegal excavations (first of all seals and amulets) in Kabul as well as in Balkh and Mazari Sharif (1998A).

Hypocritically complaining about the ethic and moral possibility of using such finds in the scientific works Lamberg-Karlovsky literally “whips” me (without sparing his words). He writes: “..there is no more depressing volume than this one. It is also rather disconcerting to see the author cite parallels to objects...in Sotheby’s auction catalogues...or known by him to be for sale in a specific gallery.” (p. 17). And he continues in the same manner. I’d like to assure Lamberg-Karlovsky that I feel happy and proud that I could afford to do my bit to save for science at least some photographs of the artifacts now lost in private collections. If Lamberg-Karlovsky feels embarrassed on my part, I can just say that I feel ashamed for the Harvard professor who doesn’t know such simple things that are clear to every freshman.

And only in the end the reason of this mentor’s lecture becomes clear. These are values “expressed by the Society of American Archaeology”! One may get an impression that the “Society of American Archaeology” is a professional and ethical standard that should be followed by all archaeologists of the world!

Having accused me in not “confronting” the ethic and moral issues, Lamberg-Karlovsky is in a hurry to

note that “It must not be thought that these issues are not of concern to archaeologists in Russia. They are!” (p. 17). Then in subsequent paragraphs, Lamberg-Karlovsky says that: “Neither ecological change nor the role of conflict are given any specific attention within the Russian research programs of the Central Asian Bronze Age. These matters, as well as a more attentive concern for stratigraphic excavations, contextual associations, and the analysis of palaeoethnobotanical and zooarchaeological materials, remain for future excavation programs to examine”(p. 18). And he states this in spite of the fact that my both books (1990 and 1998) contain appendixes by Professor of the Moscow State University Mayer-Melikian that are supplied by macrophotographs on the definition of the alkaloid plants. More than that on my invitation this Professor came to Margiana in order to make these definitions on the spot, in the field. Also, the book of 1990 is supplied by a comprehensive appendix on the research of paleometals of Margiana written by N. Terekhova.

Such an “archaeological imperialism” forced on us by an American professor is simply insulting and one can’t but remember a Russian expression: “And who are the judges?” Indeed, in this connection one remembers an episode that happened almost a hundred years ago when an American expedition of R. Pampelly made excavations in Anau in the south of Turkmenistan. The Russian academician-orientalist V. Bartold after studying the methodology of American excavations which he found backward for those days, simply said: “Unfortunately even the first pages of the volume unintentionally woke some doubt in the ability of the members of the expedition in general and of their leader in particular to evaluate to what extent the results of their research suggest anything new compared to what has been known prior to their work” (V. Bartold. Collection of Works. Vol. IV. Moscow,1966). The same fully applies to the author of the discussed “review”.

One may continue to cite other remarks of Lamberg-Karlovsky, but I suppose it would be better to stop here. Nonetheless, the “review” has its positive side. It showed that in recent decades one can note a certain kind of “asymmetry” (using the expression of my opponent) in the researches of archaeologists. The large scale excavations increase in the geometrical progression the bulk of new archaeological material on one hand and on the other the existent historical conceptions are not always able to interpret it correctly. This is exactly what happened with Lamberg-Karlovsky who tried in his “review” to study and estimate the “Margiana phenomenon” from the point of view of the last (or even previous) century. It is for this reason that all his historical interpretations of the “Margiana phenomenon” look so childish and helpless.

The Russian archaeologists were lucky to find something absolutely new and unusual. It is my strong belief that this is exactly that very “Iranian paganism” that for centuries and without success many specialists was looking for in many parts of Near East. This discovery is so unexpected and new that it demands new methods and approaches. The five books that were under discussion in the “review” were the first experience in this direction.

In my next book I’ll present to readers material concerning a unique architectural ensemble of North Gonur (excavated in 2002-2006) that puts even more intriguing problems. As it turned out the kremlin with the palace made up the center of the “ruler’s area” and was surrounded on all sides by square defensive walls with towers. Each of the four outer facades of the kremlin was joined through a passage to a temple. These were “Temple of Fire”, “Temple of Communal eatings”, “Temple of Sacrifices”, “Temple of Water”. There is a lot of work to do and instead of losing time on abstract, scholastic discussions it would be better together with colleagues to try to solve the new problems from new position, and on the new level of historic thinking. This will be a long and difficult way, there certainly will be mistakes (as there are in my five books), there will be discussions, but they should be constructive and fruitful.

Certainly one may scrupulously describe each room where this or that ceramic fragment was found on a certain depth (and only in the palace several thousand of them were found and they should be investigated by a specialist on pottery), one may carefully measure the width and length of each excavated wall (which is all reflected in the field diaries in the expedition's archive), one may and should do a lot of other laboratory researches of our "archaeological kitchen", but this all is the matter for the future. At present it is necessary to present to scientists the new and in many cases vague (at least for me) material and give it an objective characteristic, to simply get specialists acquainted with it. The first steps in this respect have been already done. Thus, the second edition of the book "Necropolis of Gonur" has a comprehensive and very highly qualified appendix of the leading Russian anthropologists, as well as three different appendixes on the laboratory analyses of ancient fabric found lately in Margiana.

In a few words, a gigantic and multi-planned research work should be done, but this is in the future. At the present stage, specialists in various sciences and profiles (and first of all linguists) should concentrate their efforts in order to understand (perhaps not so thoroughly, but in broader scope) what is the "Margiana phenomenon" and its role in the ancient history of the Near East. We are dealing with a new direction in the historic science and though the way to comprehend it will be difficult, the scientists will be rewarded by new discoveries in ancient history, culture and ideology of the people who are now collectively named as the people of the BMAC, the impersonal and hard to pronounce abbreviation.

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ABBREVIATIONS

- AJA - American Journal of Archaeology
 EIEC - Encyclopedia of the Indo-European Culture
 JIES - Journal of Indo-European Studies
 KSIA - Kratkie Soobshenia Instituta Archaeologii
 MAIKTZA - Mezhdunarodnaya Assotziatzia po Izucheniu Kultur Tzentralnoy Azii
 SA - Sovetskaya Archaeologia
 VDI - Vestnik Drevnei Istorii

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1

APPENDIX



Main characteristics of all graves, excavated at the Gonur necropolis

Quite recently the Ligabue Study and Research Center published a very important and useful volume of articles on the Gonur necropolis (Margiana. Gonur-depe. Necropolis. 2002. Venezia. Ed. Rossi-Osmida) that gives a general idea of this unique site.

We would like to dwell on the article of Rossi-Osmida, the discrepancies of which may lead a reader to the wrong conclusion. The basic inaccuracies refer to the description of the graves which principally differ from the diary information of the main archaeologists of the Gonur necropolis E. Muradova and B. Udeumuradov.

Thus according to Rossi-Osmida, in grave #560, a woman 20-25 years old and a child 2-3 years old were buried (Rossi-Osmida, 2002, p. 94). However the grave actually contained a girl's skeleton about 12-13 years old (Sarianidi, 2001, p. 101. Appendix 1). Grave #194 is described by Rossi-Osmida with a complicated and incomprehensible term: "Sepulchral Pit-Burial Chamber," though it was a typical "Sepulture". According to Rossi-Osmida the cranium of the skeleton was missing (Rossi-Osmida, 2002, p. 88) though it was actually placed under the right hand of the skeleton (Sarianidi, 2001, p. 32). Grave #1172 according to Rossi-Osmida contained a child 9-10 years old (Rossi-Osmida, 2002, p. 97) but the bones found in this grave in truth belonged to a child with very short and destroyed extremities and a dog (Sarianidi, 2001, p. 18, 21). The scheme-map made by Rossi-Osmida does not reflect the real situation: the chamber graves were not located only in the eastern part (up to the canal) but there were quite a lot of them behind the canal too (Sarianidi, 2001, the plan of the necropolis).

Another discrepancy concerns the thesis repeatedly repeated about some special "areas of the nobles," "privileged areas" with a reference to me. But I repeated more than once that the chamber graves were located at the necropolis without any definite system. Many times Rossi-Osmida speaks about coffins in the graves of the Gonur necropolis and once he even describes one coffin decorated with round stone inlays (Rossi-Osmida, 2002, p. 96), but unfortunately this is not supported by the diaries of the archaeologists E. Muradova and B. Udeumuradov. Perhaps coffins existed but so far they have not been excavated. Rossi-Osmida is very careless with other terminology as well. The chamber grave #1999 he named "The Dog Mausoleum" and describes it this way: "Near the entrance was found a small grave containing the remains of a dog; this is the reason for the name given to the whole complex" (Frankfort, Rossi-Osmida, 2002, p. 121). But the fact of the matter is that the dog grave is located in another section of the necropolis and bears its own number – #1739 and so has nothing to do with the Mausoleum in question. Such reports are good for journalism but not science, since they may mislead professional archaeologists (Salvatori, 2000).

The list of such unprofessional descriptions and remarks could be continued but it already becomes clear that the article is addressed to a common reader and not to a specialist. However, at the same time, it should be said in all fairness Rossi-Osmida works very hard in the field and especially in the reconstruction and preservation process of the excavated findings. This Appendix presents the most important features of the graves, excavated at the Gonur necropolis. The following characteristics of the graves are presented here and they provide an opportunity to have real facts and to move to the level of deep interpretations

1. Ordinary number of the grave.
2. Construction of the grave: BP – burnt pit; Cist – cist; Fp – fire place; P – pit; Sepult – chamber grave (sepulture); Sh – shaft; ? – not determined.
3. Depth of the grave. It is a distance from its bottom to the present day surface (in cm).
4. Dimensions: the largest dimensions of the grave.
5. Safety: by + in situ graves are marked; by (-) – the robbed already in the Bronze Age graves.
6. Position of the buried: R – on the right side; L – on the left side; Supine – "on the back"; Prone – "on the belly"; Centph – cenotaph; Sct – scattered, disrupted; Abs – the bone remains are absent; ? – not determined precisely.
7. Orientation of the head of buried: N – to the North; W – to the West; Nw – to the North-West; Nnw – to the North-North-West; S – to the South; E – to the East, and so on. In the overwhelming majority of cases was determined with the help of compass.
8. Sex: M – male; F – female; ? – not determined.
9. Age at death (years) of buried: determined on the basis of physical anthropological investigation of the remains. In those cases when it was not possible to determine the precise age : Ad – adult person, Ch – child, Baby – baby; Juven – juvenile; ? – not determined.
10. Funeral inventory, found in the grave. It includes 30 basic items, both personal belongings and attributes of professional activities, as well as symbol of prestige and status. In most cases numbers of artifacts of a certain kind, found in grave, are presented in the Table, and in rare cases – only the fact of their presence, the layer – with the sign (+).

Conditional labels:

Br – bronze, D – diameter, Fr – fragments, St – stone, Ceram – ceramic.

NoNo of graves	1	2	3	4	5	6	7	8	9	10
Construction of the grave	P	Sh	P	Sh	P	Sh	Fp	Fp	Bp	Bp
Depth of the grave (cm)	70	70	80	75	105	135	20	25	65	65
Dimensions	100x80	90x90	100x98	130x95	160x95	155x90	70x50	75x75		75x65
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Abs	Sct	R	Sct	Sct	R	Abs	A	Sct	Abs
Orientation of the head of buried		?	N	?	?	N	?	?	?	?
Sex of buried		?	F	?	?	F	?	?	?	?
Age at death (years) of buried		Ch	Ad	Juv	?	Ad	?	?	?	?
Ceramic vessels	1	1	2	1	2	6				1
Rings				1Br						
Notes							Ash	Ash		Ash
NoNo of graves	11	12	13	14	15	16	17	18	19	20
Construction of the grave	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Sh	Bp
Depth of the grave (cm)	55	50	85	65	70	55	50	90	100	50
Dimensions	95x75	80x68	100x70	90x70	100x80	85x50	80x50	90x60	200x110	D 80
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Abs	Abs	Abs	Abs	Abs	Abs	Abs	Abs	Sct	Abs
Orientation of the head of buried									Nw	
Sex of buried									?	
Age at death (years) of buried									?	
Ceramic vessels		1		2	1	1			2	
Beads									+ small beads	
Another funeral inventory				Ceram. disk						
Notes	Ash	Ash	Ash	Animal bones			Ash	Ash		Ash
NoNo of graves	21	22	23	24	25	26	27	28	29	30
Construction of the grave	Sh	P	Sepult	P	P	Sh	P	P	P	Sh
Depth of the grave (cm)	80	80	80	95	120	70	95	50	40	100
Dimensions	100x90	150x120	118x110	220x100	240x170	240x120	100x80	90x90	105x65	140x85
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Abs	Double L/?	Sct	Sct	Centph	Abs	Abs	Abs	Sct
Orientation of the head of buried	?		Nw	?	Nw	Abs				?
Sex of buried	F		M/?	?	?					?
Age at death (years) of buried	Ad		17-18/?	?	?					?
Ceramic vessels	1	2	11	5	7	11	2		1	
Seal			1 cylindrical							
Arrow heads								1 flint		1 flint
Another funeral inventory			White St amulet							
NoNo of graves	31	32	33	34	35	36	37	38	39	40
Construction of the grave	Bp	Fp	Fp	Fp	Fp	Fp	Fp	Fp	Bp	Fp
Depth of the grave (cm)	60	30	20	30	35	50	50	30	70	25
Dimensions	90x70	45x40	D 60	D 30	D 35	D 37	45x40	D 30	90x65	60x50
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Abs	Abs	Abs	Abs	Abs	Abs	Abs	Abs	Abs
Orientation of the head of buried	?									
Sex of buried	?									
Age at death (years) of buried	?									
Ceramic vessels	2									
Notes	Ash	Ash	Ash	Ash	Ash	Ash	Ash	Ash	Ash	Ash
NoNo of graves	41	42	43	44	45	46	47	48	49	50
Construction of the grave	Fp	P	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	30	95	63	?	?	?	110	?	110	55
Dimensions	40x35	190x115	83x60	?	?	?	?	?	120x75	?

NoNo of graves	41	42	43	44	45	46	47	48	49	50
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Abs	Sct	Sct	Sct	Sct	Sct	Sct	Sct	?	?
Orientation of the head of buried		?	?	?	?	?	?	?	?	?
Sex of buried		?	?	?	?	?	?	?	?	?
Age at death (years) of buried		?	Ch	Ad	Ch	Ad	Ch	?	?	?
Ceramic vessels		3	1	3	2	2		3	2	4
Rings						+ Br				
Bangles						+ Br				
Hair-pins						1Br				
Beads						1 St bico- nical				
Stone Miniature Columns								1		
Another funeral inventory								1 St vessel		
Notes	Ash		Ash							
NoNo of graves	51	52	53	54	55	56	57	58	59	60
Construction of the grave	Sh	Sh	P	Sh	P	Sh	Sh (3sh?)	Sh	Sh	Sh
Depth of the grave (cm)	90	90	130	100	80	45?	140	85	130	?
Dimensions	180x80	110x100	190x170	120x110	?	150x115	155x75	115x80	95x85	?
Safety	-	-	-	-	+	-	-	-	-	+
Position of the buried	Supine	Sct	Sct	Sct	Double Sct/R	Abs	Sup (Triple?)	Sct	Sct	R
Orientation of the head of buried	SE	?	?	?	?/N		N/?/?	?	?	Nw
Sex of buried	?	?	?	?	?/M		F/?/?	?	?	F
Age at death (years) of buried	?	?	?	?	?/Ad		Ad/?/?	?	?	?
Ceramic vessels	2	Fr	2	1	4	1	Fr	4	6	4
Beads	1 St Bico- nical			1 fiance	1 St Bico- nical					1
Seals					1 Br with scorpion					
Terracota statuettes					1 Fem					
Cosmetic flacones	1 Br									
Cosmetic sticks	1Br									
Hair-pins	1 Br									
Bangles	2 Br									
Another funeral inventory	1 Br Dagger						1 fiance eagle			
NoNo of graves	61	62	63	64	65	66	67	68	69	70
Construction of the grave	Cist	P	Sh	Sh	Sh	Sh	Sh	P	Sh	Sh
Depth of the grave (cm)	100	100	?	110	?	?	67	?	125	?
Dimensions	165x105	?	?	?	?	?	?	?	180x85	?
Safety	-	-	-	-	-	-	-	+	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	R	Sct	Sct
Orientation of the head of buried	Nnw	?	Nw	Nw	N	Nnw	N	Nw	Nne	Nw
Sex of buried	?	?	?	F	?	?	?	F	F	?
Age at death (years) of buried	?	?	?	10	>60	?	?	Ad	18-20	?
Ceramic vessels	1	2	Fr	4	3	2+ Fr	3	3	2	Fr
Beads						1 St		1 st	2st,30 faience	
Hair-pins						1 br				
Cosmetic flacon								1 Br		
Another funeral inventory							1 St vessel		1 cilindrical steatite vesse	
Notes									In the cist # 1337	

NoNo of graves	71	72	73	74	75	76	77	78	79	80
Hair-pins						1 br				
Hair pins					2 ivory					
Bangles					1 from biser					
Seals					2 Br (one of them like scorpion)					
Arrow heads			1 flint							
Mirror		1 br			1 Br					
Cosmetic flacon					1 Br					
Another funeral inventory		1 br stick		1 Fr of St staff	In the right hand – 7 stones; 2 stones – near the a waistline					
NoNo of graves	81/2002	82	83	84/2002	85	86	87/2002	88	89/2002	90
Construction of the grave	Sh	Sh	Sh	Sh	Fp	Sh	Bp	Sh	Bp	Sh
Depth of the grave (cm)	70	120	?	115	?	100	141	100	85	60
Dimensions	150x70	115x80	?	140x65	D 55	155x90	75x50	120x85	85x50	130x100
Safety	+	-	-	-	-	-	?	-	-	-
Position of the buried	R	Sct	Sct	L	Abs	Sct	?	Abs	Abs	Sct
Orientation of the head of buried	Nnw	?	N	N		?	?			?
Sex of buried	M	?	F	F		?	Some teeth and bones of dog?			?
Age at death (years) of buried	25-30	?	?	25-30		?				?
Ceramic vessels	3	2+fr	Fr				2	Fr		
Beads		2 St biconical								
Another funeral inventory										
Notes	Without cist of hands; a scull on the dromos – in the Bp									
NoNo of graves	91	92	93	94	95/2002	96	97	98	99	100
Construction of the grave	Sh	Sh	Sh	Sh	Bp	Sh	?	Sh	Bp	Fp
Depth of the grave (cm)	130	130	?	150	75	190	?	130	50	?
Dimensions	120x80	170x100	120x100	130x90	75x50	D 100		130x95	110x70	D 40
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Abs	Sct	Abs	Sct	Sct	Sct	Abs	Sct
Orientation of the head of buried	?	?		?		?	?	?		?
Sex of buried	?	?		?		?	?	?		?
Age at death (years) of buried	?	?		?		?	?	?		?
Ceramic vessels	2 + Fr	2	6	5		Fr	Fr	Fr		Fr
Beads				2 st		13 st small				2
Stone Miniature Column	1 Fr									
Seals				1 Br						
Another funeral inventory										
Notes									Ash	Ash
NoNo of graves	101	102	103	104	105	106	107	108	109	110
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	80	100	90	110	60	150	100	75	125	100
Dimensions	190x160	220x90	D 100	D 120	160x70	180x140	150x105	240x125	255x135	200x100
Safety	-	-	-	-	+	-	-	-	-	-
Position of the buried	R	R	Sct	Sct	Centph	Sct	R	?	R	Sct

NoNo of graves	111	112	113	114	115	116	117	118	119	120
Ceramic vessels	1	1	1	2	3	4	3	1	3	5
Bangles									2 Silv	
Beads				+ St					1 St biconical	10 St, 1 lapis lazuli
Seals				1 gypsum Fr						
Hair pins		1 Br								1 Bone
Mirror										1 Br
Buttons									1 Silv	
Arrow heads							1 flint			
Another funeral inventory									2 Silv lava- liere; 2 Silv. temple rings	1 double bladed Br dagger; 1 Br vessel
Notes										In a vase – lamb bones
NoNo of graves	121	122	123	124	125	126	127	128	129	130
Construction of the grave	Sh	Sh	Sh	Sepult	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	?	110	150	100	100	100	60	30	?	70
Dimensions	?	210x110	D 100	440x200	120x70	180x95	140x95	200x170	?	172x93
Safety	-	-	-	-	-	-	+	+	-	+
Position of the buried	R	Sct	Sct	Prone	Prone	Sct	Prone	Double Sct/Sct	R	R
Orientation of the head of buried	N	?	?	N	N	?	Nw	?/?	Nw	Nw
Sex of buried	?	?	?	F	?	?	F	Nw/nw	M	M
Age at death (years) of buried	Ad	?	?	Ad	Ad	Ad	Ad	Ch/Ch	Ad	Ad
Ceramic vessels	1	Fr	Fr	3 (1 with a paintings)	2	Fr	2	2+ fr		3
Beads			1 St biconical	+st				1 st		
Hair-pins			1 bone with a head as a com- pressed fist	1 bone						
Applicator				1 silv						
Another funeral inventory	Stone thing			1 br small lid of flacon						
Notes		In 1 cer. fragm – small coals								Fp – on the 45 cm deep
NoNo of graves	131	132	133	134	135	136	137	138	139	140
Construction of the grave	Sh	Sh	P	Sh	Sh	Sh	P	P	P	?
Depth of the grave (cm)	20	?	109,2	?	205	125	80	50,5	61,5	40,5
Dimensions	147x68	?	190x158	?	150x82	115x64	200x170	170x80	165x80	?
Safety	+	-	+	-	+	+	+	+	+	-
Position of the buried	R	R	R	?	R	R	L	R	R	Sct
Orientation of the head of buried	Nw	Nw	nnw	Nw	Nw	Nw	N	N	Nnw	Nnw
Sex of buried	MP	F	?	?	M	F	?	?	F	?
Age at death (years) of buried	Ad	Ad	Ad	Ch	Ad	Ad	Ch	Ad	Ad	Ch
Ceramic vessels	4	2	4	3	4	6	2	4	6	3
Mirror						1 br			1 Br	
Cosmetic spades									1 Br	
Cosmetic flacon						1 Br				
Cosmetic stick						1 Br				
Another funeral inventory						1 st vessel				

NoNo of graves	141	142	143	144	145	146	147	148	149	150
Construction of the grave	P	P	P	?	?	P	P	?	?	?
Depth of the grave (cm)	54,7	50,2	60	52,7	46,7	58,2	38,2	42,2	41,7	59,7
Dimensions	?	140x60	150x60	?	?	?	?	?	?	?
Safety	-	?	+	-	-	+	-	-	?	-
Position of the buried	Sct	R	R	R	R	Supine	R	Centph	Centph	R
Orientation of the head of buried	?	Nnw	Wwn	nnw	Wws	Nw	Nne	Abs	Abs	Nnw
Sex of buried	?	?	M	?	?	?	?			?
Age at death (years) of buried	Ch	Ad	30-40	?	13-17	15-17	Ad			10-14
Ceramic vessels		2	4	2	2	5	1	4	2	1
Hair pins						1 br				
Another funeral inventory						1 Gold earring				
Notes										Ceramic vessel with birds, snake and a tree
NoNo of graves	151	152	153	154	155	156	157	158	159	160
Construction of the grave	?	?	P?	?	?	?	?	?	?	?
Depth of the grave (cm)	54,7	38,2	42	87,2	115,5	97,7	64	44,2	58,7	101,7
Dimensions	?	?	175x65	?	?	?	?	?	?	?
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	R	Sct	Sct	Sct	Sct	R	Sct	Sct	Sct
Orientation of the head of buried	?	Nnw	N	?	?	?	Nnw	?	Nnw	Nnw
Sex of buried	?	?	?	?	?	?	?	?	?	?
Age at death (years) of buried	?	Ad	Ad	Ad	Ad	Ad	Ad	Ad	Ad	Ad
Ceramic vessels	6		6		3	2		3		1
Beads			1 St biconical							1 st (D 27 mm)
Hair pins							1 bone			
Another funeral inventory										1 Bead
NoNo of graves	161	162	163	164	165	166	167	168	169	170
Construction of the grave	?	?	Cist	Cist	Sh	?	?	Sh	?	?
Depth of the grave (cm)	101,2	76	83,8	91	104,7	34,7	40,7	153,2	80,5	67
Dimensions	?	?	175x125	152x108	186x101	?	?	192x103	?	?
Safety	-	-	-	-	+	+	-?	-	-	-
Position of the buried	Sct	R	R	Sct	R	Supine	R	Sct	R	Centph?
Orientation of the head of buried	?	Nnw	nnw	Nnw	Nnw	Wwn	Nnw?	n	nnw	Abs
Sex of buried	?	?	?	?	F	?	?	?	?	?
Age at death (years) of buried	Ad	Ch	Ad	Ad	22-28	Ad	Ad	Ad	Ad	
Ceramic vessels	2			1	4	3	2	2	1	4
Beads				1 agat; 1 granat; 2 steatit biconical	1 st biconical					
Seals				1 silver	1 br					
Hair pin				1 silver with a top like lions and eagle						
Mirrors					1 br					
Cosmetic flacon				1 br						
Another funeral inventory				1 Gold spiral	2 Silver spiral earrings		1 st mace head			
NoNo of graves	171	172	173	174	175	176	177	178	179	180
Construction of the grave	Cist	Sh	?	?	P	P	Sh	P	?	Sh
Depth of the grave (cm)	51	107,9	68	50	43,4	50,4	52	58,5	53,3	129,4
Dimensions	138x108	171x103	?	?	130x65	160x65	180x100	170x70	?	160x105
Safety	-	-	-?	+	+	+	-	+	-	-

NoNo of graves	231	232	233	234	235	236	237	238	239	240
Sex of buried	?	F	?	?	?	?	F	?	?	?
Age at death (years) of buried	?	35-40	Ad	Ad	Ad	Ad	50	Ad	Ad	Ad
Ceramic vessels	2	5	2	3	4	1	7	4	1	2
Beads		2 gypsum; 1 gold foil	4 gypsum; 2 st bico- nical		1 gypsum		2 st	2 st; 5 gypsum; 1 st biconical		1 st
Seals							1 br	1 lead		
Mirrors			1 br							
Hair pins			1 bone with engravings				1 bone with a fist 1 bone; 1 br			
NoNo of graves	241	242	243	244	245	246	247	248	249	250
Construction of the grave	Sh	P	Sh	Sh	Sh	Sh	?	Sh	?	Bp
Depth of the grave (cm)	163	53	158	148	176,5	?	88	101	65	?
Dimensions	200x105	112x70	208x100	?	210x140	272x170	?	144x90	?	98x75
Safety	-	+	-	+	-	-	-	+	-	-
Position of the buried	R	L	Sct	R	Sct	Sct	R	R	R	Sct
Orientation of the head of buried	Nne	Wwn	Nnw	Nnw	Nnw	Nne	Sw?	Nne	nnw	Nne
Sex of buried	?	?	?	?	?	?	?	?	?	?
Age at death (years) of buried	Ad	Ad	?	Ad	?	?	Ad	Ad	Ad	?
Ceramic vessels	5	3	2	1	3	8	1 twice	1	1	
Beads					1 carnelian					
NoNo of graves	251	252	253	254	255	256	257	258	259	260
Construction of the grave	Sh	Sh	Sh	?	P?	Sepul	Sh	Bp	Sh	Sh
Depth of the grave (cm)	159	154	148	125	71	156	155,4	61	134	150
Dimensions	200x115	190x90	160x110	?	?	136x270	191x100	88x60	?	228x100
Safety	-	-	-	-	-	-	+	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	R	Abs	Double			
R/ R	L	R	R							
Orientation of the head of buried	Nnw	Nnw	N	N	N		Nnw	Nne	Nnw	Nnw
Sex of buried	?	?	?	?	?		F?/?	Head of a lamb	?	?
Age at death (years) of buried	Ad	Ad	Ad	?	Ad		Ad/Ad		Ad	Ad
Ceramic vessels	6	3	2	1	1	9	4/2	1	3	6
Beads	1 st biconical					1 st	2 carnelian; 1 st biconical			
Cosmetic stick							1 br/-			
Another funeral inventory							Horn (20 cm long)			
Notes						Scale en- trance 60 cm				
NoNo of graves	261	262	263	264	265	266	267	268	269	270
Construction of the grave	?	Sepul	Sh	?	?	Bp	Sh	Sh	Sh	Sepul
Depth of the grave (cm)	65,2	148	172	56	82	55	160	140	75	138
Dimensions	?	109x226	160x80	?	?	75x60	180x100	230x90	172x78	365x195
Safety	-	-	-	-	+	-	-	+	-	-
Position of the buried	Double R/L	?	Sct	R	R	Abs	Sct	Centph	Sct	Sct
Orientation of the head of buried	Wwn/Wwn	Nnw	Nne	Nw	Nnw	Nnw	Wwn	Nnw	N	Nw
Sex of buried	?/?	?	?	?	M?		?		?	?
Age at death (years) of buried	Ad/Ad	Ad?	Ad	Ad	Ad		Ad		?	?
Ceramic vessels		6	4	1	2		2	4		12
Beads		5 st (turqu- oise, lapis lazuli, agat)			1 st			1 carnelian	1 st	

NoNo of graves	261	262	263	264	265	266	267	268	269	270
Seals		1 silver								
Another funeral inventory		Pieces of gold foil						2 gold cartridges to beads		Gold and silver foil
Notes		Along the north wall –a bench								A hearth
NoNo of graves	271	272	273	274	275	276	277	278	279	280
Construction of the grave	?	Sh	Sh	Sh	Bp	Sh	Bp	P?	P?	Sh
Depth of the grave (cm)	85	80	90	90	45	122	5	35	35	106
Dimensions	?	193x110	162x80	215x114	86x60	157x85	D 70	?	?	125x80
Safety	-	-	-	-	-	-	-	+	+	+
Position of the buried	?	Sct	Sct	Sct	Sct	Sct	Abs	R	R	Supine
Orientation of the head of buried	Nnw	Nne	Nnw	Nw	Wws	Nnw		Nw	Nw	Nne
Sex of buried	M	?	?	M	?	?		F	M	F
Age at death (years) of buried	Ad	Ad	Ad	20-25	?	Ad		40-50	16-18	10
Ceramic vessels	3	2	6	2	2	3		3		4
Beads										410 st, 18 gypsum and 4 golden beads
Mirrors										1 br
Cosmetic flacon										1 br
Applicator										1 br
Another funeral inventory										4 golden and 1 silver earrings
NoNo of graves	281	282	283	284	285	286	287	288	289	290
Construction of the grave	P?	P?	P?	Cist	Cist	Sh	Bp	Sh	Sh	Sh
Depth of the grave (cm)	30	35	40	50	50	110	50	105	105	95
Dimensions	?	?	?	165x76	192x109	175x105	D 65	180x104	170x90	150x75
Safety	-	-	+	-	-	-	-	-	-	-
Position of the buried	R	L	L	L	Sct	R	Abs	R	R	Sct
Orientation of the head of buried	Nnw	Wwn	Wwn	Nnw	Nne	Nw		Nnw	Nnw	Nnw
Sex of buried	?	F	F	?	M	M		F	M	?
Age at death (years) of buried	18-20	35-40	30-35	Ad	25-30	Ad		50-55	Ad	?
Ceramic vessels	1	1	2	7	3	3	2	2	1	3
Beads	1 st							1 st		
Arrow heads									22 flint (may be in quiver)	
Notes								In the n-w angle – ash linz		
NoNo of graves	291	292	293	294	295	296	297	298	299	300
Construction of the grave	Sh	P?	P?	P?	P?	P?	P?	P?	P?	Sh
Depth of the grave (cm)	120	40	40	40	40	35	70	70	70	120
Dimensions	180x110	?	?	?	?	?	?	?	?	155x112
Safety	-	-	-	+	+	-	-	-	-	-
Position of the buried	Sct	R	R	L	L	Double L/?	Double L/?	R	R	L
Orientation of the head of buried	Nnw	Nnw	Nnw	Nne	Nne	W/W	Sse	Nnw	Ees	Nnw
Sex of buried	?	M	F	F	M	F/M	F/Ch	Ch	M	M

NoNo of graves	291	292	293	294	295	296	297	298	299	300
Age at death (years) of buried	?	40-45	30-35	12-14	6-7	15/15	35-40-1=1,5	1-1,5	7-8	Ad
Ceramic vessels	1			2	3					5
Hair pins		1 bone								
Notes		In the sand	In the sand	In the sand	In the sand	In the sand	In the sand	In the sand	In the sand	
NoNo of graves	301	302	303	304	305	306	307	308	309	310
Construction of the grave	Sh	P	P	Sh	Sh	?	?	?	Sh	P
Depth of the grave (cm)	70	80	45	110	160	55	60	60	115	100
Dimensions	120x70	D 100	100x40	180x100	165x95	?	?	?	175x90	?
Safety	+	-	-	-	+	-	-	-	-	+
Position of the buried	?	Abs	Supine	Sct	R	R	Triple L/R/R	R	Sct	Double /L/L
Orientation of the head of buried	Nnw		S	Nne	Nnw	Nne	Sse/wws /nnw	Nnw	?	Nw/nw
Sex of buried	F		?	?	F	M	F/F/M	M	?	M/F
Age at death (years) of buried	40-50		Ad	Ad	30-35	40-50	20-22/ 10/11-12	40-50	>60	18-25/ 30-35
Ceramic vessels	1	2		5	4			1	3	
Beads					1 st			2 st; 1 st biconical		
Seals								1 br		
Hair pin					2 bone					
Cosmetic flacon					1 br			1 br		
Applicator					1 br			1 br		
Notes					Lower jaw and neck are absent	In the sand	In the sand	In the sand		
NoNo of graves	311	312	313	314	315	316	317	318	319	320
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P	Sh	P?	P	P?
Depth of the grave (cm)	160	95	95	105	95	80	105	35	40	40
Dimensions	240x145	210x115	240x120	230x125	165x95	200x95	148x88	132x60	126x70	137x60
Safety	-	-	-	-	-	+	-	+	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Supine	Sct	Centph	Centph	R
Orientation of the head of buried	Nnw	Nnw	Nnw	N	Nnw	Nnw	nnw			N
Sex of buried	M	?	M	?	?	M	?			?
Age at death (years) of buried	Ad	Ad	30-35	?	?	25-30	?			Ad
Ceramic vessels	2	2	1	1	2	3	3	4	9	3
Beads						2 st; 1 st bi- conical; 1 br				1st
Seals								1 br		
Hair pins								1 bone		
Mirrors								1 br		
Applicator						1 br				
NoNo of graves	321	322	323	324	325	326	327	328	329	330
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	90	160	118	100	60	90	95	142	130	90
Dimensions	170x115	214x135	185x115	135x95	130x50	150x84	180x96	263x127	170x110	211x114
Safety	+	+	-	-	-	+	-	-	-	+
Position of the buried	Prone	R	R	Sct	R	R	R	Sct	Sct	R
Orientation of the head of buried	Nnw	Nnw	Nnw	?	Nnw	Nne	Nnw	Nnw	Nnw	Nne
Sex of buried	F	M	M	?	M	M	M	?	?	F
Age at death (years) of buried	45-50	25-30	>60	?	25-35	35-40	45-50	?	Ad	25-30
Ceramic vessels	2	4	4	3		2	2	6		9
Beads								77 gypsum and 1 carnelian	1 st biconical	1 st bico- nical; 2 st
Arrow heads			4 flint							

NoNo of graves	321	322	323	324	325	326	327	328	329	330
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	90	160	118	100	60	90	95	142	130	90
Dimensions	170x115	214x135	185x115	135x95	130x50	150x84	180x96	263x127	170x110	211x114
Safety	+	+	-	-	-	+	-	-	-	+
Position of the buried	Prone	R	R	Sct	R	R	R	Sct	Sct	R
Orientation of the head of buried	Nnw	Nnw	Nnw	?	Nnw	Nne	Nnw	Nnw	Nnw	Nne
Sex of buried	F	M	M	?	M	M	M	?	?	F
Age at death (years) of buried	45-50	25-30	>60	?	25-35	35-40	45-50	?	Ad	25-30
Ceramic vessels	2	4	4	3		2	2	6		9
Beads								77 gypsum and 1 carnelian	1 st biconical	1 st biconical; 2 st
Arrow heads			4 flint							
Seals				1 br						
Hair pins										2 bone, 1 silver with winged lions
Mirrors										1 br
Cosmetic spades										1 br
Applicator										1 br
Another funeral inventory								2 gold foils;		4 br buttons 1 Br vessel
NoNo of graves	331	332	333	334	335	336	337	338	339	340
Construction of the grave	P?	Sh	P	P	Sh	P	P	Sh	P	P
Depth of the grave (cm)	40	70	49	35	70	35	30	110	35	40
Dimensions	?	122x77	166x67	90x60	110x65	150x63	112x60	175x100	120x60	120x66
Safety	-	+	+	-	-	+	+	-	?	?
Position of the buried	Sct	R	R	Double R/?	Sct	R	Double R/?	R	R	R
Orientation of the head of buried	?	wvn	Nnw	Nnw	Wvn	Nnw	Nnw/?	Nnw	Nne	Ssw
Sex of buried	M	M	F	F/M	F	M	F/F	F	M	F
Age at death (years) of buried	7	35-40	45-55	50-60/9-10	30-35	Ad	50-60/ 50-60	35-40	10	45-50
Ceramic vessels	2	4	7	1	2	4	3	2	2	2
Beads			1 st biconical	1 st						1 st biconical; 1 st
Seals			1 gypsum							
Hair pins			1 br							
Another funeral inventory			1 fr of silver earring							1 ivory ring
Notes		The toracal vertebrae and hipbones are absent								
NoNo of graves	341	342	343	344	345	346	347	348	349	350
Construction of the grave	P	P	P	P?	P	Sh	Sh	Sh	Sh	Sepul
Depth of the grave (cm)	46	55	32	80	70	85	70	110	100	120
Dimensions	153x72	150x85	145x70	130x70	110x70	145x?	165x85	175x95	180x104	134x?
Safety	+	+	+	+	+	-	-	-	-	-
Position of the buried	Double L/L	Centph	Prone	R	Double R/L	R	R	Sct	Sct	Double Sct/Sct
Orientation of the head of buried	Ssw/ Ssw		Nne	Nnw	Nne/nne	Nnw	Nne	Nne	Nnw	Nne/nne
Sex of buried	M/F		M	F	F/Ch	F	?	?	M	M/F
Age at death (years) of buried	Ad/25-30		40-50	50-60	50-60/6-7	30-40	Ad	Ad	50-60	50-60/18-20

NoNo of graves	341	342	343	344	345	346	347	348	349	350
Ceramic vessels	1	5	3	4	2	5	3	4	2	8
Beads				1 st bico- nical	1 gypsum bisonic/ 1 gypsum					
Arrow heads			1 flint							
Mirrors						1 br				
Cosmetic flacon						1 br				
Another funeral inventory				1 Stone vessel		1 silver earring				
NoNo of graves	351	352	353	354	355	356	357	358	359	360
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	?	P?	Sh	Sh
Depth of the grave (cm)	110	75	85	100	135	105	35	30	115	95
Dimensions	255x150	206x115	220x120	215x110	172x102	186x115	?	?	194x110	190x100
Safety	-	-	-	-	+	+	-	+	-	+
Position of the buried	Sct	Double Sct/Sct	R	Sct	R	R	R	R	R	R
Orientation of the head of buried	Nnw	nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nw	Nnw	Nnw
Sex of buried	M	F/F	M	?	M	F	M	F	?	?
Age at death (years) of buried	35-40	16-18/30-35	40-50	Ad	35-40	12-16	35-40	35-40	Ad	Ad
Ceramic vessels	6	2	6	3	2	3		3		3
Beads	1 red st								10 gypsum	
Seals	1 br							1 br		
Statuettes									2 Fem terracota	
Hair pins								1 br with double spiral head		1 bone with fist and engravings 1 br
Mirrors										
Another funeral inventory									1 st button	
Notes							In the sand	In the sand		
NoNo of graves	361	362	363	364	365	366	367	368	369	370
Construction of the grave	Sh	Sh	Sh	Sh	P?	?	Sh	Sh	P?	Bp
Depth of the grave (cm)	105	115	110	145	45	65	90	110	40	35
Dimensions	230x100	220x130	200x100	215x110	155x70	?	160x100	235x155	120x50	75x60
Safety	-	-	-	-	-	-	+	-	-	+
Position of the buried	Sct	Abs	Sct	Sct	Sct	R	L	Sct	R	Supine
Orientation of the head of buried	Nnw		Nnw	Nne	Nnw	Nnw	Ssw	Nnw	Nne	Ees
Sex of buried	M		?	?	?	?	F	F	M	F
Age at death (years) of buried	35-40		?	Ad	Ad	Ad	45-50	Ad	16-17	55-60
Ceramic vessels	3		1	3	5	2	2	5	3	1
Beads		1 st			2 st biconical		1 gypsum biconical	1 st bico- nical		
Hair pin							1 br			
Another funeral inventory				1 piece of the st staff						
Notes		1 human falang			In the sand		In the angle traces of fire			
NoNo of graves	371	372	373	374	375	376	377	378	379	380
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Bp	Sh	Bp	Sh	Sh
Depth of the grave (cm)	105	115	135	70	115	40	70	25	85	70
Dimensions	175x110	195x95	230x110	160x85	220x95	?	210x105	D 60	210x115	140x80
Safety	+	-	-	+	-	-	-	-	-	+
Position of the buried	R	Sct	Sct	Supine	Sct	Sct	Sct	Abs	Sct	R
Orientation of the head of buried	Nnw	Nnw	Nnw	Nnw	Nnw	Sw	N		Nnw	N
Sex of buried	F	?	?	M	?		F		?	F
Age at death (years) of buried	16-17	?	?	Ad	Ad		16-17		?	50-60

NoNo of graves	371	372	373	374	375	376	377	378	379	380
Ceramic vessels	5	4	3	3	1		3		2	3
Beads					1 lapis lazuli					1 st biconical; 1 st
Seals					1 br					
Hair pin	1 bone									1 br
Cosmetic flacon	1 br									
Cosmetic spades	1 br									
Mirrors	1 br									
Cosmetic stick	1 br									
Another funeral inventory	1 Br earring									2 Br earrings
NoNo of graves	381	382	383	384	385	386	387	388	389	390
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	P	?	Sh
Depth of the grave (cm)	100	70	80	100	105	100	105	30	?	100
Dimensions	240x120	215x110	147x80	200x100	170x85	190x100	150x90	?	?	180x100
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	L	Sct	Abs	R	Sct	Sct
Orientation of the head of buried	Nnw	Nne	Nnw	Nw	Nnw	Nnw		S	?	Nw
Sex of buried	?	?	?	?	M	?		M	M	M
Age at death (years) of buried	Ad	?	?	?	6	?		18-20	35-40	Ad
Ceramic vessels	1	1	2	2	2	2	1			8
Beads						1 st biconical				
Statuettes										1 Fem terracotta
NoNo of graves	391	392	393	394	395	396	397	398	399	400
Construction of the grave	Sh	Sh	P?	P?	P?	Sh	Sh	?	?	Sh
Depth of the grave (cm)	130	150	35	40	35	80	120	90	70	120
Dimensions	170x117	200x107	115x70	?	100x60	190x112	120x110	?	?	224x120
Safety	-	+	?	-	-	+	+	-	+	+
Position of the buried	Sct	R	R	Double R/R	R	Double R/L	R	R	R	R
Orientation of the head of buried	Nnw	Nw	Nnw	Nnw/?	Nnw	Nnw/Nnw	Nnw	Nnw	Wws	Nnw
Sex of buried	M	F	M	F/M	F	M/M	M	M	M	M
Age at death (years) of buried	17-18	25-30	55-60	35-40/ 40-50	10-12	8-9/ 40-50	50-60	9	35-40	Ad
Ceramic vessels	6	5	2			2/0	5		1	2
Beads							23 st			
Hair-pins		2 bone with engravings; 1 silver with animal figurine					1 br; 1 silver			
Seals		1 br					2 gypsum			
Applicators		1 br					1 stette with engravings			
Cosmetic spades		1 br								
Cosmetic sticks		2 br					1 br			
Mirrors		2 br					1 br			
Another funeral inventory		1 silver button					2 gold earrings 1 silver diadem			
Notes						A man was located above the boy	A skull is absent	In a sand		
NoNo of graves	401	402	403	404	405	406	407	408	409	410
Construction of the grave	?	?	Cist	Sh	Sh	Sh	Sh	Sh	P	Sh
Depth of the grave (cm)	55	45	60	100	85	90	120	110	45	120
Dimensions	?	?	130x78	170x85	200x110	150x110	230x145	195x110	90x55	185x120

NoNo of graves	401	402	403	404	405	406	407	408	409	410
Safety	-	-	-	+	+	+	-	+	+	+
Position of the buried	L	R	Sct	R	R	R	Sct	R	Supine	R
Orientation of the head of buried	Nnw	Nnw	Nnw	Nw	Nnw	Nne	Nne	Nnw	Nne	Nnw
Sex of buried	M	F	F	M	M	F	M	M	F	M
Age at death (years) of buried	35-40	40-45	35-40	50-60	25-30	50-60	50-60	35-40	45-50	50-60
Ceramic vessels	4	1	3	3	4	3	3	3	3	1
Beads				1 st biconical				1 gypsum		
Hair pins					1 bone	1 bone with fist				
Seals						1 br				
Arrow heads										2 flint
Mirrors					1 br					
Cosmetic flacon				1 br						
NoNo of graves	411	412	413	414	415	416	417	418	419	420
Construction of the grave	P	P?	?	Sh	Sh	Sh	P	P	P	Sh
Depth of the grave (cm)	60	60	?	95	80	145	40	70	40	135
Dimensions	100X50	45x45	?	150x85	200x120	200x100	150x75	105x65	165x60	230x130
Safety	+	-	-	+	+	-	-	-	+	-
Position of the buried	Centph	Sct	Sct	R	Centph	Sct	R	R	R	Sct
Orientation of the head of buried		?	?	Nnw		Nnw	Nnw	Nnw	Nnw	Nnw
Sex of buried		M	?	F		?	?	M	F	M
Age at death (years) of buried		40-50	?	20-25		?	Ad	50-60	20-25	25-30
Ceramic vessels	3			2	3	2			4	4
Beads				1 st					4 gypsum	1 gypsum
Hair pin	1 br			1 bone						
Applicator									1 br	
Cosmetic flacon									1 br	
Another funeral inventory	1 Br knife									
Notes		Fraction Burial								
NoNo of graves	421	422	423	424	425	426	427	428	429	430
Construction of the grave	P	Sh	Sh	Sh	Sh	Sh	Sh	Sh	P?	Sh
Depth of the grave (cm)	80	100	160	130	120	140	80	140	50	105
Dimensions	140x70	145x90	220x120	255x170	200x110	210x130	175x90	195x135	110x90	135x85
Safety	+	-	-	-	+	-	-	-	-	+
Position of the buried	R	Sct	Sct	R	R	Sct	R	R	Sct	R
Orientation of the head of buried	Nnw	Nne	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw
Sex of buried	F	?	?	?	F	?	?	?	?	?
Age at death (years) of buried	40-45	Ad	Ad	Ad	Ad	Ad	Ad	Ad	Ad	Ad
Ceramic vessels	3		3	2	4	2	2	3		4
Beads	1 gypsum				1 st biconical					
Seals					1 br					
Cosmetic flacon	1 bone									1 br
Applicator	1 br									1 br
Mirrors										1 br
Hair pins										1 bone
Another funeral inventory					2 silver earrings					
NoNo of graves	431	432	433	434	435	436	437	438	439	440
Construction of the grave	P?	Sh	Sh	Sh	Sh	P	Sh	P?	Sh	Sh
Depth of the grave (cm)	30	130	95	125	170	55	145	80	110	140
Dimensions	100x50	140x100	155x85	195x100	180x195	80x50	200x120	100x50	145x95	175x105
Safety	+	+	+	+	+	+	-	+	-	-
Position of the buried	R	R	R	Supine	R	R	Sct	R	R	Sct
Orientation of the head of buried	Wwn	Nnw	Nnw	Nnw	Nnw	Een	Nnw	N	Wws	Nnw

NoNo of graves	431	432	433	434	435	436	437	438	439	440
Sex of buried	?	?	?	?	F	?	?	?	?	?
Age at death (years) of buried	Ad	Ad	Ad	Ad	Ad	Ad	Ad	Ad	Ad	Ad
Ceramic vessels		4	2	6	4	1	2	2	2	5
Beads					1 golden foil		1 st biconical			
Mirrors					1 br					
Hair pins		1 br								
Cosmetic flacon					1 br					
Applicator					1 br					
Another funeral inventory					2 silver earrings				2 Silver earrings	
NoNo of graves	441	442	443	444	445	446	447	448	449	450
Construction of the grave	Sh	Sh	Cist	Sh	Sh	P?	Bp	Sh	Sh	Septult
Depth of the grave (cm)	145	130	80	150	95	50	65	120	105	140
Dimensions	200x120	160x95	120x80	175x95	165x100	97x55	85x85	190x125	215x130	280x160
Safety	+	-	-	-	-	-	+	+	-	-
Position of the buried	R	R	Sct	R	Sct	R	R	R	Sct	Double Sct/Sct
Orientation of the head of buried	Nnw	Wwn	Nnw	Nne	Nnw	Nw	Nnw	Nnw	Nnw	Nnw/Nnw
Sex of buried	?	?	?	?	?	Ch	Ch	F	?	Ad/Ch
Age at death (years) of buried	Ad	Ad	Ad	Ad	?	10-11	10-12	45-50	?	?/?
Ceramic vessels	4	2	3	4	3	1	2	4	3	7
Beads	1 st	1 st biconical		1 st		8 gypsum		4 st biconical		1 with gold holder; 1 terracota
Hair pins				2 bone						
Statuettes						1 fem terracotta				1 fr of fem terracotta
Arrow heads										1 flint
Mirrors	1 br									
Another funeral inventory										
Notes										A bench, a table, a hearth
NoNo of graves	451	452	453	454	455	456	457	458	459	460
Construction of the grave	Sh	Sh	?	P	?	Sh	Sh	P	Sh	Cist
Depth of the grave (cm)	110	95	45	85	45	130	90	70	100	45
Dimensions	170x90	145x90	?	130x80	?	165x105	150x70	145x60	155x100	150x110
Safety	+	-	-	+	-	-	-	?	-	-
Position of the buried	R	R	Sct	R	R	Sct	Sct	R	R	Sct
Orientation of the head of buried	Nnw	Nnw	?	Nne	Nnw	N	Ees	Nne	Nne	Nnw
Sex of buried	M	M	M	?	F	?	?	?	?	?
Age at death (years) of buried	30-35	15-16	30-40	Ad	Ad	Ad	Ad	Ad	Ad	?
Ceramic vessels	2	2				4	2	4	3	3
Another funeral inventory			St greed-ing?							
NoNo of graves	461	462	463	464	465	466	467	468	469	470
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	?	Sh
Depth of the grave (cm)	100	125	110	110	120	105	145	140	90	130
Dimensions	170x100	150x100	100x50	125x80	140x100	110x70	140x80	D 130	155x95	160x80
Safety	-	-	-	-	-	-	+	-	-	+
Position of the buried	R	Sct	R	L	Sct	Sct	R	R	Abs	R
Orientation of the head of buried	Nne	N	Nnw	Nnw	N	Nnw	Nnw	Nnw		Nnw
Sex of buried	F	F	F	F	M	M	F	F		F
Age at death (years) of buried	40-45	20-25	40-50	25-30	30-35	35-40	40-45	40-45		50-55
Ceramic vessels		3	3		4		2		2	5

NoNo of graves	501	502	503	504	505	506	507	508	509	510
Another funeral inventory								kaolin		St staff 125,5 cm; 1 lid disk
NoNo of graves	511	512	513	514	515	516	517	518	519	520
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P	Sh	Sh	Sh	Sh
Depth of the grave (cm)	76	90	130	150	110	50	154	140	110	142
Dimensions	168x84	160x110	174x92	177x100	132x67	166x77	241x137	154x87	192x97	256x144
Safety	-	-	+	-	+	+	+	+	-	+
Position of the buried	R	Sct	R	?	R	R	R	R	?	R
Orientation of the head of buried	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nne	Nnw	Nne
Sex of buried	F	?	F	F	F	M	M	F	?	F
Age at death (years) of buried	25-30	?	25-30	50-55	15-16	35-40	25-30	25-30	?	30-35
Ceramic vessels		3	3	3	2	3	6	3	1	8
Beads				1 st biconical						1 faience and 1 st biconical
Mirrors										1 br
Ceremonial axes							1 Br			
Hair-pins						2 Br	1 bone			1 br; 1 bone
Knives	1 br					1 Br				1 Br
Cosmetic flacons										1 br; 1bone
Knives	1 br					1 Br				1 Br
Cosmetic flacons										1 br; 1bone
Applicator										
Another funeral inventory						1 fr lid disk; 2 honnees Kaolin			1 br	
NoNo of graves	521	522	523	524	525	526	527	528	529	530
Construction of the grave	Sh	Sh	Sh	Sh?	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	105	110	80	65	160	145	155	155	155	150
Dimensions	165x90	165x110	155x90	135x80	270x140	185x130	?	?	?	242x125
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	Sct	Sct	R	Sct	Sct	Sct	Sct	Sct	Sct	R
Orientation of the head of buried	Nnw	N	Nne	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw
Sex of buried	?	?	M	F	F	M	?	F	M	M
Age at death (years) of buried	Ad	Ad	25-30	25-30	20-25	50-55	Ad	25-30	Ad	18-20
Ceramic vessels	4	2	2	4	1	1	3	1	2	6
Beads		1 st biconical			1 st					
Seals							1 gypsum			
Another funeral inventory					1 st vessel	1 st vessel				1 st vessel
NoNo of graves	531	532	533	534	535	536	537	538	539	540
Construction of the grave	Sh	Sh	Sh	P?	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	155	160	140	70	150	95	80	80	120	130
Dimensions	265x140	210x115	160x140	185x95	220x95	190x120	175x90	160x90	220x100	185x110
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	R	R	Sct
Orientation of the head of buried	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	nnw	nnw	nnw	Nnw
Sex of buried	?	?	?	?	?	?	F	F	?	F
Age at death (years) of buried	Ad	?	?	?	Ad	?	20-25	20-25	?	30-35
Ceramic vessels	2	1	1	3	5	2	2	1	1	2
Beads										1 st
Mozais										Fr
NoNo of graves	541	542	543	544	545	546	547	548	549	550
Construction of the grave	Sh	Sh	P?	P?	Sh	P	Sh	P?	P	Sepult
Depth of the grave (cm)	100	110	15	20	100	70	165	35	55	115
Dimensions	140x85	165x100	?	?	160x130	175x80	220x100	?	150x70	270x120
Safety	-	-	-	-	-	+	-	-	+	-

NoNo of graves	541	542	543	544	545	546	547	548	549	550
Position of the buried	Supine	Sct	Sct	Sct	Abs	R	Double Sct/Sct	Double R/Sct	R	Sct
Orientation of the head of buried	Nnw	Nnw	Nne	Nnw		Nnw	Nnw/Nnw	Nnw/Nnw	Nnw	Nnw
Sex of buried	M	?	M	M		F	?/?	M/F	F	?
Age at death (years) of buried	40-45	?	35-40	25-30		20-25	Ad/Ch	30-35/20-25	25-30	20-25
Ceramic vessels	2	2		1	4	5		1	3	9
Beads						1 gypsum biconical; stone beads on the neck			1 st biconical	
Cosmetic flacon									1 br	
Hair-pins						1 br				
Another funeral inventory						2 bangles from the beads			Silver diadem	
Notes										Along the north wall – a bench
NoNo of graves	551	552	553	554	555	556	557	558	559	560
Construction of the grave	P	P	Cist	Sh	Sepult	P	Sh	Sh	Sh	Cist
Depth of the grave (cm)	40	70	90	95	170	80	125	100	90	45
Dimensions	130x65	150x75	110x85	200x55	370x185	105x70	180x120	170x120	170x75	240x115
Safety	+	+	-	+	-	+	-	-	-	+
Position of the buried	L	R	Sct	R	Sct	R	Sct	Sct	?	Sct
Orientation of the head of buried	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw
Sex of buried	F	M	M	F	M	F	M	?	?	F
Age at death (years) of buried	20-25	35-40	25-30	40-45	30-35	30-35	25-30	?	Ad	12-13
Ceramic vessels	3	2	5	3	10	4	3	3	2	4
Beads			2 st		2 gypsum	1 gypsum; 1 st biconical				11 lapis lazuli; 19 golden, 3 st, 1 silver beads; 3 st biconical
Seals					1 silver; 1 fr gypsum					1 br
Miniature column					1 st					
Hair-pin										Hair-pin 1 br; 1 bone, 1 silver
Cosmetic flacon					1 br					Statuettes 1 Fem. terracotta
Another funeral inventory		1 br knife			1 br goblet, 1 br head of staff; 3 silver vessels					1 gold, 2 br bangles; 3 gold earrings; 2 gold pin; 1 br cap
Notes					A model of double hearth					
NoNo of graves	561	562	563	564	565	566	567	568	569	570
Construction of the grave	P	Sh	Sh	P	Cist	Sh	P	Cist	P	Sepult
Depth of the grave (cm)	50	135	135	50	95	115	65	110	70	170
Dimensions	130x80	185x115	165x85	160x70	160x90	110x70	?	165x70	165x110	285x110
Safety	-	-	-	-	-	+	-	-	-	-
Position of the buried	R	Sct	Sct	R	?	L	R	Sct	Sct	Sct
Orientation of the head of buried	Wws	?	?	Nnw	?	Nnw	Nnw	?	?	?
Sex of buried	M	F	?	?	?	F	F	M	M	?

NoNo of graves	561	562	563	564	565	566	567	568	569	570
Age at death (years) of buried	25-30	17	Ad	Ad	Ad	30-35	20-25	35-40	40-50	Ad
Ceramic vessels	1	2	3	1	14	5	3	6		5
Beads						2 st biconical				2gypsum
Seals										1 silver goddess on the back of leopard
Arrow heads										1 flint
Hair-pin										1 bone
Another funeral inventory										Silver foil
Notes										A table
NoNo of graves	571	572	573	574	575	576	577	578	579	580
Construction of the grave	?	Sh	?	Sh	Sepult	?	?	P	P	P
Depth of the grave (cm)	125	105	105	105	140	135	135	15	25	25
Dimensions	?	200x105	?	135x90	340x135	?	?	?	?	?
Safety	-	-	-	+	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	R	Double Sct/Sct	Sct	Sct	Double Sct/Sct	Sct	R
Orientation of the head of buried	?	Nnw	?	Nnw	Wwn	?	?	Wws	?	Nnw
Sex of buried	?	F	M	M	F/Ch	?	?	F/ Ch	?	Ch
Age at death (years) of buried	?	35-40	25-30	25-30	20-25/1-2	?	?	20-25/12-14	Ad	12-13
Ceramic vessels	2	2		1	11	3	3		12	
Beads		1 gypsum			1 st					
Seals										
Another funeral inventory					1 st vessel; ivory					
Notes	Animal bones									
NoNo of graves	581	582	583	584	585	586	587	588	589	590
Construction of the grave	P	P	Sh	Sh	Sepult	Sh	Sh	?	?	Sh
Depth of the grave (cm)	25	15	120	100	100	115	105	35	35	150
Dimensions	?	110x50	195x115	180x90	315x130	180x115	160x75	?	?	200x125
Safety	-	+	-	+	-	-	-	-	-	+
Position of the buried	Sct	R	Sct	R	Sct	Sct	Sct	Sct	Sct	Centph
Orientation of the head of buried	?	Nnw	?	Nnw	Nnw	Nnw	Nnw	?	?	Nnw
Sex of buried	Ch	Ch	F	Ch	F	M	F	?	M	
Age at death (years) of buried	10-11	12-13	Ad	8-9	35-40	25-30	20-25	?	20-25	
Ceramic vessels		3	3	2	4	3	2	1	1	4
Beads										1st
Hair-pins							1 bone			
Another funeral inventory							1 fr gypsum mosaics			
Notes					A hearth, a table					Lamb bones
NoNo of graves	591	592	593	594	595	596	597	598	599	600
Construction of the grave	?	?	?	?	?	?	?	?	?	Cist
Depth of the grave (cm)	70	80	90	95	100	110	100	120	120	50
Dimensions	?	?	?	?	?	?	?	?	?	145x90
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	?	Sct	Sct	Sct	Sct	Sct	Sct	Sct	R
Orientation of the head of buried	?	?	?	?	?	?	?	?	?	Nnw
Sex of buried	?	?	?	?	?	?	?	F	?	M
Age at death (years) of buried	Ad	?	20-25	?	?	?	?	16-18	?	25-30
Ceramic vessels	1	2	2			1			4	3
Another funeral inventory		Gold foil								Lead thing
NoNo of graves	601	602	603	604	605	606	607	608	609	610
Construction of the grave	P	Sh	P	P	P	P	P	P	P	P
Depth of the grave (cm)	20	95	15	20	40	80	75	40	45	60

NoNo of graves	601	602	603	604	605	606	607	608	609	610
Construction of the grave	P	Sh	P	P	P	P	P	P	P	P
Depth of the grave (cm)	20	95	15	20	40	80	75	40	45	60
Dimensions	80x45	165x105	150x65	165x60	145x65	160x65	120x80	140x75	160x80	140x60
Safety	-	-	-	-	+	+	+	+	?	+
Position of the buried	Sct	Sct	R	R	Supine	Sct	R	Sct	L	R
Orientation of the head of buried	Nnw	NNw	Nnw	Nnw	Nnw	Nne	Nne	Nnw	N	Nnw
Sex of buried	Ch	M	M	M	F	?	M	?	F	F
Age at death (years) of buried	11-12	20-25	25-30	25-30	20-25	Ad	40-45	Ad	35-40	25-30
Ceramic vessels		3		2	3	4	3	3	6	8
Beads										1 st; 1 st biconical
Hair-pins										1 silver
Mirrors										1 br
Cosmetic flacon										1 br
Another funeral inventory										1 gold earring; 1 silver plate;
Notes									Without scull	
NoNo of graves	611	612	613	614	615	616	617	618	619	620
Construction of the grave	P	Sh	Cist	Sh	P?	P	?	Sh	P	Sh
Depth of the grave (cm)	70	150	55	105	80	50	110	150	115	110
Dimensions	?	270x150	195x95	150x75	195x105	?	?	205x125	160x70	140x80
Safety	-	+	-	-	-	-	-	-	-	+
Position of the buried	Sct	R	Sct	Sct	Abs	L	Double Sct/Scr	Abs	Double R/R	Double R/R
Orientation of the head of buried	?	Nne	Nnw	Ssw		?	?/?		Sw	Nnw
Sex of buried	M	M	?	M		M	F/F		M	F/Ch
Age at death (years) of buried	25-30	35-40	?	20-25		25-30	14-15/16-17		Ad	50-65/6-7
Ceramic vessels	3	2	8	5	4	1		2	3	
Beads		1 st				1 gypsum				
Notes	1 br artifact									A child near the woman legs
NoNo of graves	621	622	623	624	625	626	627	628	629	630
Construction of the grave	?	?	?	?	?	?	?	?	?	?
Depth of the grave (cm)	100	110	130	120	100	120	130	110	100	120
Dimensions	?	?	?	?	?	?	?	?	?	?
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Double Sct/Sct
Orientation of the head of buried	?	?	?	?	?	?	?	?	?	?
Sex of buried	M	M	?	M	?	M	M	?	M	F/Ch
Age at death (years) of buried	25-30	30-35	?	Ad	?	20-25	30-35	?	20-25	25-35/7-8
Ceramic vessels	1		3		1	1	2	1	5	3
NoNo of graves	631	632	633	634	635	636	637	638	639	640
Construction of the grave	?	?	?	?	?	?	?	?	?	?
Depth of the grave (cm)	130	120	125	130	110	100	125	125	120	130
Dimensions	?	?	?	?	?	?	?	?	?	?
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	?	?	?	?	?	?	?	?	?	?
Sex of buried	?	M	?	?	M	F	F	?	?	?
Age at death (years) of buried	?	25-30	?	?	25-30	Ad	Ad	?	?	?
Ceramic vessels	3		1	1	1	3	2			1

NoNo of graves	641	642	643	644	645	646	647	648	649	650
Construction of the grave	?	?	?	?	?	?	?	?	?	Cist
Depth of the grave (cm)	120	125	110	100	125	130	115	125	130	110
Dimensions	?	?	?	?	?	?	?	?	?	150x105
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	?	?	?	?	?	?	?	?	?	?
Sex of buried	?	M	?	?	M	?	F	F	?	?
Age at death (years) of buried	?	25-30	?	?	35-40	?	18-20	35-40	?	?
Ceramic vessels	1	3	2	2	2	1	3	1	2	6
Beads										1 st
NoNo of graves	651	652	653	654	655	656	657	658	659	660
Construction of the grave	?	?	?	?	?	?	?	?	?	?
Depth of the grave (cm)	100	135	120	125	130	135	140	120	110	100
Dimensions	?	?	?	?	?	?	?	?	?	?
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	?	?	Centph	?	Centph	?	Centph	?	?	?
Orientation of the head of buried	?	?		?		?		?	?	?
Sex of buried	?	?		F		M		F	F	Ch
Age at death (years) of buried				30-35		35-40		20-25	35-40	14-15
Ceramic vessels	1		3		1	2	1			1
NoNo of graves	661	662	663	664	665	666	667	668	669	670
Construction of the grave	?	?	?	?	?	?	?	?	?	Sh
Depth of the grave (cm)	120	115	130	125	120	140	110	120	120	95
Dimensions	?	?	?	?	?	?	?	?	?	130x70
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	?	?	?	?	?	?	DoubleR/R	Sct	Abs	Supine
Orientation of the head of buried	?	?	?	?	?	?	Nnw	?		Sse
Sex of buried	F	M	F	F	F	F	M/F	F		?
Age at death (years) of buried	15-16	30-35	20-25	Ad	35-40	Ad	35-40/40-45	25-30		Ad
Ceramic vessels	5		3	1		2		4	2	3
Beads							1 st	1 st		1 st
NoNo of graves	671	672	673	674	675	676	677	678	679	680
Construction of the grave	?	P	?	?	?	?	?	?	?	Sh
Depth of the grave (cm)	?	45	120	120	120	120	120	120	120	110
Dimensions	?	?	?	?	?	?	?	?	?	175x120
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Centph	Supine	?	?	?	?	?	?	?	Sct
Orientation of the head of buried		Sse	?	?	?	?	?	?	?	?
Sex of buried		M	?	M	M	?	?	M	?	M
Age at death (years) of buried		55-60	?	20-25	25-60	?	?	35-40	45-50	35-40
Ceramic vessels	1	2	2	3	2	4	1	3	1	4
Beads	1 gypsum									1 st; 1 gold
Arrow heads										1 flint
Another funeral inventory				1 br artifact						1 st vessel;
NoNo of graves	681	682	683	684	685	686	687	688	689	690
Construction of the grave	Sh	Sh	?	?	Cist	?	?	?	P	?
Depth of the grave (cm)	90	85	105	105	135	120	120	100	50	90
Dimensions	170x120	?	?	?	140x95	?	?	?	110x70	?
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	R	Sct	Double Sct/Sct	Sct	Sct	Sct	Centph	Sct	Supine	Sct
Orientation of the head of buried	Nnw	?	?	?	?	?	?	?	S	?
Sex of buried	F	F	?/Ch	?	?	?	?	F	F	?
Age at death (years) of buried	30-35	45-50	Ad/6-7	?	?	20-25		18-20	20-30	?
Ceramic vessels	4	1	1		2					2

NoNo of graves	691	692	693	694	695	696	697	698	699	700
Construction of the grave	?	?	?	?	P	?	P	?	?	?
Depth of the grave (cm)	130	125	100	110	145	90	85	90	80	100
Dimensions	?	?	?	?	200x125	?	140x70	?	?	?
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Centph	Sct	Sct	R	Centph	Centph	Centph
Orientation of the head of buried	?	?	?	Abs	Nnw	?	Nnw	Abs	Abs	Abs
Sex of buried	M	?	?		F	F	M			
Age at death (years) of buried	35-40	?	?		40-50	Ad	25-30			
Ceramic vessels	3	1	3	2	3	1		3	4	2
Beads					1 gypsum					
Another funeral inventory					1 st vessel					
NoNo of graves	701	702	703	704	705	706	707	708	709	710
Construction of the grave	Cist	P	Sh	Sh	Sh	Sh	Sh	Sh	Cist	Sh
Depth of the grave (cm)	45	65	75	75	125	75	150	90	30	65
Dimensions	190x100	165x85	205x115	230x120	205x145	190x110	150x110	160x135	185x120	160x85
Safety	-	+	-	-	-	-	-	-	-	+
Position of the buried	Sct	Centph	Sct	Sct	Sct	Sct	R	Sct	Sct	Double R/R
Orientation of the head of buried	Nw	Abs	?	?	Nne	Nnw	Nw	?	?	Nnw
Sex of buried	?		?	?	F	?	F	M	F	F/ch
Age at death (years) of buried	?		?	?	Ad	?	20-30	30-35	45-50	Ad/ 7-8
Ceramic vessels	1	5	5	7	7	5	9	5	5	3
Beads		1 wight st					2 gypsum			
Hair pin							1 bone			
NoNo of graves	711	712	713	714	715	716	717	718	719	720
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P	Sh	P	Sh	Sh
Depth of the grave (cm)	40	115	95	90	130	50	85	40	105	90
Dimensions	130x75	215x130	185x80	170x120	195x135	130x80	210x145	150x100	220x125	170x100
Safety	-	-	-	-	-	-	+	-	-	-
Position of the buried	Centph	?	Sct	Sct	Sct	R	Cenotph	Sct	Sct	Sct
Orientation of the head of buried	Abs	?	N	Nnw	Ssw	Nnw	Abs	Wwn	Nnw	?
Sex of buried		?	M	M	F	?		M	F	F
Age at death (years) of buried		?	30-35	35-40	30-35	Ad		40-45	50-55	30-35
Ceramic vessels	4	6	2	5	7	2	6	4	6	4
Beads	1 st				5 st; 1 gypsum biconical	1 st biconical	3 st			
Seals					1 gypsum		1 gypsum			
Mirrors					1 br					
Cosmetic flacon					1 br					
Cosmetic spades					1 br					
Another funeral inventory	Kaolin				1 br plate; 1 br thing		1 st vessel; kaolin			
NoNo of graves	721	722	723	724	725	726	727	728	729	730
Construction of the grave	Sh	Sh	Sh	P	Sh	Sh	Sh	Sh	Sh	P
Depth of the grave (cm)	120	150	75	80	145	115	105	100	90	160
Dimensions	120x50	240x125	210x120	?	220x115	185x120	190x105	200x110	175x115	285x177
Safety	-	+	-	-	+	+	+	+	-	-
Position of the buried	Sct	Centph	Sct	Sct	Centph	L	R	Centph	Sct	R
Orientation of the head of buried	Een	Abs	nne	Wwn	Abs	Nw	Wnn	Abs	Wwn	Nnw
Sex of buried	F		M	F		M	F		M	M
Age at death (years) of buried	25-30		40-45	40-45		30-35	30-35		30-35	45-50
Ceramic vessels	3	8	2		4	8	5	9	1	10
Beads		2 st				1 st biconical	1 st biconical			1 lapis lazuli

NoNo of graves	721	722	723	724	725	726	727	728	729	730
Seals							1 br			
Hair pins						1 br		1 br		
Mirrors						1 br		1 br		
Cosmetic flacon							1 br	1 br		
Cosmetic spades						1 br		1 br		
Applicator							1 br			
Another funeral inventory	Kaolin						1 silver earring	1 lead disk; 1 br knife; 1 br diadem		
Notes				Without scull				Animal bones		
NoNo of graves	731	732	733	734	735	736	737	738	739	740
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	P
Depth of the grave (cm)	128	95	65	125	150	135	90	135	125	40
Dimensions	165x85	115x90	150x80	175x105	217x150	200x107	155x120	135x110	?	80x40
Safety	-	+	+	-	+	-	-	-	-	+
Position of the buried	R	Supine	R	Sct	R	Sct	Sct	Sct	Sct	Supine
Orientation of the head of buried	W	Nnw	Nnw	Wws	Nne	N	Wwn	Nne	Wwn	Nnw
Sex of buried	F	F	?	?	F	?	M	F	?	F
Age at death (years) of buried	20-25	45-50	Ad	?	30-35	Ad	35-40	16-18	Ad	Ad
Ceramic vessels	2	3	2	5	5	2		5	2	1
Beads	3 st				1 st biconical	gypsum				1 st
Seals					1 br					1 br
Hair pin	1 br				1 br					1 bone
Cosmetic spades					1 br					
Statuettes	1 fem terracotta									
Another funeral inventory								1 silver earring	1 gypsum	1 st vessel
NoNo of graves	741	742	743	744	745	746	747	748	749	750
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P	Sh	Sh	P	P
Depth of the grave (cm)	55	115	110	104	90	30	120	110	70	70
Dimensions	155x95	190x105	185x90	190x100	170x110	96x65	175x105	180x110	170x75	165x75
Safety	+	-	-	+	+	+	-	-	-	+
Position of the buried	Abs	Sct	Abs	R	R	L	Sct	Sct	Sct	Centph
Orientation of the head of buried		Wwn		Nnw	Nnw	S	Nnw	Nnw	Nnw	Abs
Sex of buried		?		M	?	?	?	?	?	
Age at death (years) of buried		?		40-45	Ad	Ad	Ad	Ad	Ad	
Ceramic vessels		1	3	3	3	1	3	3	1	5
Another funeral inventory		1 st vessel								
NoNo of graves	751	752	753	754	755	756	757	758	759	760
Construction of the grave	Sh	P	Sh	Fp	Fp	P	Sepult	Sh	P	Sh
Depth of the grave (cm)	105	85	105	40	40	90	105	110	75	135
Dimensions	165x90	175x105	180x90	50x35	50x35	175x95	260x140	215x10	115x75	210x110
Safety	-	-	-	+	+	-	-	-	+	-
Position of the buried	Sct	Sct	Sct	Abs	Abs	Sct	Sct	Sct	R	Sct
Orientation of the head of buried	N	N	Wwn			W	Nnw	Nnw	N	Nnw
Sex of buried	M	F	?			F	?	F	M	?
Age at death (years) of buried	35-40	30-35	Ad			25-30	?	35-40	40-45	Ad
Ceramic vessels	3	1	2			3	5	3		3
Arrow heads	2 flint									
NoNo of graves	761	762	763	764	765	766	767	768	769	770
Construction of the grave	Sh	Sh	Sh	P	Sh	Sh	Bp	Sh	Sh	Sh
Depth of the grave (cm)	150	110	105	70	104	145	50	105	105	130
Dimensions	210x110	190x95	190x95	180x95	230x120	220x110	60x55	106x80	200x105	210x100
Safety	-	-	-	-	-	-	+	-	-	-

NoNo of graves	761	762	763	764	765	766	767	768	769	770
Position of the buried	Sct	Sct	Sct	Abs	Sct	?	R	Sct	Sct	Sct
Orientation of the head of buried	Nnw	Nnw	Nnw		Nnw	Nnw	E	Nw	Nnw	Nnw
Sex of buried	?	?	?		?	?	Ch	?	F	M
Age at death (years) of buried	Ad	Ad	Ad		25-30	?	5-6	Ad	20-25	30-35
Ceramic vessels	1	8		2				3	2	2
NoNo of graves	781	782	783	784	785	786	787	788	789	790
Construction of the grave	?	Fp	Fp	Fp	Fp	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	135	20	20	15	10	140	120	85	115	65
Dimensions	?	70x55	80x65	95x65	70x60	180x75	190x110	160x90	180x120	145x85
Safety	-	+	+	+	+	-	+	+	+	+
Position of the buried	Sct	Abs	Abs	Abs	Abs	Sct	Centph	Centph	Centph	Centph
Orientation of the head of buried	?					N	Abs	Abs	Abs	Abs
Sex of buried	?					?				
Age at death (years) of buried	?					Ad				
Ceramic vessels	4					1	2	7	2	2
Beads							1 st	1 st biconical		1 st
Seals								1 br		
Mirrors								1 br		
Arrow heads								1 flint		
Hair pins								1 bone		
Cosmetic flacon								1 br in the box		
Another funeral inventory							1 st cylinder	1 st tool	kaolin	
NoNo of graves	791	792	793	794	795	796	797	798	799	800
Construction of the grave	Sh	Sh	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	165	100	70	120	110	135	170	100	160	165
Dimensions	210x100	225x125	84x50	190x110	205x115	185x100	200x102	190x130	210x105	240x125
Safety	-	-	+	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Abs	Sct	Sct	Centph	R	Sct	Sct	R
Orientation of the head of buried	Nne	Nnw		Nnw	N	Abs	Nne	Nnw	Nne	N
Sex of buried	F	F		?	?		F	M	F	M
Age at death (years) of buried	25-30	Ad		?	?		35-40	40-45	40-45	30-35
Ceramic vessels	3	1		3	3	3	3	4	1 (d 1,4 cm)	5
Beads						1 crystal				
Seals	1 br									
Another funeral inventory								1 gypsum button		
Notes			Ash							
NoNo of graves	801	802	803	804	805	806	807	808	809	810
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	135	155	170	170	120	117	125	90	130	115
Dimensions	200x130	210x130	195x117	255x170	198x123	220x100	180x100	180x130	205x140	200x115
Safety	-	-	-	-	-	-?	+	-	-	+
Position of the buried	R	Sct	R	Sct	L	R	R	Sct	Sct	R
Orientation of the head of buried	Nnw	Nnw	Nne	N	Wwn	Wwn	Nnw	Nnw	Nne	Wwn
Sex of buried	F	F	M	F	F	F	M	?	M	M
Age at death (years) of buried	35-40	45-50	20-30	30-35	35-40	50-60	20-25	Ad	40-45	30-35
Ceramic vessels	3	3	5	7	5	5	3	2	3	2
Beads					1 st biconical; 2 white st	20 gypsum		6 black st		
Seals					1 br					
Mirrors					1 br	1 br				
Statuettes						2 fem terracotta				
Cosmetic flacon					1 br					

NoNo of graves	801	802	803	804	805	806	807	808	809	810
Cosmetic spades					1 br	1br				
Another funeral inventory	Kaolin				1 alabaster artifact					
NoNo of graves	811	812	813	814	815	816	817	818	819	820
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	170	160	155	110	160	140	125	140	180	145
Dimensions	180x90	200x130	280x140	170x115	270x140	185x105	250x150	212x125	260x160	220x125
Safety	-	+	-	-	-	-	-	-	-	-
Position of the buried	Sct	R	R?	L	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Wwn	Nne	Nnw	Nnw	Nnw	Wwn	Nnw	Nne	Nne	Nnw
Sex of buried	M	F	M	Ch	F	F	?	F	?	?
Age at death (years) of buried	45-50	35-40	30-35	4-5	18-20	20-25	Ad	20-25	Ad	Ad
Ceramic vessels	4	4	4	3	2	3	3	3	5	6
Beads		1 st biconical		1 st				1 st		
Seals		1 gypsum								
Another funeral inventory	1 st cubus 1x1 cm				1 terracotta head					
NoNo of graves	821	822	823	824	825	826	827	828	829	830
Construction of the grave	Sh	Sh	Sh	P	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	80	110	155	40	95	120	110	145	145	110
Dimensions	160x100	180x113	315x190	150x90	180x130	175x100	220x100	260x125	250x140	265x150
Safety	+	-	-	+	-	-	-	-	-	-
Position of the buried	R	R	Double Sct/Sct	R	R	Sct	Centph	Sct	Sct	Triple R/Sct/Sct
Orientation of the head of buried	Nnw	Nnw	Wwn	Nnw	Wwn	Wwn	Abs	N	Wwn	Nnw
Sex of buried	F	F	F/Ch	M	M	F		?	F	M/F/ Ch
Age at death (years) of buried	Ad	25-30	20-25/11-12	35-40	25-30	35-40		Ad	25-30	35-40/30-35/ 9-10
Ceramic vessels	4	4	9	7	4	1	4	6	8	3
Beads	1 gypsum; 2 gypsum biconical		1 agat; 15 gypsum;			2 gypsum			1 ceramic; 1 st	
Seals	1 gypsum		1 br							
Cosmetic stick									1 br	
Hair-pins			1 br							
Cosmetic spades			1 br							
Another funeral inventory						1 terracotta head; 1 gypsumbutton; 1 fr of earring				
NoNo of graves	831	832	833	834	835	836	837	838	839	840
Construction of the grave	Sh	Sh	Sepult	Sh	Sh	BP	P	Sh	Sh	Sh
Depth of the grave (cm)	85	60	135	120	120	40	25	150	85	105
Dimensions	180x90	170x80	420x190	210x125	210x120	95x70	130x55	200x120	230x80	170x130
Safety	-	-	-	-	-	?	-	-	+	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Abs	R	Sct	R	R
Orientation of the head of buried	Nnw	Nnw	?	N	?	Abs	Nnw	Wwn	Nnw	Nnw
Sex of buried	F	M	F	?	M		F	M	F	M
Age at death (years) of buried	40-45	25-30	40-50	?	Ad		50-55	30-35	17-18	20-25
Ceramic vessels	1	1	12	1	1		4	5	4	2
Beads							1 st		2 st;335 gypsum	
Seals							1 br			
Mirrors							1 br			
Arrow heads					1 flint					

NoNo of graves	831	832	833	834	835	836	837	838	839	840
Another funeral inventory			1 gypsum; kaolin							
Notes			1 table							
NoNo of graves	841	842	843	844	845	846	847	848	849	850
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	P	P	P	Sepult
Depth of the grave (cm)	105	180	100	120	95	100	30	40	50	170
Dimensions	180x105	195x120	180x110	125x70	140x80	140x100	125x55	115x60	180x65	380x200
Safety	-	-	-	+	-	-	-	-	+	-
Position of the buried	Double Sct/Sct	Sct	Sct	R	R	Sct	Sct	Sct	R	Double? Sct/Sct
Orientation of the head of buried	?	Nnw	Nne	Nne	W	?	Nnw	Nnw	Nnw	?
Sex of buried	F/Ch	?	M	F	F	?	M	F	F	F/Ch
Age at death (years) of buried	18-20/6-7	Ad	35-40	40-45	25-30	?	40-45	18-20	30-35	40-45/10-12
Ceramic vessels	3	9	1	6	1		4	2	5	14
Beads		1 faience biconical		1 st bico- nical			1 st bico- nical	1 faience		50 gypsum
Mirrors				1 br			1 br			
Applicator				1 br						
Hair-pins		1 br		2 bone						
Cosmetic flacon				1 br						
Cosmetic spades				1 br						
Another funeral inventory										1 fr gold foil
Notes										Double hearth/ a bench?
NoNo of graves	851	852	853	854	855	856	857	858	859	860
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Bp	Sh
Depth of the grave (cm)	110	110	150	120	135	100	130	160	30	135
Dimensions	210x120	180x100	230x120	200x120	180x90	195x100	215x115	175x105	95x70	295x170
Safety	-	-	-	-	+	+	-	-	?	-
Position of the buried	Sct	Sct	Sct	R	R	R	Sct	Sct	Abs	Double R/Sct
Orientation of the head of buried	Wwn	Nnw	Nne	Nnw	N	Nnw	Nnw	N	Abs	Sse
Sex of buried	?	?	M	M	F	F	F	?		F/M
Age at death (years) of buried	Ad	Ad	40-45	35-40	20-25	30-35	18-20	Ad		18-20/20-25
Ceramic vessels	5	3	6	1	5	5	3	1		13
Beads					1 st	1 gypsum biconical	1 st			1 lapis lazuli; 1 biconical with gold foil
Seals					1 br	1 br				
Applicator					1 br	1 br				
Hair-pins										
Cosmetic spades					1 ceramic					
Cosmetic flacon					1 br	1 br				
Mirrors					1 br					
Another funeral inventory								1 fr of st staff		Kaolin
NoNo of graves	861	862	863	864	865	866	867	868	869	870
Construction of the grave	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	65	115	170	100	140	165	125	140/115/60	90	105
Dimensions	95x75	230x130	200x120	180x120	190x110	230x130	180x110	230x120	200x95	170x100
Safety	?	-	-	-	-	-	-	-	+	
Position of the buried	Sct	Centph	L	R	Centph	Centph	Sct	Triple R/L/L	R	R
Orientation of the head of buried	?	Abs	Wws	Nnw	Abs	Abs	?	Nnw/ Ssw/ Nnw	Nne	N

NoNo of graves	861	862	863	864	865	866	867	868	869	870
Construction of the grave	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	65	115	170	100	140	165	125	140/115/60	90	105
Dimensions	95x75	230x130	200x120	180x120	190x110	230x130	180x110	230x120	200x95	170x100
Safety	?	-	-	-	-	-	-	-	+	
Position of the buried	Sct	Centph	L	R	Centph	Centph	Sct	Triple R/L/L	R	R
Orientation of the head of buried	?	Abs	Wws	Nnw	Abs	Abs	?	Nnw/ Ssw/ Nnw	Nne	N
Sex of buried	?		?	M			?	F/F/F	F	M
Age at death (years) of buried	?		Ad	35-40			?	20-25/30-35/35-40	45-50	30-35
Ceramic vessels	3		3	3	3	2	1	5	3	2
Beads									1 st biconical; 20 gypsum	
Seals									1 br	
Applicator									1 br	
Cosmetic flacon									1 br	
Hair-pins									1 bone	
Another funeral inventory	3 human bones	Kaolin								
NoNo of graves	871	872	873	874	875	876	877	878	879	880
Construction of the grave	Sh	Bp	Bp	Sh	Bp	Bp	Sh	Sh	Sh	Sh
Depth of the grave (cm)	110	60	95	130	70	55	195	185	160	75
Dimensions	190x120	85x65	90x60	180x120	70x50	80x55	200x150	240x150	225x115	210x85
Safety	+	?	?	-	?	?	-	-	-	-
Position of the buried	Centph	Abs	Abs	Sct	Abs	Abs	Sct	Abs	Sct	Sct
Orientation of the head of buried				Nnw			Nne		Nnw	Nnw
Sex of buried	Abs			M			M		F	M
Age at death (years) of buried				18-20			Ad		Ad	30-35
Ceramic vessels	4			10	4	4	6	3	3	1
Beads		1 agat cylindrical; many gypsum								
Another funeral inventory	Kaolin									
NoNo of graves	881	882	883	884	885	886	887	888	889	890
Construction of the grave	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Sh	Sh	Sh
Depth of the grave (cm)	90	85	65	80	60	40	70	130	160	185
Dimensions	85x54	80x50	70x50	70x65	70x65	70x60	80x80	210x105	260x135	250x140
Safety	?	?	?	?	?	?	?	-	-	-
Position of the buried	Abs	Abs	Abs	Abs	Abs	Abs	Abs	R	Abs	Sct
Orientation of the head of buried								Nne		Nne
Sex of buried								M		M
Age at death (years) of buried								35-40		20-25
Ceramic vessels						1	2	2	13	6
NoNo of graves	891	892	893	894	895	896	897	898	899	900
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P?	Sh	Sepult	Sh	Sh
Depth of the grave (cm)	120	145	130	125	190	30	65	190	75	80
Dimensions	175x85	185x110	180x115	200x120	250x130	95x60	160x70	360x175	135x80	230x130
Safety	-	-	+	-	-	-	-	-	+	-
Position of the buried	Sct	Abs	R	Double Sct/ Sct	Sct	R	L	Sct	R	Sct
Orientation of the head of buried	Nnw		Nnw	N/n	Wwn	W	Wwn	Wwn	W	Nnw
Sex of buried	M		F	F/Ch	?	M	F	F	F	F
Age at death (years) of buried	25-30		20-25	Ad/6-7	Ad	Ad	30-35	25-30	15	30-35
Ceramic vessels	1	3	5	9	2	3		6	1	3
Beads			1 br; 1 shell			1 st		1 st		1 st biconical

NoNo of graves	891	892	893	894	895	896	897	898	899	900
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P?	Sh	Sepult	Sh	Sh
Depth of the grave (cm)	120	145	130	125	190	30	65	190	75	80
Dimensions	175x85	185x110	180x115	200x120	250x130	95x60	160x70	360x175	135x80	230x130
Safety	-	-	+	-	-	-	-	-	+	-
Position of the buried	Sct	Abs	R	Double Sct/ Sct	Sct	R	L	Sct	R	Sct
Orientation of the head of buried	Nnw		Nnw	N/n	Wwn	W	Wwn	Wwn	W	Nnw
Sex of buried	M		F	F/Ch	?	M	F	F	F	F
Age at death (years) of buried	25-30		20-25	Ad/6-7	Ad	Ad	30-35	25-30	15	30-35
Ceramic vessels	1	3	5	9	2	3		6	1	3
Beads			1 br; 1 shell			1 st		1 st		1 st biconical
Hair-pins			1 br					1 bone		
Another funeral inventory				1 st vessel	1 fr of staff					
Notes							Scull is absent	Double hearth		
NoNo of graves	901	902	903	904	905	906	907	908	909	910
Construction of the grave	Bp	Sh	Sh	Sh	Bp	Sh	Bp	Bp	Sh	Sh
Depth of the grave (cm)	65	70	135	135	60	185	50	60	150	125
Dimensions	70x60	180x95	220x105	190x125	80x50	230x145	130x75	75x50	?x125	175x115
Safety	-	+	-	-	-	-	-	?	-	+
Position of the buried	?	R	Sct	Sct	Sct	R	L	Abs	Sct	R
Orientation of the head of buried	Nw	Nnw	N	Nne	Wwn	Nne	Ees		W	Nnw
Sex of buried	Ch	M	F	M	F	M	F		?	F
Age at death (years) of buried	7-8	35-40	20-25	35-40	20-25	30-35	15-16		Ad	20-25
Ceramic vessels		4	2	4	1	3		1 Fr		
Beads			1 st							1 st biconical
Mirrors										1 br
Arrow heads		1 flint								
Another funeral inventory										1 silver earring
Notes	1 teeth									
NoNo of graves	911	912	913	914	915	916	917	918	919	920
Construction of the grave	Bp	Sh	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	70	185	100	225	200	160	190	190	140	150
Dimensions	85x55	195x155	80x60	270x160	205x150	235x125	250x140	230x150	280x130	206x110
Safety	?		?	-	-	-	-	-	-	-
Position of the buried	Abs	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Abs	Sct
Orientation of the head of buried		Nne		Nne	Nne	N	Nw	Nnw		N
Sex of buried		F		M	?	M	M	M		M
Age at death (years) of buried		Ad		45-50	?	35-40	Ad	25-30		20-25
Ceramic vessels		1	1	5	4	4	5	6	3	3
Beads									1 st	
Another funeral inventory				1 br stick						
NoNo of graves	921	922	923	924	925	926	927	928	929	930
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	155	220	170	170	165	125	155	165	160	135
Dimensions	190x120	300x150	190x115	220x140	290x150	290x120	230x160	210x110	230x120	225x140
Safety	+	-	-	-	-	-	-	-	-	+
Position of the buried	R	?	?	?	Abs	Sct	R	L	Sct	R
Orientation of the head of buried	Nne	Nne	Wwn	Nnw		Nnw	Nnw	Nne	Nne	Nne
Sex of buried	F	M	M	M		M	M	M	F	M
Age at death (years) of buried	30-35	25-30	20-25	30-35		20-25	35-40	30-35	Ad	20-30
Ceramic vessels	3	4	6	2	8	15	4	8	9	4
Beads	1 gypsum; 1 st biconical					1 st biconical; 1 st			1 gypsum biconical; 1 st cylindrical	

NoNo of graves	951	952	953	954	955	956	957	958	959	960
Another funeral inventory		1 fr os staff								
NoNo of graves	961	962	963	964	965	966	967	968	969	970
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	145	140	160	110	145	115	145	140	145	90
Dimensions	250x130	170x110	230x130	220x120	200x130	200x120	245x110	205x125	255x150	140x100
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	Sct	Sct	Double R/Sct	Abs	Sct	Sct	Sct	R	Sct	R
Orientation of the head of buried	Nne	Nne	Nne/Nne		Nne	N	Nne	N	Nne	Nne
Sex of buried	F	F	M/ Ch		?	Ch	F	M	F	F
Age at death (years) of buried	25-30	30-35	30-35/8-9		Ad	6	45-50	30-35	30-35	25-30
Ceramic vessels	2	2	6	2	3	5	6	3	3	4
Beads			1 st				1 st	1 st	1 st bico-nical	1 gypsum
Arrow heads			1 flint							
Hair-pins										2 silver
Another funeral inventory			1 br ceremonial axe under the man skeleton							2 silver earrings
Notes			A child was above the man							
NoNo of graves	971	972	973	974	975	976	977	978	979	980
Construction of the grave	Sh	Sh	P	Sh	Sh	Sepult	Sh	Sh	Sh	Sh
Depth of the grave (cm)	180	175	80	175	160	120	145	160	175	160
Dimensions	230x120	270x150	205x120	270x150	220x125	285x140	195x125	245x145	275x150	185x115
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	?	R	Sct	R	Sct	Sct	Double Sct/Sct	Sct	Sct	Sct
Orientation of the head of buried	Nne	Nne	Nnw	Nne	Nne	?	Nnw	Wwn	Nne	W
Sex of buried	?	M	?	?	?	?	M/ Ch	?	M	?
Age at death (years) of buried	Ad	30-35	Ad	Ad	Ad	?	20-25/9-10	Ad	25-30	?
Ceramic vessels	7		2	1		4	3	3	6	3
Beads	1 st biconical; 1 lapis lazuli									
Seals	1 br									
Hair-pins							1 bone			
Another funeral inventory									Br fragments	
Notes	Some teeth									
NoNo of graves	981	982	983	984	985	986	987	988	989	990
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P	Sh	Sh	Sh	P
Depth of the grave (cm)	170	60	160	145	190	70	125	165	95	45
Dimensions	180x90	120x75	205x120	195x105	175x95	230x130	215x150	190x100	185x100	155x90
Safety	+	+	-	-	+	-	-	-	+	?
Position of the buried	L	R	Sct	Sct	R	Sct	Sct	Sct	R	L
Orientation of the head of buried	Wwn	W	Nne	Nne	Wws	Wws	Nne	Nne	Nnw	Wwn
Sex of buried	?	F	F	M	M	?	M	?	F	?
Age at death (years) of buried	Ad	25-30	25-30	30-35	45-50	Ad	25-30	Ad	12-13	?
Ceramic vessels	5	1			2	1			4	1
Beads									2 st	
Mirrors										1 br
Another funeral inventory	Kaolin; fr of gold foil								2 silver earrings	

NoNo of graves	991	992	993	994	995	996	997	998	999	1000
Construction of the grave	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	80	135	160	175	195	190	125	145	190	180
Dimensions	D 95	150x80	220x130	105x130	205x100	205x140	200x105	180x90	160-120	180x85
Safety	+	-	-	-	-	-	-	+	-	-
Position of the buried	L	Sct	Sct	Sct	Sct	R	Sct	R	Sct	R
Orientation of the head of buried	Nne	Nnw	Wwn	Nnw	Nnw	Nnw	Nnw	N	Wwn	Wwn
Sex of buried	F	F	F	?	M	F	?	F	?	F
Age at death (years) of buried	30-35	18-20	Ad	?	25-30	30-35	?	18-20	Ad	30-35
Ceramic vessels		2	2	3	2	3	3		2	5
Beads								1 st		1 gypsum
Another funeral inventory										Kaolin
Notes										1 domestic animal tooth
NoNo of graves	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010
Construction of the grave	Sh	?	?	?	?	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	143	?	?	?	?	185	150	155	105	120
Dimensions	222x100	?	?	?	?	210x110	180x100	190x105	155x90	160x95
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	N	?	?	?	?	Nne	N	N	Nne	Nne
Sex of buried	M	?	?	?	?	?	?	?	?	?
Age at death (years) of buried	30-35	?	?	?	?	Ad	Ad	Ad	Ad	?
Ceramic vessels	2	?	?	?	?	2	2	2	3	3
Another funeral inventory										Fr of St staff
NoNo of graves	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P	Bp	Sh	Bp	Sh
Depth of the grave (cm)	125	120	155	175	205	30	95	135	65	165
Dimensions	300x140	145x95	240x145	220x130	205x130	110x70	80x70	175x100	85x70	200x100
Safety	-	-	-	-	-	-	?	+	?	-
Position of the buried	Sct	Sct	R	Sct	Sct	R	Supine	Centph	Abs	Sct
Orientation of the head of buried	N	Nne	N	Nne	Nne	Nnw	Nnw			N
Sex of buried	M	?	F	M	Ch	F	M			F
Age at death (years) of buried	25-30	?	40-45	30-40	10-15	25-30	30-35			25-30
Ceramic vessels			3	10	5	2		3		
Beads					1 red st			1 st		
Another funeral inventory							St object	Kaolin		
NoNo of graves	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030
Construction of the grave	P	Sepult	Sh	Sh	Sh	Sh	Sh	Sh	Sh	P
Depth of the grave (cm)	75	55	210	85	130	165	120	170	70	70
Dimensions	210x150	450x240	170x110	215x112	220x134	205x125	130x95	210x140	190x90	170x90
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Abs	R
Orientation of the head of buried	Nne	Nne	Wwn	Nnw	Nnw	Nne	Nnw	Nne		Wwn
Sex of buried	?	?	M	M	?	?	M	F		F
Age at death (years) of buried	?	?	20-25	30-35	Ad	?	40-45	30-35		30-35
Ceramic vessels		12	4		2		1	7	10	6
Beads		35 with gold foil						Gypsum; 1 lapis lazuli	4 st biconical	2 st biconical
Mirrors										1 br
Statuettes		1 composite						1 composite		
Hair-pins		1 bone						1 bone		
Another funeral inventory		Fr of box? 42x32 with mosaics; a piece of gold foil						Fr br; fr bone mosaics; 1 shell	1 gypsum vessel	

NoNo of graves	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030
Notes									Lamb bones	
NoNo of graves	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040
Construction of the grave	Sh	Bp	Sh	Sh	Sh	Sh	Bp	Sh	P	Sh
Depth of the grave (cm)	165	70	135	120	140	150	115	115	135	190
Dimensions	245x130	80x60	170x130	210x130	180x105	260x150	?	130x90	155x100	260x120
Safety	+	?	+	-	-	-	?	-	-	-
Position of the buried	R	Abs	R	R	Abs	Sct	Abs	Sct	Abs	Sct
Orientation of the head of buried	Nne		Nnw	Nne		Nnw		Nnw		Wwn
Sex of buried	F		F	F		M		?		?
Age at death (years) of buried	12-13		30-35	30-35		25-30		Ad		Ad
Ceramic vessels	4		6		2	7	2	2	2	15
Beads			1 st biconical; 1 gypsum							8 gold; 2 lapis lazuli; 1 st biconical
Mirrors			1 br							
Cosmetic flacons			1 br							
Seals			1 silver							
Hair-pins	1 br									
Cosmetic spades			1 br with a hand like snake							
Applicator			1 br							
Another funeral inventory	Kaolin		1 twice vessel	Small st stocking up	Kaolin	Stone object; fr of br object				1 fr of gold foil
NoNo of graves	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050
Construction of the grave	Sh	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	150	80	150	145	100	180	195/ 115	105	165	175
Dimensions	230x125	D 70	172x105	170x110	150x80	150x80	285x140	?	120x110	195x120
Safety	-	+	-	-	+	-	-?	-	-	-
Position of the buried	Sct	Abs	R	Sct	R	Sct	Abs/L	R	Sct	Sct
Orientation of the head of buried	Nnw		Nnw	Nne	N	Wws	-/Nne	Wwn	Nne	Nne
Sex of buried	M		?	?	F	F	Abs/F	?	M	?
Age at death (years) of buried	30-35		Ad	?	20-25	25-30	Abs/15	Ad	30-35	Ad
Ceramic vessels	1	2	3	2	7	2	5	1	8	2
Beads					3 st bico- nical; 1 agat					
Mirrors					1 br					
Hair-pins					1 bone					
Cosmetic stick					1 br					
Applicator					1 br					
Cosmetic flacons					1 gypsum					
Another funeral inventory						Kaolin				
NoNo of graves	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
Construction of the grave	Sh	?	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	80	90	170	135	130	175	130	150	100	160
Dimensions	150x80	100x80	230x130	185x105	200x110	190x120	165x80	170x105	200x100	250x155
Safety	+	-	-	-	-	-	+	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	R	Sct	Sct	Abs
Orientation of the head of buried	Nw	Wwn	Nnw	N	Wwn	Nne	Nne	Wws	Wwn	
Sex of buried	F	F	?	?	?	?	F	M	?	
Age at death (years) of buried	16-18	16-18	Ad	Ad	Ad	Ad	18x20	20-25	?	
Ceramic vessels		5	2	1	3	1	4	3	2	5
Beads		1 gypsum					1 st			
Hair-pins							1 bone			
Bangeles							2 br			

NoNo of graves	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
Another funeral inventory		1 gypsum vessel					2 br vessels; 1 lead stick			
Notes		The skeleton is fragmented: the face of a skull is down; upper limbs bones are absent								
NoNo of graves	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	P	Sh	Sepult
Depth of the grave (cm)	100	115	130	140	160	150	165	65	130	140
Dimensions	150x90	200x105	180x110	170x120	210x135	200x100	215x115	200x140	185x90	330x210
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Abs	Sct	Sct	Double? Sct/Sct
Orientation of the head of buried	?	?	?	?	?	?		Ssw	Nne	?
Sex of buried	M	?	F	?	?	M		?	?	M/ Ch
Age at death (years) of buried	18-20	Ad	35-40	Ad	Ad	30-35		?	Ad	25-30/?
Ceramic vessels	1	2	4	2	4	2	2	1		4
Beads			1 st							1 st
Seals			1 br							
Applicator			1 br							
Cosmetic spade			1 br							
Another funeral inventory										1 silver vessel
Notes			1 st mace head							A bench, a hearth
NoNo of graves	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080
Construction of the grave	Bp	Sh	P	Sh?	Bp	Bp	P	Sh	Sh	Sepult
Depth of the grave (cm)	130	115	35	70	90	60	70	150	125	120
Dimensions	80x60	150x70	120x70	?	70x45	D 70	75x50	210x110	190x130	315x155
Safety	-	-	-	-	-	?	-	-	-	-
Position of the buried	Double/ Prone/L	Sct	R	Sct	Double/ Sct/Sct	Abs	Sct	Abs	Sct	Sct
Orientation of the head of buried	Nw/Nw	Nnw	Nne	Nne	??		N		Nnw	Nnw
Sex of buried	M/F	M	M	M	F/F		Ch		?	?
Age at death (years) of buried	35-40/Ad	35-40	25-30	25-30	25-30/ 30-35		11-12		?	Ad
Ceramic vessels	5			3	1		1	6	2	8
Beads										1 gold; 2 st biconical
Seals										1 br
Another funeral inventory									1 gypsum vessel	1 silver vessel;
Notes					Only 2 skulls					
NoNo of graves	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090
Construction of the grave	Sh	Sh	Sh	2 part oven	Sh	Sh	Sh?	Sh	Sh	Sepult
Depth of the grave (cm)	195	130	145	35	135	105	90	165	160	140
Dimensions	295x175	190x125	200x110	85x65/ 65x20	160x100	160x90	210x150	180x115	210x115	305x180
Safety	-	-	-		-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct		Sct	Sct	Abs	Sct	Sct	Sct
Orientation of the head of buried	Nnw	Nne	Nne		Nnw	Nne		Nne	Wwn	Nne
Sex of buried	?	?	?			M		M	?	?

NoNo of graves	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090
Age at death (years) of buried	Ad	Ad	Ad			16-17		18-20	?	?
Ceramic vessels	5	4	1		2	3	6	3	3	5
Beads		2 st biconical					1 st			1 gold
Another funeral inventory	1 st mace head					1 gypsum button			1 st mace head	
Notes										A table, a bench, a hearth
NoNo of graves	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100
Construction of the grave	Sh	Sh	Sh	Cist	Sh	Bp	Bp	?	Sh	Bp
Depth of the grave (cm)	85	150	150	70	95	85	55	125	100	105
Dimensions	150x95	265x170	205x110	160x95	140x100	D 85	90x50	?	175x120	125x95
Safety	+	-	-	-	-	?	?	-	-	?
Position of the buried	R	Sct	L	R	Sct	Abs	Abs	Sct	Sct	Abs
Orientation of the head of buried	Wwn	Nnw	Wws	Nnw	Nnw			Nnw	Nne	
Sex of buried	F	M	F	M	?			M	F	
Age at death (years) of buried	18-20	30-35	35-40	30-35	Ad			30-35	18-20	
Ceramic vessels	4	3	1	4	1			5	2	
Beads	1 st biconical; 1 agat	3 lapis lazuli; 3 gypsum								
Seals	1 br									
Hair-pins					1 br					
NoNo of graves	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	?	?	?
Depth of the grave (cm)	115	105	120	115	140	175	160	110	85	135
Dimensions	210x135	180x110	110x100	170x110	230x140	240x140	280x130	?	?	?
Safety	+	-	-	-	-	-	-	-	-	-
Position of the buried	R	Sct	R	Sct	R	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nnw	N	N	Nnw	Nnw	Nnw	Nw	?	?	?
Sex of buried	F	?	F	F	F	?	?	?	?	F
Age at death (years) of buried	35-40	Ad	35-40	20-25	25-30	Ad	Ad	?	?	15-16
Ceramic vessels		3	3			6	1	7	3	1
Beads										5 gypsum
Seals						1 gypsum				
Hair-pins										1 br
NoNo of graves	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120
Construction of the grave	?	?	?	?	?	Sh	Sh	?	?	Cist
Depth of the grave (cm)	105	80	85	90	75	115	165	60	75	85
Dimensions	?	?	?	?	?	?	180x110	?	?	45x90
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Abs	Abs	Sct	Sct	Sct	Sct	Abs	Sct	Sct
Orientation of the head of buried	?			?	?	Nnw	Nw			Nnw
Sex of buried	F			F	?	Ch	?			M
Age at death (years) of buried	35-40			20-25	?	11-12	?			25-30
Ceramic vessels	4	2	2	2	4	4	6	2	6	2
Statuettes						1 terracotta				
NoNo of graves	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130
Construction of the grave	?	Sh	Sh	Sh	Sh	Bp	Sh	Sh	Sh	Sh
Depth of the grave (cm)	50	175	160	180	120	75	130	160	80	100
Dimensions	?	210x110	220x105	190x110	160x120	70x50	210x115	180x130	140x75	150x100
Safety	-	-	-	-	-	?	-	-	+	+
Position of the buried	Sct	Sct	Abs	Sct	Sct	Abs		Sct	R	R
Orientation of the head of buried	?	Nnw		N	Nne		Abs	Nne	N	Wwn
Sex of buried	?	M		?	F			F	M	F
Age at death (years) of buried	?	25-30		Ad	>60			30-35	25-30	Ad

NoNo of graves	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130
Beads				1 st						1 st biconical; st beads on the neck
Applicator										1 br
Cosmetic flacons										1 st
Another funeral inventory										Silver diadem;
NoNo of graves	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140
Construction of the grave	Sh	Sh	Sh	P	Sh	Sh	Sh	Sh	Sh	Sepult
Depth of the grave (cm)	170	170	75	105	150	105	60	170	135	120
Dimensions	210x150	220x135	140x85	120x65	205x135	180x120	130x75	170x110	180x100	295x150
Safety	-	+	+	+	-	-	+	-	-	-
Position of the buried	R	R	R	Supine	Sct	Sct	L	Sct	Double Sct/Sct	R
Orientation of the head of buried	Nne	Nnw	N	Wwn	Wws	Nnw	Nnw	Nne	N/?	Wwn
Sex of buried	F	M	Ch	F	F	F	F	M	F/F	M
Age at death (years) of buried	30-35	40-45	10-12	35-40	18-20	30-35	25-30	25-30	35-40/ 50-60	35-40
Ceramic vessels	5				2	3	2	2	1	10
Beads						1 gypsum			Many gypsum	
Arrow heads								1 flint		
Hair-pins	1 bone								1 bone	
Another funeral inventory		Kaolin							Fr of silver and br foil	Fr of gold foil
Notes										Sheep bones
NoNo of graves	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150
Construction of the grave	Bp	Sh	Sh	Sh	Fp	Fp	Sh	Sh	Sh	Sh
Depth of the grave (cm)	60	120	150	145	?	?	100	120	155	140
Dimensions	85x65	175x105	170x110	170x105	?	?	180x100	155x100	200x105	185x110
Safety	+	-	-	-	?	?	-	-	-	+
Position of the buried	R	Sct	Abs	Sct	Abs	Abs	?	?	Abs	R
Orientation of the head of buried	Nww	Nne		Nww			N	N		Nnw
Sex of buried	M	M		?			F	?		M
Age at death (years) of buried	30-35	Ad		?			18-20	Ad		35-40
Ceramic vessels			3	3			3	3	5	3
Statuettes									1 fem terracotta	
Another funeral inventory		1 fr of miniature column							1 br button	
Notes	Dwarf									
NoNo of graves	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160
Construction of the grave	Bp	P?	Sh	Sh	Sh	Sh	Sh	Sh	?	Sh
Depth of the grave (cm)	80	50	65	145	115	160	165	140	60	165
Dimensions	70x65	115x65	125x60	210x120	170x95	170x115	180x110	155x100	?	220x135
Safety	-	+	-	-	+	-	+	+	-	-
Position of the buried	Abs	R	Sct	Sct	L	Sct	L	R	Sct	Sct
Orientation of the head of buried		Nnw	Nne	Nnw	N	N	Nw	Nnw	?	Nne
Sex of buried		M	F	?	F	F	F	?	M	?
Age at death (years) of buried		45-50	25-30	?	25-30	25-30	25-30	Ad	40-45	Ad
Ceramic vessels		2	4	4	3	3	5	5	3	
Beads							1 steatite biconical; 4 st biconical; 20 gypsum			
Seals						1 br	1 br			

NoNo of graves	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160
Hair-pins					1 bone					
Cosmetic spades							1 br			
Applicators							1 br			
Another funeral inventory					1 st vessel		2 br earrings			
NoNo of graves	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170
Construction of the grave	Sh	Sh	?	Sh	Sh	Sh	Sh	Bp	Sh	Sh
Depth of the grave (cm)	130	115	110	130	135	170	120	90	170	170
Dimensions	275x155	200x115	?	165x105	200x110	200x110	200x150	80x45	195x125	210x125
Safety	-	-	-	-	-	-	-	?	-	-
Position of the buried	R	R	Sct	Sct	Sct	Sct	Abs	Abs	Sct	Sct
Orientation of the head of buried	Nne	Nnw	?	Wwn	Nnw	Nne			N	N
Sex of buried	?	?	?	?	?	F			?	?
Age at death (years) of buried	Ad	Ad	?	Ad	Ad	18-20			Ad	Ad
Ceramic vessels	4	1	3	2	4		3		3	2
Beads						4 st; 2 br				
Applicator		1 br								
Another funeral inventory			Kaolin						Kaolin	
NoNo of graves	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180
Construction of the grave	Sh	Bp/Sh	Sh	Sh	Sh	Bp	Sh	Sh	Sh	Sh
Depth of the grave (cm)	120	150	200	170	170	90	145	150	85	75
Dimensions	130x90	120x80	230x170	185x125	205x145	70x55	250x130	190x95	125x70	170x105
Safety	-	?	-	-	+	?	-	-	-	+
Position of the buried	Sct	R/R	Sct	Sct	R	?	Sct	Sct	Abs	R
Orientation of the head of buried	Nne	N	N	Nne	Nnw	N	Wwn	W		Nnw
Sex of buried	?	Dog/Ch	?	?	M	?	?	?		F
Age at death (years) of buried	Ad	?/8	Ad	AD	25-30	?	?	Ad		Ad
Ceramic vessels	2	2	9	4	6	3	1	6	1	4
Beads								17 black st disc		St and gypsum with one large in the middle
Mirrors					1 br					
Cosmetic spades					1 br					
Cosmetic flacons					1 br					
Another funeral inventory		1 br stick						1 br object; 1 gypsum vessel;		2 br earrings
Notes		A child marked with signs of delayed growth process				1 human tooth				
NoNo of graves	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	85	185	125	165	90	100	135	135	80	170
Dimensions	190x100	200x120	220x105	220x130	180x110	185x100	210x110	235x120	120x80	190x120
Safety	-	+	-	-	+	-	-	-	+	+
Position of the buried	R	Cntph	L	Sct	R	Centph?	Sct	Abs	R	Centph
Orientation of the head of buried	Nw	Abs	Nnw	Nnw	Nnw	Abs	Nw		Nw	Abs
Sex of buried	M		?	F	F		?		F	
Age at death (years) of buried	Ad		Ad	30-35	25-30		?		20-25	
Ceramic vessels	4	5	5	3	4	2	2	4		3
Arrow heads		1 flint								
Hair-pins					1 br					
Another funeral inventory				1 silver earring		2 pieces of kaolin				
Notes									Sheep bones	

NoNo of graves	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	85	185	125	165	90	100	135	135	80	170
Dimensions	190x100	200x120	220x105	220x130	180x110	185x100	210x110	235x120	120x80	190x120
Safety	-	+	-	-	+	-	-	-	+	+
Position of the buried	R	Centph	L	Sct	R	Centph?	Sct	Abs	R	Centph
Orientation of the head of buried	Nw	Abs	Nnw	Nnw	Nnw	Abs	Nw		Nw	Abs
Sex of buried	M		?	F	F		?		F	
Age at death (years) of buried	Ad		Ad	30-35	25-30		?		20-25	
Ceramic vessels	4	5	5	3	4	2	2	4		3
Arrow heads		1 flint								
Hair-pins					1 br					
Another funeral inventory				1 silver earring		2 pieces of kaolin				
Notes									Sheep bones	
NoNo of graves	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200
Construction of the grave	Sh	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sepult	Sh
Depth of the grave (cm)	110	65	150	150	145	150	160	155	185	180
Dimensions	190x130	75x60	230x115	220x125	220x120	220x130	205x110	260x140	276x142	203x95
Safety	+	?	-	-	-	-	-	-	-	+
Position of the buried	Centph	Sct	Sct	Sct	Sct	Sct	Abs	Sct	Sct	R
Orientation of the head of buried	Abs	?	Nnw	Nnw	Nnw	Nnw		Nnw	Nne	Wwn
Sex of buried		?	?	?	?	?		M	F	M
Age at death (years) of buried		Ad	?	?	?	?		30-35	18-20	25-30
Ceramic vessels	2		6	2	7	3	1	2	2	6
Beads								1 st biconical	2 agat?	30 (gold, lapis lazuli, marmor)
Statuettes										1 st dug; fr of composite statuettes (hands)
Another funeral inventory										Jewellery tools; 1 silver miniature vessel; fr gold foil; 2 st "masc-arons"; st fr
Notes									Along the north wall – a bench	Sheep bones in one cer vase
NoNo of graves	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	105	120	145	115	70	65	115	110	130	125
Dimensions	160x80	225x120	170x110	250x120	110x70	190x100	215x110	170x90	210x105	205x130
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Abs	?	Sct	R	Sct	R	Sct	R	Sct	Sct
Orientation of the head of buried		nnw	Nnw	N	Nnw	N	nnw	Nnw	nnw	Nnw
Sex of buried		?	?	?	?	?	?	?	?	?
Age at death (years) of buried		Ad	?	Ad	Ad	AD	Ad	Ad	Ad	Ad
Ceramic vessels	2	5	3	2		6	2	4	5	5
Beads		1 st			1 st biconical				1 st	
Seals							1 br			
Another funeral inventory					1 fr of br object					
NoNo of graves	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220
Construction of the grave	Sh	Sh	Cist	Sh	Sh	Sh	?	Sh	Sh	Sh
Depth of the grave (cm)	130	130	80	145	150	145	120	135	140	240

NoNo of graves	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250
Another funeral inventory	1 fr of mosaics								Teeth of large domestic animal	
NoNo of graves	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260
Construction of the grave	P	Sh	P	Sh	Sh	Sh	Sh	Sh	P?	Sh
Depth of the grave (cm)	30	120	25	80	120	150	100	130	185	175
Dimensions	90x55	190x120	115x65	220x90	190x110	200x110	185x120	180x135	180x110	?
Safety	-	-	-	-	-	-	-	-	?	-
Position of the buried	R	Sct	R	Sct	Sct	Double L/Sct	Sct	Sct	Sct	R
Orientation of the head of buried	Nnw	Nne	Nnw	Nne	Nne	Wwn	Nnw	Nne	Nnw	Nnw
Sex of buried	F	F	F	F	M	F/Ch	M	Ch	F	M
Age at death (years) of buried	30-40	30-35	30-35	35-40	40-45	25-30/4-5	30-35	5-6	18-25	>60
Ceramic vessels	1	5		4	6	7	5	5	1	7
Beads							1 st			
Cosmetic spades					1 br					
Knife					1 br?					
Another funeral inventory		Kaolin			1 stone	1 br artefact	2 fr of st staff			
NoNo of graves	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270
Construction of the grave	Sh	Sh	P?	Sh	Sh	Sepult	Bp	P?	P?	Sh
Depth of the grave (cm)	130	80	30	145	115	125	25	25	25	125
Dimensions	210x110	185x115	100x60	175x70	255x180	300x130	D 50	95x40	110x50	215x125
Safety	-	-	-	-	+	-	?	-?	-?	+
Position of the buried	Sct	Sct	R	Sct	R	Triple Sct/sct/sct	Abs	L	R	R
Orientation of the head of buried	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw		Nnw	Nnw	Nnw
Sex of buried	F	F	Ch	M	M	M/F/Ch		Ch	?	F
Age at death (years) of buried	16-18	35-40	7-8	35-40	30-40	20-25/ 18-20/9	4	Ad	50-60	
Ceramic vessels	5	3		3	4	6		1	2	6
Beads						2 st biconical				
Mirrors										1 br
Hair-pins						1 bone				
Seals										1 steatite
Another funeral inventory						1 Shell				
Notes										In 1 vessel animal bones
NoNo of graves	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280
Construction of the grave	P?	Sh?	P?	P?	Sh	P?	Bp	P?	Sh	Sepult
Depth of the grave (cm)	50	120	40	145	145	40	45	55	90	140
Dimensions	?	160x90	120x60	185x95	225x110	?	75x50	?	195x90	205x110
Safety	-	-	-	-	-	-	?	-	-	-
Position of the buried	Sct	Sct	R	Sct	Sct	Sct	Abs	Sct	R	Sct
Orientation of the head of buried	?	Nnw	Nnw	Nne	Nnw	?		?	Nne	Nnw
Sex of buried	Ch	?	F	M	F	F		M	F	M
Age at death (years) of buried	9-10	?	30-35	16-17	30-35	40-50		40-45	30-35	20-25
Ceramic vessels	5	4	1	1	5	1			2	7
Hair-pins						1 br				
Another funeral inventory					1 fr of st vase					
NoNo of graves	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290
Construction of the grave	Sh	Sh	?	Sh	Sh	Sh	Sh	Sh	?	?
Depth of the grave (cm)	140	170	50	115	140	175	140	140	110	65
Dimensions	200x100	170x110	?	140x90	130x90	160x100	130x65	175x120	?	?

NoNo of graves	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290
Safety	-	-	-	-	+	-	-	+	-	-
Position of the buried	R	Double Sct/ Sct	L	Sct	R	R	Sct	R	Sct	R
Orientation of the head of buried	Nnw	Wwn	Sse	Wwn	Wwn	Nnw	Nnw	Nne	?	W
Sex of buried	M	F/ Ch	M	M	M	F	M	M	M	M
Age at death (years) of buried	30-35	25-30/ 5-6	30-40	25-30	40-50	25-30	25-30	40-45	25-30	30-35
Ceramic vessels	2	5	1					2		
Beads	1 st									
Cosmetic flacons		1 faience								
NoNo of graves	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Septult
Depth of the grave (cm)	150	150	145	155	160	145	195	150	165	180
Dimensions	190x90	165x105	150x100	185x90	200x130	185x110	210x95	175x95	175x60	110x85/ 205x170
Safety	-	-	+	-	-	-	-	-	+	-
Position of the buried	Double Sct/Sct	Sct	Double R/Sct	Sct	Sct	Sct	Double Sct/Sct	Sct	Supine	Four Persons Sct/Sct
Orientation of the head of buried	Nnw	Nnw	Nnw	Wwn	Sw	Nne	Nne	Nnw	Sw	Een/?/?/?
Sex of buried	Ch/M	F	F/F	M	F	F	M/Ch	M	F	M/M/F/?
Age at death (years) of buried	4-5/5-6	25-30	20-25/ 25-30	40-50	30-35	25-30	25-30/7-8	30-40	45-50	5-6/50/50-60/16-18
Ceramic vessels	4	4	3/Abs			4	4	3	3	20
Beads	1 st								2 st biconical; 1 carnelian	1 gold; 100 gypsum
Mirrors			1 br/ Abs							
Hair-pins										2 bone
Arrow heads										2 bone
Seals						1 br			1 br	
Sticks									1 br	
Another funeral inventory						Kaolin				9 fr of silver and 9 fr of gold foil; 5 gypsum objects with gold foil; 1 gypsum and 1 steatite mace heads
Notes										Double hearth
NoNo of graves	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310
Construction of the grave	P?	Cist	?	?	Sh	Sh	P?	?	?	Sh
Depth of the grave (cm)	45	70	140	170	170	155	65	140	50	105
Dimensions	?	140x85	?	?	225x90	210x130	?	?	?	155x60
Safety	?	-	-	-	-	-	?	-	-	+
Position of the buried	Double R/R	Triple Sct/Sct/ Sct	Sct	Sct	?	Double Sct/Sct	R	Sct	Triple Sct/Sct/ Sct	R
Orientation of the head of buried	Wwn	N	?	?	Wwn	Nnw	Nnw	?	Nnw/?/?	Nnw
Sex of buried	M/M	F/Ch/M	F	M	M	F/F	F	F	F/M/F	F
Age at death (years) of buried	18-20/25-30	25-30/5-6/ 35-40	18-20	>60	40-45	50-60/ 50-60	18-20	30-35	50-60/ 15-16/9-10	25-30
Ceramic vessels		3	2	2	3	2	2	6	1	5
Beads			1 gypsum			1 st		1 st		1 st biconical
Arrow heads					1 flint					

NoNo of graves	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310
Statuettes							1 zoomorf			
Cosmetic flacons			1 faience fr							
Another funeral inventory										A box with mosaics
Notes									Only skulls	
NoNo of graves	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320
Construction of the grave	Sh	Sh	?	Sh	Cist	?	Sh	Sh	Sh	Cist
Depth of the grave (cm)	185	130	30	150	100	70	115	195	130	135
Dimensions	210x95	165x85	?	170x95	273x120	?	165x105	185x95	190x90	134x110
Safety	-	-	-	-	-	?	-	-	-	-
Position of the buried	Sct	Double Sct/ Sct	?	Double Sct/Sct	Double Prone/ Sct	Supine	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nnw	Nne	?	Nnw	Nnw	Nne	Nnw	Nw	Nnw	Nne
Sex of buried	M?	M/F	M	M/F	M/F	M	F	F	M	F
Age at death (years) of buried	25-30	40-50/20-25	30-35	25-30/20-25	30-40/40-50	25-30	30-35	30-35	25-30	25-30
Ceramic vessels	2	4		2	29		10	4	1	5
Beads					1 st biconical		1 st	1 st biconical		1 large white st
Applicator										1 br
Cosmetic flacons										1 ceramic
Another funeral inventory		Fr of st staff and st disk		Kaolin	Kaolin; 2 br fr					1 st mace head
Notes			May be fractioned		The whole sheep skeleton	Without scull				A floor is laid by bricks
NoNo of graves	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330
Construction of the grave	Sh	P?	Sh	P?	P?	P?	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	140	35	160	40	20	30	130	100	145	170
Dimensions	190x95	?	170x95	?	?	?	?	130x65	145x90	110x45
Safety	-	-	-	-	-	-	-	+	-	-
Position of the buried	Double Sct/Sct	Sct	Sct	L	R	Triple R/R/R	Sct	R	Sct	Sct
Orientation of the head of buried	Wws/?	?	Wws	Wws	Wwn	Wwn	?	Nnw	Nw	Wwn
Sex of buried	M/F	M	?	F	F	F/F/Ch	?	F	M	F
Age at death (years) of buried	8-9/ 18-20	25-30	?	13-14	18-20	8-9/ 35-40/ 3-4	?	40-50	16-18	25-30
Ceramic vessels	2		4				4	2	2	7
Beads									1 st	
NoNo of graves	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Cist	Sh	Sh	Sh
Depth of the grave (cm)	185	180	145	150	160	170	160	155	135	135
Dimensions	168x95	200x95	170x90	205x90	225x100	?	170x140	230x120	165x90	260x155
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Double Sct/Sct	Double Sct/Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Triple Sct/Sct/Sct
Orientation of the head of buried	Nnw/?	Een/?	Nne	Nne	N	Ne	Nnw	Nnw	Nne	Nnw/?/?
Sex of buried	F/M	F/M	M	F	M	M	M	M	M	F/F/F
Age at death (years) of buried	13-14/15	30-35/ 40-50	35-45	Ad	18-20	50-60	14-18	35-40	25-30	35-40/ 9/60-70
Ceramic vessels	1	1	1	3	3	1	2	2	2	4
Beads							1 st cylindrical ; 30 gypsum			3 gypsum
Arrow heads					1 flint					
Another funeral inventory					Kaolin		1 br ring, 12 br fr			

NoNo of graves	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350
Construction of the grave	Sh	P	Sh	Sh	Sh	Sh	Sh	Cist	Sh	Sh
Depth of the grave (cm)	140	70	170	180	185	155	165	115	130	85
Dimensions	255x140	?	?	180x100	230x130	170x100	?	155x130	190x90	150x80
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Double Supine/?	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Double Sct/Sct
Orientation of the head of buried	Wws	Nne/?	?	Nnw	Een	Wwn	?	Nnw	Nne	Nnw/?
Sex of buried	F	M/F	F	M	F	M	M	M	F	F/F
Age at death (years) of buried	20-25	6-7/7-8	25-30	14-16	25-30	30-35	50-60	18-20	18-20	25-30/ 9-10
Ceramic vessels	2	2	5	2	4	3	1	3	5	2
Beads			1 st cylindrical			1 st			4 gypsum	
Hair-pins					1 bone with engravings					
Seals			1 gypsum							
Another funeral inventory	2 br spiral earrings									1 fr of gold foil
NoNo of graves	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	80	175	155	160	160	140	115	160	145	130
Dimensions	190x70	190x85	200x105	?	195x85	130x90	175x100	180x130	165x95	170x85
Safety	+	-	-	+	-	-	-	-	-	-
Position of the buried	R	Sct	Double Sct/Sct	L	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nnw	Nne	Nnw	Wws	Nnw	Nnw	Een	N	Ne	Nnw
Sex of buried	F	F	M/F	F	?	F	F	F	M	M
Age at death (years) of buried	35-40	25-30	35-40/30-35	20-25	?	25-30	50-60	18-20	35-40	40-50
Ceramic vessels	5	2	7	3			6	2		8
Beads				1 st biconical			2 steatite biconical; 1 gypsum; 1 pink stone			1 st biconical
Mirrors				1 br						
Stick				br						
Cosmetic spades				1 br						
NoNo of graves	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	170	140	125	160	140	155	145	125	115	120
Dimensions	185x80	?	125x75	175x80	200x100	200x85	?	170x85	200x95	135x85
Safety	-	-	+	-	-	-	-	+	-	-
Position of the buried	Sct	Sct	R	Sct	R	R	Sct	DoubleR/?	R	Sct
Orientation of the head of buried	Nnw	?	Nnw	Een	Een	Wwn	?	Wwn/?	Nnw	Nnw
Sex of buried	F	F	M	F	?	M	F	F/F	M	M
Age at death (years) of buried	20-25	30-35	35-40	25-30	Ad	5-6	18-20	30-35/ 35-40	30-40	20-25
Ceramic vessels	2	3	1	3	2	5	1	4	5	2
NoNo of graves	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	P	P
Depth of the grave (cm)	135	145	115	200	145	165	180	145	65	55
Dimensions	160x100	160x110	180x80	180x105	170x110	?	?	?	155x80	165x70
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	R	Sct	L	Sct	Double Sct/Sct	Sct	Sct	Sct	Sct	R
Orientation of the head of buried	Nnw	Nnw	Nnw	Nne	Nw	?	?	?	Nnw	Nnw
Sex of buried	M	F	M	M	F/Ch	?	?	?	M	M
Age at death (years) of buried	30-35	40-50	30-35	25-30	18-20/2-3	?	?	?	30-35	30-35
Ceramic vessels	1	4	1	4	2		1		3	5

NoNo of graves	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380
Beads										1 st biconical
Sticks										1 br
NoNo of graves	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390
Construction of the grave	Sh?	Sh?	Sh?	Sh	Sh?	Sh	Sh?	Sh	P	P
Depth of the grave (cm)	120	165	165	120	145	170	105	155	60	35
Dimensions	?	?	?	?	?	190x90	?	200x95	150x70	105x60
Safety	-	-	-	+	-	-	-	-	+	+
Position of the buried	Double Sct/Sct	Sct	Sct	Supine	R	Sct	L	Sct	Supine	R
Orientation of the head of buried	?	?	?	Nnw	?	Nnw	Nnw	Nnw	Nnw	Nnw
Sex of buried	F/Ch	F	F	M	M	M	F	M	M	F
Age at death (years) of buried	20-25/9-10	40-45	30-35	35-40	30-35	5-6	30-35	30-35	50-60	18-20
Ceramic vessels	3	3	1	2	5	2	4	6	3	2
Beads			1 st biconical	1 st						
Mirrors				1 br						
Hair-pins										1 br
Axes									1 bone	
Cosmetic sticks				1 br						
Another funeral inventory								Kaolin		
NoNo of graves	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400
Construction of the grave	P	P	Sh	P?	Sh	Sh	P	Sh	Sh	Sh
Depth of the grave (cm)	45	75	125	40	175	130	90	110	135	165
Dimensions	130x85	?	165x75	?	175x100	?	140x60	150x75	140x80	185x100
Safety	-	-	+	+	-	-	-	+	-	-
Position of the buried	R	Sct	R	R	Sct	Sct	Triple L/?/?	R	Sct	Sct
Orientation of the head of buried	Nnw	?	Nnw	S	Nnw	Nnw	Nw/?/?	Nnw	Nne	Nnw
Sex of buried	M	M	F	F	F	M	M/M/F	M	?	M
Age at death (years) of buried	35-40	35-40	>60	40-50	30-35	40-50	8-9/40-50/ 20-25	40-50	?	45-50
Ceramic vessels			3		3	5	2	4	2	2
Beads			1 st bico- nical; 1 st			1 st bico- nical	2 gypsum	1 st		
Mirrors								1 br		
Hair-pins			1 br					1 br		
Seals			1 st cylindrical on the belt							
Applicator										
Sticks								1 br		
Cosmetic flacons										
Another funeral inventory						1 st vessel	2 br earrings			
Notes			In 1 vessel sheep bones							
NoNo of graves	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410
Construction of the grave	Sh	Sh?	Sh	Sh?	Sh	Cist	P?	Sh	?	Sh?
Depth of the grave (cm)	160	100	145	120	155	140	35	140	55	140
Dimensions	150x95	?	160x90	?	160x100	105x75	?	209x90	?	?
Safety	-	-	-	-	-	-	-?	-	-	-
Position of the buried	Double Sct/Sct	Sct	Sct	R	Sct	Triple Sct/Sct/Sct	Double R/R	Sct	Sct	Sct
Orientation of the head of buried	Nnw/?	Nnw	Een	Nnw	Nnw	Nnw/?/?	Nnw/Wwn	Nne	?	Nnw
Sex of buried	M/M	?	?	M	M	F/F/F	F/F	?	F	F
Age at death (years) of buried	18-20/ 40-50	?	?	25-30	35-40	35-40/ 35-45 /16-18	30-35/ 10-12	?	18-20	20-25
Ceramic vessels	1		2	4	5	9	Abs/2		2	3
Beads				1 st	1 gypsum				2 st	

NoNo of graves	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410
Hair-pins					1 br			1 bone		1 br
Seals									1 br	
Knife						1 br				
Sticks						1 br				
Another funeral inventory				Kaolin						
										1 st biconical
NoNo of graves	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420
Construction of the grave	Sh	Sh	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	130	45	85	150	160	120	135	155	170	175
Dimensions	?	?	120x85	?	160x90	170x90	150x60	130x80	220x110	205x90
Safety	-	-	+	-	-	-	+	-	-	-
Position of the buried	Double Sct/Sct	Sct	R	Sct	Sct	Sct	Centph	Sct	Sct	Sct
Orientation of the head of buried	Nnw/?	Nnw	Nne	Nnw	Nnw	Wws	Abs	Nne	Nne	N
Sex of buried	F/M	M	M	F	F	Ch		F	M	F
Age at death (years) of buried	35-40/ 25-30	30-35	20-25	18-20	35-40	6-7		14-15	17	25-30
Ceramic vessels	2	1		1		1	5	4		4
Beads						1 gypsum		5 gypsum; 2 lapis lazuli		
Sticks								1 br		
Another funeral inventory				1 st vessel						
NoNo of graves	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430
Construction of the grave	Sh?	Sh	P	Sh?	Sh?	Sh?	P	Sh?	P	Sh
Depth of the grave (cm)	190	105	55	135	115	125	55	110	70	170
Dimensions	?	140x50	?	?	?	?	?	?	?	185x105
Safety	-	+	-	-	-	-	-	-	-	-
Position of the buried	Sct	Double R/?	R	Triple Sct/Sct/ Sct	Sct	Sct	Sct	Four Persons Sct/Sct/ Sct/Sct	R	Sct
Orientation of the head of buried	?	Wws/?	Nnw	?	?	?	Nnw	?	Nnw	Nne
Sex of buried	F	M/F	F	F/Ch/M	M	F	Ch	F/F/M/M	F	F
Age at death (years) of buried	25-30	35-40/ 35-40	18	25-30/ 6/60-70	30-35	50-60	10-11	30-35/12 12/ 40-50	18-20	18-20
Ceramic vessels	3	2		3	2	3		2		8
Beads	1 st biconical; 3 gypsum									
NoNo of graves	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440
Construction of the grave	Sh	Sh	Sh	Sh	Sh?	Sh	P	Sh?	Sh	Sh
Depth of the grave (cm)	175	110	160	165	125	160	75	135	150	140
Dimensions	160x90	120x70	165x95	185x90	?	140x90	130x80	?	155x65	200x90
Safety	-	+	-	-	-	-	-	-	-	-
Position of the buried	Sct	Centph	Sct	Sct	Sct	Sct	Sct	Sct	Double Sct/Sct	Sct
Orientation of the head of buried	Nnw	Abs	Ne	Nnw	?	Nne	Nnw	?	Nnw	Wwn
Sex of buried	?		M	Ch	Ch	?	F?	F	F/F	F
Age at death (years) of buried	Ad		25-30	6-7	7-8	Ad	Ad	20-25	18-20/8-9	30-35
Ceramic vessels	1	5	2	2	1	3	2	3	4	1
Beads							1 st biconical			
Hair-pins									1 bone	
Seals							1 br			
Cosmetic spades							1 br			
NoNo of graves	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450
Construction of the grave	Sh	Sh	Sh?	Sh?	Sh	Sh	Sh	Sh?	Sh	Sh?
Depth of the grave (cm)	155	195	205	145	195	165	165	135	180	85
Dimensions	210x95	170x105	?	?	220x115	150x75	170x95	?	215x125	?

NoNo of graves	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450
Hair-pins					1 br			1 bone		1 br
Safety	-	-	-	-	+	+	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	R	R	Sct	Sct	Double Sct/Sct	Sct
Orientation of the head of buried	W	Nnw	?	?	Nnw	Nnw	Een	?	?	?
Sex of buried	M	F	M	M	M	M	M	M	M/M	F
Age at death (years) of buried	20-25	20-25	>60	30-35	30-35	30-35	35-40	16	14-15/8	25-30
Ceramic vessels	2	3	4	2	3	1	2	1	2	3
Beads			1 st			1 lapis lazuli				
Seals		1 br				1 br				
Another funeral inventory			1 gypsum mace head		1 br mace head					
NoNo of graves	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460
Construction of the grave	Sh?	Sh?	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	165	135	145	190	155	175	185	135	105	155
Dimensions	?	?	125x70	180x95	230x105	180x95	170x100	140x75	120x601	180X100
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Double Sct/ Sct	Sct	Triple Sct/Sct/ Sct	Sct	Sct	Sct	Sct	Sct	Sct	L
Orientation of the head of buried	Nnw/?	?	Sse?/?	Nnw	Nnw	Nnw	N	Een	Een	Nnw
Sex of buried	F/F	M	F/M/F	M	M	M	Ch	F	?	M
Age at death (years) of buried	30-35/ 40-50	20-25	50-60/ 35-40/ 50-60	25-30	30-35	25-30	9-12	25-30	Ad	20-25
Ceramic vessels	2	1	3	4	4	4	3	1		2
NoNo of graves	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470
Construction of the grave	Sh	Sh?	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	105	145	95	105	165	125	125	185	175	175
Dimensions	180x70	?	190x85	100x40	150x75	290x160	190x115	170x90	200x115	210x95
Safety	-	-	-	+	-?	-	-	-	-	-
Position of the buried	R	Sct	Sct	R	Sct	R	R	Sct	R	R
Orientation of the head of buried	Wwn	?	Nnw	Nnw	Wws	Nnw	Nnw	N	Wwn	Nnw
Sex of buried	M	M	M	F	F	M	M	M	M	M
Age at death (years) of buried	30-40	20-25	25-30	20-25	40-45	50-60	20-25	20-25	20-25	20-25
Ceramic vessels	9	2	7	4	8	7	3	1	3	5
Beads	1 st cylinder			1 st biconical	1 gold; 1 lapis lazuli; 1 carnelian; 1 steatite; gypsum					
Mirrors					1 br					
Hair-pins					1 bone with fist					
Seals					1 br					
Cosmetic spades					1 br					
Sticks				1 br						
Cosmetic flacons					1 br					
Applicator					1 br					
Another funeral inventory	Silver 8-rays star		1 flint atifact		2 br rings;					
NoNo of graves	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480
Construction of the grave	Sh	Sh	Sh	Sh?	Sh	Sh	Sh	Sh	Sh?	Sh?
Depth of the grave (cm)	135	155	195	135	135	160	135	165	125	95
Dimensions	150x70	155x85	170x105	?	145x75	130x70	180x75	165x110	?	200x80
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	R	Sct	Sct	Double R/?	Sct	Sct

NoNo of graves	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480
Orientation of the head of buried	Nnw	Nnw	Nnw	?	Nnw	Nnw	Nnw	Nne/?	?	Nnw
Sex of buried	M	M	?	M	M	?	M	M/F	M	F
Age at death (years) of buried	40-50	25-30	Ad	35-40	8-9	Ad	30-35	50-60/ 30-35	30-35	20-25
Ceramic vessels	2	3	1	3	2	2	6	1	3	
Hair-pins									1 bone	
Statuettes										1 fem terracotta
Notes					Ash D 140 h=80					
NoNo of graves	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490
Construction of the grave	Sh	Cist	Sh?	Sh	P?	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	115	65	110	145	85	135	125	125	95	175
Dimensions	170x85	210x120	?	205x115	?	130x85	140x85	155x95	170x70	210x110
Safety	+	-	-	-	-	-	-	+	-	-
Position of the buried	R	Sct	Sct	Sct	Sct	Sct	Sct	R	DoubleR/?	Sct
Orientation of the head of buried	Nnw	Nnw	?	Wwn	?	Nnw	Wwn	Nnw	Nne/?	Nnw
Sex of buried	M	M	M	?	M	F	M	F	F/M	F
Age at death (years) of buried	20-25	20-25	40-50	Ad	35-40	20-25	25-30	18-20	25-30/ 10-11	25-30
Ceramic vessels	2	4	4	6	2	3	1	2	3	3
Beads	1 st									
Axes	1 br									
Another funeral inventory		1 br vessel								
NoNo of graves	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500
Construction of the grave	Sh	Sh?	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	165	145	135	155	85	185	160	165	95	160
Dimensions	160x70	?	150x80	170x80	190x70	165x85	175x90	165x110	160x80	260x120
Safety	+	-	+	-	+	+	-	-	-	+
Position of the buried	R	Abs	R	Sct	R	Sct	Sct	Sct	Double Sct/Sct	R
Orientation of the head of buried	Nw		Nw	Nnw	Nnw	Nnw	Nw	Nnw	Nne/?	Nnw
Sex of buried	M		F	M	F	F	?	?	F/F	M
Age at death (years) of buried	30-35		18	50-60	50	30-35	Ad	?	40-50/ 20-25	30-35
Ceramic vessels	6	3	2	3	3	4	2	4	2	4
Beads	1 lapis lazuli; 1 st biconical			1 terracotta biconical	1 st	1 st biconical				1 gold
Axes										1 br with cock's head
Arrow heads										16 flint
Seals					1 br	1 br				
Applicator	1 br									
Sticks					1 br with head of goat	1 br with bispiral head				
Cosmetic flacons	1 br									
Miniature column										1 st
Another funeral inventory					1 gypsum 6- rays rozette	2 gold cartridges for beads				St staff; 1 black st disc D 40 cm h 6,5 cm
Notes						Only scull				
NoNo of graves	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510
Construction of the grave	Sh	Sh	Sh	Sh?	Sh	Sh	Sh	P?	P?	P
Depth of the grave (cm)	175	180	190	85	195	190	165	75	105	35
Dimensions	170x70	190x110	225x90	?	155x85	150x80	200x100	?	?	140x75

NoNo of graves	1541	1542	1543	1544	1545	1546	1547	1548	1549	1550
Construction of the grave	Bp	Bp	Bp	Bp	Fp	Sh	Sh	Bp	Bp	Sh
Depth of the grave (cm)	30	40	50	50	45	140	75	85	65	120
Dimensions	77x60	D 70	84x70	63x48	D 45	182x105	175x65	D 80	D 60	155x85
Safety	?	?	?	?	?	+	+	?	?	-
Position of the buried	Abs	Abs	Abs	Abs	Abs	R	R	Abs	Abs	Double R/Sct
Orientation of the head of buried						Nnw	Nnw			Wws/?
Sex of buried						F	F			F/M
Age at death (years) of buried						40-45	35-40			35-40/6
Ceramic vessels						6				3
Beads						1 st biconical				
Mirrors						1 br				
Seals										1 br
NoNo of graves	1551	1552	1553	1554	1555	1556	1557	1558	1559	1560
Construction of the grave	Sh	Sh	Sh	Sh	Bp/P	Sh?	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	190	180	105	180	65/ 65	60	95	85	115	105
Dimensions	260x105	210x100	120x60	225x80	80x65/ 135x85	?	?	150x95	185x80	170x70
Safety	-	-	-	-	+	-	-	+	-	+
Position of the buried	Sct	Sct	Sct	Sct	Double R/Sct	Sct	Sct	Double R/?	Sct	L
Orientation of the head of buried	Nnw	Nnw	Nwn	Ne	Wwn/ Nne	?	?	Nnw/?	Nnw	Wwn
Sex of buried	M	M	F	M	Ch/F	?	M	F/F	M	F
Age at death (years) of buried	25-30	40-45	11-12	16-18	2-2,5/30-35	Ad	19-20	17/9	30-35	45-50
Ceramic vessels	2	6		7	1/Abs		2	4	3	2
Beads			1 gypsum	1 steatite biconical; 84 black st						
Arrow heads				1 flint						
Hair pins				1 bone						
Notes					Child was a bathrocephall; the P was destroyed by Bp;					
NoNo of graves	1561	1562	1563	1564	1565	1566	1567	1568	1569	1570
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	155	160	150	130	135	185	185	175	70	125
Dimensions	200x140	210x105	170x65	205x105	160x70	180x65	185x115	180x75	140x60	152x65
Safety	-	-	+	-	-	-	-	-	+	-
Position of the buried	Sct	Sct	R	R	Sct	Sct	Sct	Sct	L	Sct
Orientation of the head of buried	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Wwn	N
Sex of buried	?	?	?	?	?	?	?	?	M	?
Age at death (years) of buried	?	?	Ad	Ad	?	?	?	?	30-35	15-16
Ceramic vessels	3	3	3	4	1	7	6	2	3	3
Beads	1 gypsum						1 gypsum	1 st		
NoNo of graves	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580
Construction of the grave	Sh?	Sh?	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Bp
Depth of the grave (cm)	105	95	145	140	175	165	175	120	160	30
Dimensions	?	?	180x65	140x60	210x110	195x115	185x75	160x85	220x95	70x55
Safety	-	-	-	-	-	-	-	-	-	?
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Nne
Orientation of the head of buried	?	?	N	Nnw	Nnw	Nnw	Nnw	Nnw	Nnw	Abs
Sex of buried	?	?	M	?	M	F	?	F	?	
Age at death (years) of buried	?	?	25-30	?	30-35	30-35	Ad	18-20	Ad	

NoNo of graves	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580
Ceramic vessels			3		4	2	4	2	2	
Another funeral inventory						1 gypsum vessel		A flint fr		
NoNo of graves	1581	1582	1583	1584	1585	1586	1587	1588	1589	1590
Construction of the grave	Sh?	Bp	Sh	Sh	Sh	Bp	Sh	Sh	Sh	Sh
Depth of the grave (cm)	85	70	140	165	140	115	125	135	205	155
Dimensions	110x70	120x80	145x65	145x65	140x50	87x51	190x90	180x75	220x85	150x75
Safety	+	?	-	-	+	?	+	-	-	-
Position of the buried	R	Abs	Sct	Sct	L	Abs	R	Sct	Sct	Sct
Orientation of the head of buried	Wws		Nnw	Nne	Nne		Nnw	Nnw	N	Nnw
Sex of buried	F		F	?	F		F	?	F	M
Age at death (years) of buried	30-35		12-14	Ad	18-20		25-30	Ad	18-20	16-18
Ceramic vessels	2	1	2		2	2	2	2	3	3
Beads	1 st biconical; 2 st									1 st
Statuettes					1 fem tarracotta					
Seals	1 br									
Mirrors							1 br			
Sticks					1 br					
Cosmetic spades							1 br			
Another funeral inventory	1 st vessel				1 br earring				1 br spiral ring	
NoNo of graves	1591	1592	1593	1594	1595	1596	1597	1598	1599	1600
Construction of the grave	?	Sh?	Sh?	Sh	Sh	Sh	Sh	Sh	Sh	Cist
Depth of the grave (cm)	50	185	?	90	110	155	155	195	155	155
Dimensions	?	?	?	180x93	190x90	160x65	180x70	220x75	185x75	150x90
Safety	-	-	-	-	-	+	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Centph	Sct	Sct	Sct	Sct
Orientation of the head of buried	?	?	?	Nnw	Nnw	Abs	Nnw	Nne	Nne	Nw
Sex of buried	Ch	F	?	M	?		?	M	M	F
Age at death (years) of buried	4-5	40-45	?	35-40	Ad		Ad	16-18	18-20	30-35
Ceramic vessels		4		2	4	4	4	3	2	9
Beads								1 st		
Hair-pins							1 bone with engravings			
Seals							1 faience			
Notes	In the sand									In the north wall is a niche

NoNo of graves	1601	1602	1603	1604	1605	1606	1607	1608	1609	1610
Construction of the grave	Sh	Sh	Sh	Sh	Sh	?	Sh	Sh	?	Sh
Depth of the grave (cm)	180	140	110	170	135	160	140	180	105	140
Dimensions	240x100	190x110	175x70	190x75	165x75	?	150x60	220x65	?	195x80
Safety	-	-	-	-	+	-	+	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	R	Sct	R	Sct	Double Sct/Sct	Sct
Orientation of the head of buried	Nnw	Nne	Nnw	Wwn	Nnw	Nw	Nnw	Nnw	?	Nne
Sex of buried	F	M	M	?	F	M	F	F	F/M	F
Age at death (years) of buried	25-30	10	12	Ad	25-30	20-25	20-22	20-25	17/18-20	30-35
Ceramic vessels	5	3	2	2	2		4		2	3
Beads						1 st	11 st (lapis lazuli, faience, carnelian)	2 gypsum		
Statuettes								1 fem terracotta		
Mirrors							1 br			
Cosmetic spades						1 br				
Another funeral inventory							2 silver earrings	1 br earring		
NoNo of graves	1611	1612	1613	1614	1615	1616	1617	1618	1619	1620
Construction of the grave	?	Sh	Sh	Sh	Sepult?	Sh	Sh	Sh?	Sh	Sh
Depth of the grave (cm)	145	185	85	180	140	160	180	195	95	160
Dimensions	?	270x120	140x60	225x100	300x230	175x85	185x100	?	115x70	225x95
Safety	-	-	-	-	-	-	-	-	+	-
Position of the buried	Sct	Sct	Sct	Sct	Double Sct/Sct	Sct	Sct	Sct	L	Sct
Orientation of the head of buried	?	Nnw	Nne	Nnw	Nnw	Nnw	Nnw	?	Wwn	Wws
Sex of buried	?	M	F	M	F?Ch	?	M	?	M	F
Age at death (years) of buried	Ad	25-30	13-14	35-40	30-35/6-7	Ad	40-45	?	30-35	30-35
Ceramic vessels	1	1	3	4	4	7	4	1	1	3
Beads					1 st					
Statuettes			1 fem terracotta							
Seals					1 br					
Hair-pins			1 bone							
NoNo of graves	1621	1622	1623	1624	1625	1626	1627	1628	1629	1630
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	160	190	150	180	120	150	165	130	130	140
Dimensions	185x70	?	195x70	?	160x80	160x90	165x60	185x65	210x70	230x95
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	?	Sct	Sct	Sct	Sct	Sct	Sct	R	Sct
Orientation of the head of buried	Nnw	?	Nnw	?	Wws	Nnw	Wws	Nnw	Nnw	Nne
Sex of buried	?	?	M	?	Ch	M	F	M	Ch	M
Age at death (years) of buried	Ad	Ad	35-40	?	7	40-45	20-25	35-40	6-8	35-40
Ceramic vessels	1		3	1	1	4	1	3	2	3
Beads							1 st		1 st	
NoNo of graves	1631	1632	1633	1634	1635	1636	1637	1638	1639	1640
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	160	110	115	185	85	105	120	140	195	165
Dimensions	180x85	170x70	110x50	175x100	230x126	175x70	175x75	175x80	250x110	210x80
Safety	-	-	-	-	-	-	+	-	-	-
Position of the buried	Centph?	Sct	Sct	Sct	Sct	Sct	Double R/Sct	R	R	Sct
Orientation of the head of buried	Abs	Nne	Nnw	Nne	Nnw	Nnw	Wwn/?	Nnw	Nnw	N
Sex of buried		Ch	F	M	?	M	F/F	M	M	?

NoNo of graves	1631	1632	1633	1634	1635	1636	1637	1638	1639	1640
Age at death (years) of buried		3-4	30-40	20-25	?	50-55	20-25/ 14-16	30-35	30-35	20-25
Ceramic vessels		1	2	2	2		2	1	3	4
Sticks			1 br							
NoNo of graves	1641	1642	1643	1644	1645	1646	1647	1648	1649	1650
Construction of the grave	Sh?	Sh?	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	145	125	190	155	155	105	145	115	120	195
Dimensions	?	?	235x135	170x70	160x65	130x65	170x80	170x55	170x75	180x110
Safety	-	-	+	-	-	+	-	-	-	+
Position of the buried	Sct	Sct	L	?	Sct	R	Sct	Sct	Sct	R
Orientation of the head of buried	?	?	Nne	N	Nne	Wwn	Nnw	Nnw	Nnw	Nnw
Sex of buried	M	?	F	?	F	F	F	?	Ch	M
Age at death (years) of buried	35-40	?	50-55	Ad	35-40	16-17	45-50	Ad	14-15	Ad
Ceramic vessels	3	7	5	4	4	1	2		1	4
Beads		1 st biconical	17 gypsum							
Hair-pins			1 bone							
Seals			1 gypsum		1 gypsum					
Applicator			1 br							
Cosmetic spades			1 br							
Miniature column										1 st
NoNo of graves	1651	1652	1653	1654	1655	1656	1657	1658	1659	1660
Construction of the grave	Sh	Sh	Sh	Sh	Sh?	Sh	Sh	Sh	Sh	Sh?
Depth of the grave (cm)	110	170	180	150	140	85	175	135	120	150
Dimensions	150-95	215x85	125x75	220x115	?	95x45	215x70	170x75	185x70	?
Safety	+	-	-	-	-	+	-	+	-	-
Position of the buried	Double R/?	Sct	Sct	Sct	Sct	R	Sct	L	Sct	Sct
Orientation of the head of buried	Nnw/?	Sse	Nnw	Nne	?	Nne	Nnw	Nnw	Een	?
Sex of buried	M/F	F	F	F	M	Ch	M	M	?	F
Age at death (years) of buried	20-25/ 60-70	30-35	18-20	50-55	20-25	2-2,5	20-25	30-35	?	40-45
Ceramic vessels	1	3	1	9	3	1	3	3	2	4
Beads				1 st biconical; 1 gypsum		2 st				4 gypsum
Hair-pins				1 bone						
Mirrors				1 br						
Seals			1 gypsum							
Applicator				1 br						
Cosmetic flacons				1 br						
Another funeral inventory		1 st conu		1 st conu 1 ste atite vessel						
Notes				Sheep bones						
NoNo of graves	1661	1662	1663	1664	1665	1666	1667	1668	1669	1670
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh?	Sh?
Depth of the grave (cm)	145	135	130	160	125	135	130	190	160	160
Dimensions	190x115	160x90	165x55	215x100	150x65	180x85	200x90	200x80	?	?
Safety	-	-	+	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Centph	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nne	Nnw	Abs	Wwn	Nnw	Nw	nw	Nne	?	?
Sex of buried	M	M		F	?	?	F	F	M	?
Age at death (years) of buried	30-35	20-25		20-25	Ad	Ad	35-40	20-25	50-55	?
Ceramic vessels	3	2	2	5	3	2	2	3	3	2
Beads	1 st biconical			15 gypsum				1 st		
Miniature column	1 st									
Another funeral inventory				1 st vessel						
NoNo of graves	1671	1672	1673	1674	1675	1676	1677	1678	1679	1680
Construction of the grave	Sh	Sh	Sh	Sh	Fp	Sh?	Sh?	Sh	Sh	Fp
Depth of the grave (cm)	170	105	175	75	?	130	130	130	95	?

NoNo of graves	1671	1672	1673	1674	1675	1676	1677	1678	1679	1680
Construction of the grave	Sh	Sh	Sh	Sh	Fp	Sh?	Sh?	Sh	Sh	Fp
Depth of the grave (cm)	170	105	175	75	?	130	130	130	95	?
Dimensions	180x100	190x75	150x65	?	?	?	?	155x80	115x80	?
Safety	-	-	-	+	?	-	-	-	+	?
Position of the buried	R	Sct	Sct	L	Abs	Sct	Double Sct/ Sct	Sct	R	Abs
Orientation of the head of buried	Nnw	Nnw	Wwn	Nnw		?	?	Wws	Nnw	
Sex of buried	M	M	M	Ch		M	M/Ch	?	F	
Age at death (years) of buried	35-40	35-40	30-35	10-12		30-35	45-50/3-4	Ad	18-20	
Ceramic vessels		1	1	1		5	3	2	4	
Beads									1 st	
Hair-pins								1 bone		
Mirrors									1 br	
Seals									1 br	
Cosmtic spades									1 br	
Sticks									1 br	
NoNo of graves	1681	1682	1683	1684	1685	1686	1687	1688	1689	1690
Construction of the grave	Sh	Sh	Sh	Sh	Sh?	Sh?	Sh	Sh	Bp	Sh
Depth of the grave (cm)	130	165	150	155	120	195	195	150	50	170
Dimensions	200x90	200x80	210x60	140x70	?	?	170x70	240x85	70x45	150x85
Safety	-	-	-	-	-	-	-	-	?	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Double Sct/Sct	Sct	Abs	Sct
Orientation of the head of buried	Nnw	Wwn	Nnw	Nne	?	?	Nw/?	Nnw		Nnw
Sex of buried	?	M	M	F	M	M	M/M	F		M
Age at death (years) of buried	Ad	Ad	40-45	14-16	18	30-35	40-50/11	30-35		20-25
Ceramic vessels	1	3	2	1	3	4	3	7		2
Beads	1 st	1 st in a silver cartridge								
Hair-pins								1 bone		
Arrow heads		3 flint								
Miniature column		1 st								
Another funeral inventory								1 st vessel; fr of gold foil		
NoNo of graves	1691	1692	1693	1694	1695	1696	1697	1698	1699	1700
Construction of the grave	Sh	Sh	Sh	Sh	Sh?	Sh	Sh	Sh	Sh	?
Depth of the grave (cm)	185	175	185	185	120	90	155	190	140	?
Dimensions	160x85	210x80	220x90	175x70	?	165x60	150x100	240x60	165x65	?
Safety	+	-	-	-	-	+	-	-	+	?
Position of the buried	R	Sct	Sct	Sct	Sct	R	Sct	Sct	DoubleR/?	Sct
Orientation of the head of buried	Nnw	Nnw	Nnw	Nnw	?	Nnw	Wwn	Nnw	Nnw/?	?
Sex of buried	F	?	M	?	?	F	F	M	F/F	?
Age at death (years) of buried	12-13	Ad	30-35	?	25-30	40-45	30-35	20-25	18-20/12	?
Ceramic vessels	4	3	3	3	2	3	2	4	2	
Beads	3 gypsum; 11 st									15 gypsum
Statuettes	2 fem terracotta									
Seals							1 br		1 br	
Sticks									1 br	
NoNo of graves	1701	1702	1703	1704	1705	1706	1707	1708	1709	1710
Construction of the grave	Sh	Sh	Sh	Sh?	Sh	Sh	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	125	95	120	80	125	145	105	115	100	180
Dimensions	165x70	130x65	160x70	?	115x65	170x60	?	165x90	160x80	220x145
Safety	+	+	+	-	+	-	-	-	-	-

NoNo of graves	1701	1702	1703	1704	1705	1706	1707	1708	1709	1710
Position of the buried	R	L	R	Sct	R	Double Sct/Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nnw	Nnw	Nnw	?	Wws	Nne/?	?	Nne	Een	Wwn
Sex of buried	M	F	M	?	F	M/F	?	?	F	F
Age at death (years) of buried	18-20	40-45	10-11	?	18-20	40-50/ 25-30	?	?	30-35	25-30
Ceramic vessels	2	2	3	1	2	3		1	1	7
Hair-pins		1 br								
Seals										1 silver
NoNo of graves	1711	1712	1713	1714	1715	1716	1717	1718	1719	1720
Construction of the grave	Fp	Sh	Sh	Sh?	Sh?	Sh	Sh	Sh	Sh	Bp
Depth of the grave (cm)	65	135	185	110	125	155	175	145	155	95
Dimensions	D 45	208x95	180x90	140x75	185x100	180x110	230x90	165x115	165x80	105x65
Safety	?	-	-	-?	-	-	+	+	-	?
Position of the buried	Abs	Sct	Sct	Sct	Sct	Sct	L	R	Sct	Sct
Orientation of the head of buried		Nne	Ees	Wwn	Nne	Nw	Nne	Nne	Nw	Wws
Sex of buried		?	?	?	?	?	M	F	M	?
Age at death (years) of buried		Ad	20-25	Ad	Ad	30-35	40-45	25-30	35-40	Ad
Ceramic vessels		5	2		1	3	6	3	6	
NoNo of graves	1721	1722	1723	1724	1725	1726	1727	1728	1729	1730
Construction of the grave	Sh?	Sh	Bp	Sh	Sh	Sh	Sh	Sh	Sh	?
Depth of the grave (cm)	155	125	85	175	91	180	85	190	115	105
Dimensions	?	140x100	83x70	210x100	165x65	165x70	1650x95	?x105	170x90	?
Safety	-	-	?	+	+	-	-	-	+	-
Position of the buried	Sct	Sct	Abs	R	Centph	Sct	Double Sct/Sct	Sct	R	Sct
Orientation of the head of buried	?	W		Nw	Abs	N	N/?	Nw	N	?
Sex of buried	?	M		M		?	?/?	F	?	?
Age at death (years) of buried	?	40-45		45-50		?	Juv/Juv	18-20	9-10	5-6
Ceramic vessels	2	3	2	4	4	1	2	1	3	2
Beads					3 st					1 st
Mirrors					1 br					
Seals					1 br					
Applicator					1 br					
Cosmetic spades					1 br					
Cosmetic flacons					1 br					
Notes	In the sand	In the sand								In the sand
NoNo of graves	1731	1732	1733	1734	1735	1736	1737	1738	1739	1740
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sepult
Depth of the grave (cm)	155	100	95	145	135	145	115	165	85	120
Dimensions	175x100	160x90	168x85	210x100	160x95	145x95	182x85	240x95	150x85	337x212
Safety	-	+	+	-	-	-	-	-	-	-
Position of the buried	Sct	R	R	Sct	Sct	Sct	Sct	Sct	Sct	Abs
Orientation of the head of buried	Nnw	Nnw	N	Nw	N	Wws	Nw	N	W	
Sex of buried	?	M	F	F	?	M	?	?	F	
Age at death (years) of buried	Ad	45-50	12-13	30-35	?	30-35	?	?	35-40	
Ceramic vessels	5	2	5	5	6	2	2	4	4	31
Beads					1 st; 3 gypsum					
Notes										Bones of 2 sheeps in one room; human remains – in another

NoNo of graves	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750
Construction of the grave	Cist	Sh	Sh	Sh	Sepult	?	Sh	Sh	Sh	Sepult
Depth of the grave (cm)	65	115	148	135	145	120	115	170	180	145
Dimensions	192x110	140x70	150x70	150x115	260x220	?	190x95	230x115	230x120	350x205
Safety	-	+	+	-	-	-	+	-	-	-
Position of the buried	Centph	R	R	Sct	Sct	Sct	Triple R/?/?	Triple R/Sct?Sct	Sct	Sct
Orientation of the head of buried	Abs	N	Nnw	N	N	?	N/?/?	N/?/?	N	Wwn
Sex of buried		F	F	M	M	?	F/M/Ch	M/F/Ch	M	?
Age at death (years) of buried		17-18	11-12	35-40	40-45	Ad	18-20/ 40-45/?	25-30/ 30 -35/4-5	40-45	Ad
Ceramic vessels	14	2	3	3	6	2	6	3	2	6
Beads	6 br						42 br, 31 black st; 1 light st		3 gypsum	
Hair-pins									1 bone with engravings	
Applicator							1 br			
Cosmetic flacon							1 br			
Arrow heads	1 flint									
Mirrors							1 br			
Another funeral inventory							2 silver earrings	Small (D 1 cm) st artefact		1 two-part st vessel; 2 br plate
NoNo of graves	1751	1752	1753	1754	1755	1756	1757	1758	1759	1760
Construction of the grave	Bp	Sh	Sh	Sh	Bp	Sh	Sh	Sh	Bp	Sh
Depth of the grave (cm)	58	150	145	160	65	110	125	180	110	85
Dimensions	80x55	175x85	205x100	205x125	85x70	185x100	205x90	300x135	220x120	180x65
Safety	?	-	-	-	?	-	-	-	-	+
Position of the buried	Abs	Sct	Sct	Sct	Abs	Sct	Sct	Centph	Abs	R
Orientation of the head of buried		?	N	N		N	Nw	Abs		N
Sex of buried		?	M	M		M	?			F
Age at death (years) of buried		?	25-30	40-45		40-45	?			20-25
Ceramic vessels		2	2	5		2	3	6		5
Beads						2 st				
Hair-pins										1 br
Arrow heads		1 flint						1 flint		
Applicator										1 br
Bangeles										1 br
Cosmetic flacons										1 br
Mirrors										1 br
Another funeral inventory								1 br triumph; 2 kaolin		1 br diadem; 1 br vessel
NoNo of graves	1761	1762	1763	1764	1765	1766	1767	1768	1769	1770
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	115	95	145	90	175	205	105	140	155	165
Dimensions	220x110	175x100	225x115	195x100	230x130	285x170	195x85	245x130	200x100	190x90
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	R	Sct	L
Orientation of the head of buried	N	N	N	N	N	N	Nw	Wwn	N	Ne
Sex of buried	?	M	M	?	M	F	M	M	?	F
Age at death (years) of buried	?	35-40	20-23	Ad	30-35	30-40	35-40	30-35	?	30-35
Ceramic vessels	5	1	2	2	5	2	5	2	3	3
Beads						1 gypsum				1 st
Cosmetic spades										1 br
Statuettes										1 fem terracotta

NoNo of graves	1761	1762	1763	1764	1765	1766	1767	1768	1769	1770
Construction of the grave	Cist	Sh	Sh	Sh	Sepult	?	Sh	Sh	Sh	Sepult
Seals										1 br
Applicator										1 br
Mirrors										1 br
Miniature column								1 st		
Another funeral inventory				Kaolin			1 st vessel			1 silver rosette; 1br diadem; 1 br round artefact
NoNo of graves	1771	1772	1773	1774	1775	1776	1777	1778	1779	1780
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P	Sh	Sh	Sh	Sh
Depth of the grave (cm)	120	100	165	150	120	140	115	135	180	140
Dimensions	180x100	145x90	240x125	190x90	190x100	200x100	210x105	190x100	205x105	230x115
Safety	-	-	-	-	+	-	+	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	R	Centph	Centph	Sct	Sct	Abs
Orientation of the head of buried	Nnw	Nnw	N	Nw	Nnw	Abs	Abs	N	Een	
Sex of buried	?	Ch	M	?	M			?	F	
Age at death (years) of buried	?	4-5	20-25	Ad	30-35			Ad	35-40	
Ceramic vessels	4	4	4	4	4	5	4	2	4	4
Beads	1 st		1 steatite biconical		1 st biconical					
Mirrors			1 br							
Hair-pins								2 bone		
Seals				1 gypsum						
Applicator			1 br							
Cosmetic spades			1 br							
Cosmetic flacons			1 br							
Another funeral inventory						Kaolin				
NoNo of graves	1781	1782	1783	1784	1785	1786	1787	1788	1789	1790
Construction of the grave	P	Sh	Sh	Sh	Bp	Sh	P	Sh	Sh	Bp
Depth of the grave (cm)	80	140	175	180	115	195	65	135	140	75
Dimensions	125x70	195x95	215x95	200x120	100x80	220x120	160x125	250x100	210x90	80x70
Safety	+	-	-	-	?	-	-	+	-	?
Position of the buried	L	Sct	Sct	Sct	Abs	Sct	Sct	R	Sct	Abs
Orientation of the head of buried	S	N	N	Nne		N	N	N	Nw	
Sex of buried	M	F	F	M		F	M	F	?	
Age at death (years) of buried	30-35	20-25	35-40	40-45		20-25	30-35	25-30	Ad	
Ceramic vessels		4	4	5		6	1	4	2	
Beads			1 steatite biconical; 1 lapis lazuli					2 st biconical	1 black st biconical	
Seals			1 gypsum							
Applicator								1 br		
Cosmetic flacons								1 cer		
Another funeral inventory				3 white stones						
NoNo of graves	1791	1792	1793	1794	1795	1796	1797	1798	1799	1800
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Bp
Depth of the grave (cm)	105	155	150	155	170	175	135	175	170	95
Dimensions	175x95	185x105	190x90	230x130	190x85	200x110	240x115	190x100	205x105	90x65
Safety	-	-	-	-	-	+	-	-	+	-
Position of the buried	Sct	Sct	Sct	Sct	R	R	Sct	Sct	R	Sct
Orientation of the head of buried	Nnw	Nne	N	Wwn	Nnw	Nnw	N	N	N	N
Sex of buried	F?	M	M	M	M	F	F	?	F	?
Age at death (years) of buried	18-20	25-30	35-40	18-20	Ad	30-35	20-25	Ad	25-30	Ad
Ceramic vessels	2	2	5	4	3	8	4	1	7	

NoNo of graves	1831	1832	1833	1834	1835	1836	1837	1838	1839	1840
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Bp	Sh	Sh	Sh	Sh
Depth of the grave (cm)	165	110	130	165	135	125	175	105	145	145
Dimensions	210x115	170x110	225x105	250x120	185x90	85x70	240x150	215x95	180x80	210x100
Safety	-	+	-	-	-	-	-	-	-	-
Position of the buried	Sct	R	Sct	Sct	Sct	Abs	Sct	Sct	Sct	Sct
Orientation of the head of buried	Wwn	Nnw	Nnw	N	Nnw		N	Nnw	N	Nnw
Sex of buried	F	M	M	M	?		M	F	M	M
Age at death (years) of buried	30-35	30-35	30-35	18-20	Ad		25-30	25-30	40-45	20-25
Ceramic vessels	4	3	3	5	1		5	1	4	3
Beads		1 st						1 gypsum		
NoNo of graves	1841	1842	1843	1844	1845	1846	1847	1848	1849	1850
Construction of the grave	Sh	Sh	Sh	Sepult	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	155	155	135	135	195	85	155	165	150	145
Dimensions	240x110	180x100	180x100	265x203	180x90	120x75	150x75	230x120	210x100	235x130
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Centph?	Sct	Sct	R
Orientation of the head of buried	Nw	N	Nnw	N	E	N	Abs	Nne	N	N
Sex of buried	F	F	M	M	F	M		?	M	M
Age at death (years) of buried	30-35	25-30	40-45	45-50	35-40	11-12		Ad	25-30	40-45
Ceramic vessels	5	2		8	5	1	5	3	6	2
Beads		2 stette biconical			1 st			1 gypsum		
Another funeral inventory				1 lazuli pin top; Kaolin; 1 fr st staff; 1 lead ring D 27 cm						
NoNo of graves	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	160	140	185	180	185	125	145	85	105	180
Dimensions	250x130	210x105	210x90	210x105	230x110	192x110	210x95	110x75	170x80	260x110
Safety	-	-	-	-	-	-	-	+	-	-
Position of the buried	Centph	Sct	Sct	Sct	Sct	R	Sct	R	Sct	Sct
Orientation of the head of buried	Abs	Nw	E	Nnw	N	N	Wwn	Wwn	Nnw	Nnw
Sex of buried		M	M	F	M	M	?	Ch	Ch	F
Age at death (years) of buried		35-40	25-30	20-25	40-45	35-40	?	12-13	6-7	25-30
Ceramic vessels	3	3	2	10	2	4	3		3	7
Beads				1 st biconical; 1 st cylinder						2 st cylinders
Hair-pins				2 bone with engravings		1 bone				
Another funeral inventory				Fr of silver and br						Gypsum mosaics inlays
Notes								It was Bp, where secondary was made a shaft burial		
NoNo of graves	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	110	140	185	185	165	120	135	140	135	130
Dimensions	215x105	165x90	210x110	175x90	200x100	165x90	230x105	230x110	184x110	195x100
Safety	-	-	-	-	-	-	+	-	+	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	R	R	R	Sct
Orientation of the head of buried	Nnw	W	Nnw	W	N	Wwn	Nw	Nnw	Nnw	N
Sex of buried	F	?	?	?	F	Ch	F	M	M	?

NoNo of graves	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870
Age at death (years) of buried	25-30	Ad	Ad	Ad	25-30	4-5	35-40	30-35	25-30	?
Ceramic vessels	1	1	2	1	4	1	6	5	2	5
Beads	Small black st		1 gypsum				1 carnelian cylindrical; 1 steatite biconical; 10 gypsum			
Hair-pins							2 silver			
Mirrors							1 br			
Cosmetic spades							1br			
Applicator							1 br			
Cosmetic flacons							1 br			
Another funeral inventory							2 gold earrings; 1 gypsum mace head			
NoNo of graves	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	155	175	180	160	170	175	175	140	125	165
Dimensions	200X95	220x120	300x130	240x115	200x120	160x90	180x80	190x90	240x110	260x120
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Abs	Sct	Sct	R	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nnw		Nnw	Nnw	N	N	E	N	N	Nnw
Sex of buried	F		F	M	M	M	?	M	?	F
Age at death (years) of buried	35-40		25-30	35-40	40-45	30-35	Ad	30-35	Ad	20-25
Ceramic vessels	4	3	6	4	5	4	3	5	4	4
Beads	1 steatite biconical		1 st biconical	1 gypsum biconical				1 st		
Hair-pins										1 bone
Mirrors	1 br									
Sticks							1 br			
Cosmetic flacons	1 br						1 ceram			
Another funeral inventory	Kaolin	Kaolin			Lead spiral			2 flint tools		
NoNo of graves	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	155	165	195	155	165	140	140	160	135	170
Dimensions	225x110	240x100	240x100	250x110	230x120	190x100	200x110	190x110	190x85	210x90
Safety	-	-	+	-	-	?	-	-	+	+
Position of the buried	Sct	Sct	R	R	Sct	Sct	Sct	Sct	R	R
Orientation of the head of buried	Nw	N	Nw	Nne	Nnw	Nnw	Wwn	Nnw	N	Nnw
Sex of buried	M	M	F	M	F	M	M	M	F	F
Age at death (years) of buried	35-40	40-45	50-55	20-25	25-30	30-35	40-45	25-30	25-30	25-30
Ceramic vessels		4	1	3	3		2	3	7	5
Beads	2 gypsum		1 agate, 1 carnelian							1 st biconical; 1 faience
Hair-pins									1 bone	1 bone
Mirrors										1 br
Seals									1 lead	
Applicator										1 br with a goat head
Arrow heads	1 flint									
Cosmetic flacons										1 br
Cosmetic spades										1 br
Another funeral inventory				1 fr st staff		Destroyed				1 st vessel

NoNo of graves	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	155	145	160	180	110	135	155	165	170	180
Dimensions	170x80	190x110	270x110	195x95	180x90	170x90	200x110	365x170	270x160	200x90
Safety	-	-	-	-	-	+	-	-	-	-
Position of the buried	Centph?	R	Abs	Sct	Sct	R	Sct	Sct	Sct	Sct
Orientation of the head of buried	Abs	Nnw		W	Nw	Nnw	Nnw	N	Nnw	N
Sex of buried		M		M	M	M		M	F	M
Age at death (years) of buried		30-35		35-40	12-13	30-35		Ad	35-40	20-25
Ceramic vessels	3	3	2	6	2	2	3	15	15	6
Beads					1 br		3 gypsum			
Hair-pins									1 bone	
Arrow heads					1 flint					
Another funeral inventory							Destroyed		Bone semifabric	
NoNo of graves	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Construction of the grave	Sh?	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Bp	Sh
Depth of the grave (cm)	75	185	120	60	85	130	165	150	100	125
Dimensions	?	220x120	150x85	160x80	140x80	190x100	240x95	240x120	80x65	230x90
Safety	-	-	-	+	-	-	-	-	?	-
Position of the buried	Sct	Sct	Sct	R	Sct	Sct	Sct	Sct	Abs	R
Orientation of the head of buried	?	Nne	Nnw	Nnw	N	N	Nne	Nnw		Nnw
Sex of buried	?	M	?	F	?	?	F	M		F
Age at death (years) of buried	Ad	40-45	?	18-20	?	Ad	30-35	20-25		30-35
Ceramic vessels	5	8		2	3	4	3	4	1	4
Beads						1 faience				
Statuettes			1 fr of fem terracotta							
Another funeral inventory		Kaolin; fr of br								
NoNo of graves	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	160	185	160	155	140	140	180	120	95	160
Dimensions	250x110	250x150	230x140	250x130	260x120	210x100	260x120	160x90	140x70	300x140
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	L	Sct	Sct	R	Sct	Sct	Sct	R	Abs
Orientation of the head of buried	Nnw	N	Nne	W	Nne	Nw	N	N	N	
Sex of buried	M	M	F	?	M	F	?	?	M	
Age at death (years) of buried	20-25	30-35	40-45	Ad	40-45	25-30	Ad	Ad	30-35	
Ceramic vessels	7	5	4	1	4	6	10 (including 1 painted)			
Beads		1 st		1 gypsum		1 gypsum				
Arrow heads	2 flint	3 flint								5 flint
Miniature column		1 st model								
Another funeral inventory		1 st vessel				Kaolin				
Notes		In the east wall - model of the double owen								
NoNo of graves	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
Construction of the grave	Sh	Sepult	Sh	Sh	Sh	Sh?	Sh	Sh	Sh	Sh
Depth of the grave (cm)	165	?	170	165	155	150	145	180	145	145
Dimensions	240x135	320x160	260x120	210x75	215x85	?	155x80	220x100	200x100	200x80
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	R
Orientation of the head of buried	Nne	Nnw	N	N	N	?	Nnw	Nw	N	Nnw

NoNo of graves	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
Sex of buried	M	M	M	F	F	M	?	M	F	F
Age at death (years) of buried	30-35	Ad	25-30	30-35	20-25	35-40	Ad	25-30	25-30	25-30
Ceramic vessels	3	14	6	2	2	1	1	5	1	2
Beads		1 turquoise			1 st			1 st		
Arrow heads			1 flint							
Another funeral inventory		1 br dagger; 1 gold inlight for bead								
NoNo of graves	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Construction of the grave	Sh	Sh	Sh?	Sh	Sh	Sh	Sh	Sh	Bp	Sh
Depth of the grave (cm)	160	110	95	135	130	100	140	110	95	140
Dimensions	210x100	235x75	?	300x105	250x90	90x60	245x85	200x75	90x70	180x80
Safety	-	-	-	-	-	+	-	-	?	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	R	Sct	Sct	Abs	Sct
Orientation of the head of buried	Ne	Nnw	?	N	Nw	Ne	Ne	N		Nne
Sex of buried	M	M	M	?	?	Ch	M	?		?
Age at death (years) of buried	20-25	30-35	25-30	Ad	Ad	5-6	25-30	Ad		?
Ceramic vessels	2	9	8	6	2	2	2	1		3
Beads	1 st	3 st					1 st biconical			
Notes									The dog's burial	
NoNo of graves	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	165	?	125	85	130	90	120	130	100	155
Dimensions	245x110	260x115	205x105	180x80	200x90	225x80	215x95	185x90	190x80	195x100
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Abs	Sct	Sct	Sct	Sct	R
Orientation of the head of buried	Nnw	N	Nnw	Nnw		Nne	N	Nnw	N	N
Sex of buried	M		M	?		?	?	?	?	?
Age at death (years) of buried	35-40		35-40	Ad		Ad	Ad	Ad	Ad	Ad
Ceramic vessels	5		6	3	1 (in the shaft)	2	2	5	2	2
Beads			1 st biconical				1 steatite biconical			
Another funeral inventory			1 br vessel; 1 fr st staff							
Notes		Destroyed								
NoNo of graves	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	120	90	120	85	120	130	135	105	105	150
Dimensions	200x100	145x55	170x100	170x100	155x90	180x80	?	210x125	160x70	275x120
Safety	-	-	+	-	-	-	-	-	-	-
Position of the buried	Sct	R	R	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nnw	N	Nnw	Een	Nnw	N	?	Wwn	Ne	N
Sex of buried	M	M	F?	?	?	?	M	M	M	M
Age at death (years) of buried	25-30	35-40	35-40	?	Ad	Ad	30-35	30-35	18-20	50-55
Ceramic vessels	3		1	1	2	1		5	1	2
Beads										1 gypsum biconical
Hair-pins								1 bone		
Notes				Traces of fire in the corner of shaft						
NoNo of graves	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	150	135	120	95	125	80	125	165	150	140

NoNo of graves	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Dimensions	190x80	245x100	215x85	215x80	180x75	145x60	215x90	220x90	210x100	260x90
Safety	+	-	-	-	+	-	-	-	-	-
Position of the buried	Supine	Sct	Sct	Sct	R	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	N	N	Nnw	Nnw	Nnw	N	Nnw	N	N	W
Sex of buried	M	?	M	?	F	?	?	M	F	F
Age at death (years) of buried	25-30	Ad	30-35	Ad	45-50	?	Ad	30-35	20-25	Ad
Ceramic vessels	5	4	3	2	2	2	6	2	7	1
Beads	1 st biconical								Gypsum	
Hair-pins									1 bone	1 bone
Seals					1 br					
Another funeral inventory	1 gypsum hollow conu									
NoNo of graves	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Bp	Sh	Sh	Sh
Depth of the grave (cm)	110	115	120	70	140	100	65	120	125	110
Dimensions	170x80	250x90	260x120	160x60	210x70	145x90	105x65	210x85	180x60	280x150
Safety	-	-	-	-	-	-	?	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	R	Abs	Sct	Sct
Orientation of the head of buried	Nw	Nnw	Nnw	Nnw	N	Nnw	Nnw		Nne	Nw
Sex of buried	?	?	?	?	M	F	F		?	?
Age at death (years) of buried	Ad	5-6	?	Ad	Ad	18	30-35		?	Ad
Ceramic vessels		4	2		2		1	4	2	2
Beads			1 st cylinder							
Another funeral inventory		Kaolin								
NoNo of graves	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Construction of the grave	Sh	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	110	45	140	150	55	80	95	135	145	140
Dimensions	195x60	85x55	230x90	230x80	100x45	140x70	210x100	230x100	280x110	206x110
Safety	-	?	-	-	+	-	-	-	-	+
Position of the buried	Sct	Abs	Sct	Sct	Centph	Sct	Sct	Sct	Sct	Centph
Orientation of the head of buried	Nnw		N	N	Abs	N	Nne	N	N	Abs
Sex of buried	?		M	M		?	F	M	M	
Age at death (years) of buried	?		45-50	35-40		Ad	20-25	25-30	20-25	
Ceramic vessels	3		4	3	4	2	5	2	4	7
Beads							1 st biconical			
Another funeral inventory							2 br earrings			1 gypsum hollow conu
NoNo of graves	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Construction of the grave	Sh	Bp	Bp	Bp	Bp	Sh	Sh	Sh	Sepult	Sepult
Depth of the grave (cm)	150	50	50	65	55	120	155	125	160	165
Dimensions	245x80	90x85	75x55	85x75	90x55	180x70	195x90	190x80	215x116/ 290x213	250x125/ 290x213
Safety	-	?	?	?	?	-	-	-	-	-
Position of the buried	Sct	Abs	Abs	Abs	Abs	Sct	Sct	R	Nine persons Sct, Fr	Sct
Orientation of the head of buried	Nnw					Nne	N	N	W/????	Een
Sex of buried	M					F	M	M	M/F/F/F/ F/M/F/F/?	?
Age at death (years) of buried	30-35					Ad	30-35	20-25	18-20/50-60/ 50-60/ 30-40/ 20-30/35-40/ 40-50/40- 50/13-16	Ad
Ceramic vessels	2					3	3	2	25 (including 1 painted)	18

NoNo of graves	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Beads						1 st			1 lapis lazuli; 12 gold	1st
Hair-pins									1 bone; 2 silver: with a sheep and with a goat's head; 1 br head of pin with a top like wild goat	
Mirrors									1 br	
Dagger										1 br
Cosmetic spades									1 silver	
Miniature column										1 st
Stick									1 br	
Another funeral inventory	Kaolin								Vessels: 2 gypsum cylinder; 1 br double; 2 st; 7 silver; 1 steatite; 1 br strainer; 1 br head of spear; 5 fr of gold foil; 1 silver tortille's shell; 1 mozaics box for mirror	3 silver vessels
Notes									A model of hearth	
NoNo of graves	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Construction of the grave	Bp	Sh	Sh	Bp	Bp	Bp	Bp	Sh	Sh	Sh
Depth of the grave (cm)	70	175	115	115	75	90	95	125	90	125
Dimensions	70x50	185x100	170x80	134x85	90x75	80x65	80x50	180x60	155x60	235x70
Safety	?	+	+	+	?	?	?	-	-	-
Position of the buried	Abs	R	Centph	L	R	Abs	Abs	Sct	Sct	R
Orientation of the head of buried		?	Abs	Wwn	Nnw			Nnw	Nnw	W
Sex of buried		M		F	?			F	?	M
Age at death (years) of buried		25-30		35-40	?			25-30	?	35-40
Ceramic vessels		4	2	2				2		4
Beads										2 st
Axes			1 br							
Arrow heads			1 flint							
Statuettes									1 fr of fem terracotta	
Another funeral inventory			1 br signal trumpet							
Notes					A skull is absent					
NoNo of graves	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Bp	Sh	Sh	Sh	Sh
Depth of the grave (cm)	130	135	120	100	120	75	150	180	170	165
Dimensions	180x80	185x70	140x70	195x70	190x80	130x95	240x120	190x70	220x90	165x80
Safety	-	-	+	-	-	?	-	-	-	-
Position of the buried	R	Sct	R	R	Sct	Abs	L	Abs	Sct	R
Orientation of the head of buried	Nnw	W	Nnw	Nnw	N		N		Nne	N
Sex of buried	F	M	M	M	M		F		M	F
Age at death (years) of buried	18-20	25-30	40	40-50	35-40		30-35		30-35	30-35
Ceramic vessels	3	1	3	6	2		2	5	2	5
Beads	2 st cylinder						1 st biconical			2 st

NoNo of graves	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090
Another funeral inventory									1 st vessel	
Notes							Dog's teeth			
NoNo of graves	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Bp	Bp	P With Bp
Depth of the grave (cm)	105	150	150	125	100	115	100	50	50	100
Dimensions	205x80	230x80	215x100	220x100	205x100	205x80	240x80	90x75	75x60	235x120
Safety	-	-	-	-	-	-	?	?	?	-
Position of the buried	Sct	Sct	Sct	Centph	Centph?	Sct	Abs	Abs	Abs	Sct
Orientation of the head of buried	Nnw	Nnw	Nnw	Abs	Abs	Nnw				Nnw
Sex of buried	F	?	M			M				Ch
Age at death (years) of buried	35-40	Ad	40-45			20-25				10-11
Ceramic vessels	1	4	3		2	1	4			1
Another funeral inventory					Kaolin; 1 fr of st staff					
Notes										In the north of P – Bp D 60 h 25
NoNo of graves	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110
Construction of the grave	Bp	Bp	Sh	Sh	Bp	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	80	75	120	100	55	150	100	140	160	120
Dimensions	D 75	D 95	130x80	220x90	65x60	230x100	250x90	200x80	240x80	270x80
Safety	?	?	+	-	?	-	-	-	-	-
Position of the buried	Abs	Abs	R	Sct	Abs	Abs	Sct	Abs	Sct	Sct
Orientation of the head of buried			Nnw	Nnw			Ees		Wwn	Nne
Sex of buried			F	?			F		F	M
Age at death (years) of buried			20-25	Ad			25-30		30-35	20-25
Ceramic vessels			2			2	1	4	4	4
Arrow heads										6 flint
Another funeral inventory										kaolin
NoNo of graves	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120
Construction of the grave	Sh	Bp	Bp	Bp	Sh	Sh	Sh	Bp	Bp	Sh
Depth of the grave (cm)	150	90	75	75	140	155	135	65	70	90
Dimensions	260x110	80x65	70x55	80x70	220x100	220x80	195x65	80x55	70x60	210x90
Safety	-	?	?	?	-	-	-	?	?	-
Position of the buried	Sct	Abs	Abs	Abs	Sct	R	Sct	Abs	Abs	Sct
Orientation of the head of buried	Nw				Nnw	Nw	Nnw			Nw
Sex of buried	?				M	M	M			?
Age at death (years) of buried	Ad				25-30	25-30	25-30			Ad
Ceramic vessels	5				2	2				1
Beads	1 st				2 st					1 st
Hair-pins					2 silver (one with a head like a lion)					
NoNo of graves	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130
Construction of the grave	Bp	Sh?	Sh	Bp	Bp	Sh	Bp	Sh	Sh	Sh?
Depth of the grave (cm)	35	105	100	90	80	140	55	100	140	120
Dimensions	75x60	?	210x90	D 110	90x75	260x110	90x75	215x100	205x110	?
Safety	?	-	+	?	?	-	?	-	-	-
Position of the buried	Abs	Sct	Double R?Sct	Abs	Abs	Sct	Abs	Sct	Abs	Abs
Orientation of the head of buried		?	Nnw			Nnw		Nnw		
Sex of buried		F	M/F			F		M		
Age at death (years) of buried		25-30	30-35/ 20-25			25-30		Ad		
Ceramic vessels		2	3			3		8	3	1
Beads						1 st		1 st		

NoNo of graves	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140
Construction of the grave	Sh	Bp	Bp	Bp	Sh	Sh?	Sh	Bp	Sh	Sh
Depth of the grave (cm)	100	35	35	70	90	95	100	50	130	110
Dimensions	160x80	90x80	75x70	80x65	170x100	?	280x100	D 60	220x90	210x85
Safety	-	?	?	?	-	-	-	?	?	-
Position of the buried	Sct	Abs	Abs	Abs	Sct	Sct	Abs	Abs	Sct	Sct
Orientation of the head of buried	N				N	?			Nw	N
Sex of buried	F				F	M			?	?
Age at death (years) of buried	30-35				20-25	35-40			Ad	Ad
Ceramic vessels	3					1	1		3	2
Another funeral inventory	1 st vessel									
NoNo of graves	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150
Construction of the grave	Sh	Sh	Bp	Sh	Bp	Sh	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	115	120	55	110	80	110	135	125	140	120
Dimensions	220x90	230x90	?	205x100	75x60	215x85	?	180x80	240x90	250x80
Safety	-	-	?	-	?	-	-	-	-	-
Position of the buried	Sct	Centph?	Abs	Sct	Abs	Abs	Sct	R	Abs	Abs
Orientation of the head of buried	Nnw	Abs		N			?	Nnw		
Sex of buried	?			?			?	M		
Age at death (years) of buried	Ad			Ad			?	30-35		
Ceramic vessels	2	3		2		2		4	2	1
Arrow heads		2 flint								
Another funeral inventory		1 silver triumph								kaolin
NoNo of graves	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Bp	Bp	Bp
Depth of the grave (cm)	150	120	110	80	115	100	140	90	80	70
Dimensions	215x85	260x100	165x75	100x45	230x100	280x100	280x100	70x55	80x55	55x45
Safety	-	-	-	-	-	-	-	?	?	?
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Abs	Abs	Abs	Abs
Orientation of the head of buried	Nw	Nnw	Nnw	N	Nnw	Nw				
Sex of buried	?	?	?	?	M	?				
Age at death (years) of buried	Ad	Ad	Ad	Ad	25-30	Ad				
Ceramic vessels	2	2	2	3	3	4	1			
Beads	1 st biconical			1 st biconical						
Hair-pins				1 bone						
Another funeral inventory					kaolin					
NoNo of graves	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170
Construction of the grave	Bp	Sh	Bp	Sh	Bp	Sh	Sh	Sh	Sh	Bp
Depth of the grave (cm)	95	110	70	100	80	135	150	120	120	80
Dimensions	75x60	240x100	60x55	240x100	85x65	290x120	295x110	230x85	210x110	D 50
Safety	?	-	?	-	?	-	-	-	-	?
Position of the buried	Abs	Sct	Abs	Sct	Abs	Sct	Abs	Centph	Sct	Abs
Orientation of the head of buried		N		N		N		Abs	Nnw	
Sex of buried		M		F		?			?	
Age at death (years) of buried		20-25		20-25		?			Ad	
Ceramic vessels		3		5		12	2	4	3	
Another funeral inventory		kaolin; 1 br spiral						3 semy- fabrics for jewelry; 1 steatite shoe model		
NoNo of graves	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180
Construction of the grave	Bp/Sh	Sh	Sepult	Sh	Sh	Sh	Bp	Sh	Sh	Sh
Depth of the grave (cm)	90	130	115	90	140	85	?	120	90	160
Dimensions	95x70	260x90	290x195	210x70	?	?	?	?	?	?
Safety	+	-	-	-	-	-	?	-	-	-

NoNo of graves	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180
Position of the buried	Double B/Sct	Abs	Sct	Abs	Abs	Sct	Abs	Abs	Sct	Sct
Orientation of the head of buried	Nne		N			Wwn			N	Nnw
Sex of buried	M/M		?			?			?	F
Age at death (years) of buried	Juv/25-30		?			?			12-15	30-35
Ceramic vessels		1	5						2	6
Notes			A hearth							
NoNo of graves	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh?	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	120	100	130	115	140	80	90	90	110	105
Dimensions	225x110	175x70	225x80	210x90	210x85	?	?	175x80	160x80	290x110
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Abs	Sct	Sct	Sct	Abs	Sct	Sct	Sct	Sct
Orientation of the head of buried	W		Nnw	Nw	Nw		?	N	W	Nw
Sex of buried	?		F	M	F		?	M	F	M
Age at death (years) of buried	Ad		40-45	25-30	30-35		?	35-40	25-30	30-35
Ceramic vessels	7	1	9	1	1	1			4	2
Beads	1 st		2 st	1 st				2 carnelian	1 st	1 st
Seals				1 faience						
Another funeral inventory	1 fr of gold foil		1 br earring?		kaolin					
NoNo of graves	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200
Construction of the grave	Sh	Bp	Bp	Bp	Sh	Sh	Sh	Bp	Sh	Sh
Depth of the grave (cm)	95	60	75	85	115	125	110	60	115	105
Dimensions	275x80	D 50	D 50	D 50	250x100	220x110	240x90	85x60	260x100	230x100
Safety	-	?	?	?	-	-	-	?	-	-
Position of the buried	Sct	Abs	Abs	Abs	Sct	Sct	Sct	Abs	Abs	Sct
Orientation of the head of buried	Nnw				Nnw	Nnw	N			N
Sex of buried	M				F	M	F			?
Age at death (years) of buried	40-45				Ad	35-40	30-35			?
Ceramic vessels	1				1	3	1		4	3
Beads						1 st	1 st			
Cosmetic flacons									1 ceramic	
Another funeral inventory							1 st vessel			
NoNo of graves	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210
Construction of the grave	Sh	Sh	Sh?	Sh?	Sh	Sh	Sh	Sh?	Sh	Sh
Depth of the grave (cm)	110	90	95	90	115	145	145	110	100	110
Dimensions	250x100	235x100	?	?	180x90	190x100	240x120	?	180x80	235x100
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Abs	Sct	Sct	Abs	Abs	Sct	R	Sct	Abs	Abs
Orientation of the head of buried		Nnw	?			Nnw	Nw	?		
Sex of buried		?	?			?	M	?		
Age at death (years) of buried		Ad	Ad			Ad	35-40	12-13		
Ceramic vessels		6		3		2	8	1	2	2
Beads							1 st			
Seals		1 faience								
Cosmetic flacons					1 ceramic					
Arrow heads							2 flint			
NoNo of graves	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220
Construction of the grave	Bp	Sepult	Sepult	Sh?	Sh?	Sh	Sh	Sh	Sh	Sh?
Depth of the grave (cm)	65	125	120	115	80	120	110	140	155	60
Dimensions	105x70	345x245	180x270	?	?	210x100	220x90	230x135	315x115	?
Safety	?	-	-	-	-	-	+	+	-	-
Position of the buried	Abs	Sct	Sct	Abs	Sct	Sct	R	Centph	Sct	Sct
Orientation of the head of buried		n	N		?	Nnw	N	Abs	N	?

NoNo of graves	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220
Sex of buried		?	?		F	M	F		F	?
Age at death (years) of buried		Ad	Ad		35-40	35-40	25-30		25-30	?
Ceramic vessels		8	1	2	1	2	6	6	3	4
Seals					1 br					
Hair-pins							1 br, 1 bone			
Applicator							1 br			
Cosmetic flacons							1 br			
Arrow heads			2 flint							
Seals									1 faience	
Another funeral inventory							1 br earrings	kaolin		
Notes			A hearth, a shaft in the west room							
NoNo of graves	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230
Construction of the grave	Sh?	Sh	Sh	Sh	Sh	Bp	Sh?	Cist	Sh	Cist
Depth of the grave (cm)	110	130	100	100	140	60	90	105	115	130
Dimensions	?	250x110	260x110	130x100	310x120	85x60	?	140x85	220x80	120x100
Safety	-	-	-	+	-	-	-	+	-	-
Position of the buried	R	Abs	Abs	R	Sct	Abs	Abs	R	Abs	Sct
Orientation of the head of buried	?			Wwn	N			Nw		N
Sex of buried	M			M	M			F		?
Age at death (years) of buried	30-35			30-35	25-30			25-30		?
Ceramic vessels	2	2	3		3		2	7	2	4
Beads			1 st biconical					2 st biconical		
Seals								1 br		
Hair-pins								2 br		
Mirrors								1 br		
Arrow heads					1 flint					
Another funeral inventory		1 gold chain					kaolin	1 ivory comb; 1 sil- ver earring		
NoNo of graves	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240
Construction of the grave	Bp	Sh?	Sh	Sh	Bp	Sh	Cist	Sh	Sh	Sepult
Depth of the grave (cm)	80	130	90	110	90	125	80	120	120	115
Dimensions	95x55	?	145x75	240x115	100x75	215x75	170x90	240x100	245x90	235x315
Safety	?	-	+	-	?	-	-	-	-	-
Position of the buried	Abs	Abs	R	Abs	Abs	Sct	Double Sct/Sct	Sct	Sct	Sct
Orientation of the head of buried			N			Nw	N	Nw	Nw	N
Sex of buried			F			?	M/F	F	?	?
Age at death (years) of buried			12-13			?	35-40/18-20	20-25	Ad	?
Ceramic vessels		1	3	2	3	7	5	1	4	9
Statuettes			1 fem terracotta							
Miniature column									1 st fr	
Another funeral inventory										1 fr of silver foil
Notes										Cist in a large pit
NoNo of graves	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250
Construction of the grave	Sh	Sh	Sh	Sepult	?	Sh	?	Sh	Sh	Sh
Depth of the grave (cm)	185	110	105	95	110	120	130	115	140	110
Dimensions	?	270x110	305x110	360x260	?	285x105	?	205x80	190x95	185x110
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	R	Sct	Abs	Sct	Abs	Sct	Sct	Sct

NoNo of graves	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250
Orientation of the head of buried	?	Nw	Nnw	Nnw		N		N	Wwn	Wwn
Sex of buried	?	M	M	?		F		?	?	?
Age at death (years) of buried	Ad	35-40	Ad	?		Ad		Ad	Ad	Ad
Ceramic vessels	1	4	4	6	1	1	2	1	3	1
Beads				1 gypsum		1 st				
Another funeral inventory				1 br earring; 1 br ring				kaolin		
Notes				A hearth Sheep bones						
NoNo of graves	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260
Construction of the grave	Sh	Sh?	Pit	Sh	Sh?	Sh	Sh	Sh	Cist	Sh?
Depth of the grave (cm)	140	140	95	60	125	60	80	75	95	105
Dimensions	220x85	?	260x210	150x60	?	140x60	240x75	205x80	175x100	?
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	R	R	Sct	Sct
Orientation of the head of buried	N	?	N	N	?	N	n	N	N	?
Sex of buried	?	M	?	?	?	F	F	F	?	?
Age at death (years) of buried	?	12-15	Ad	?	?	30-35	40-45	40-45	Ad	Ad
Ceramic vessels	3	3	5	1	3	3	1	3	5	3
Beads	1 st		1 st biconical			1 kaolin		1 steatite biconical		
Mirrors								1 br		
Another funeral inventory	kaolin							1 br knife; 1 br earring	kaolin	
Notes			Cist in the large pit							
NoNo of graves	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh?	Sh?	Fp	Fp
Depth of the grave (cm)	?	105	110	95	110	100	90	40	60	60
Dimensions	?	210x80	220x80	180x80	240x90	180x70	?	?	D 0,25	D 0,25
Safety	-	-	-	-	-	-	-	-	?	?
Position of the buried	Sct	Sct	Sct	R	R	Sct	Sct	Centph?	Abs	Abs
Orientation of the head of buried	?	Nnw	Nnw	N	N	Nnw	?	Abs		
Sex of buried	M	M	F	M	F	?	?			
Age at death (years) of buried	30-35	40-45	25-30	40-45	30-35	20-25	Ad			
Ceramic vessels	6		2	1	5	2	1	3		
Beads					1 st			1 gypsum		
Mirrors					1 br					
Cosmetic flacons					1 ceramic					
Sticks					1 br					
Another funeral inventory		kaolin	kaolin	kaolin				1 faience fr		
Notes							In the sand	In the sand		
NoNo of graves	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280
Construction of the grave	Fp	Sh?	Sh?	Sh?	Sh	Sh?	Fp	Bp	Sh?	Sh
Depth of the grave (cm)	80	120	90	60	95	90	65	65	120	110
Dimensions	D 85	?	?	?	180x55	?	D 70	90x65	?	250x150
Safety	?	-	-	-	+	-	?	?	-	+
Position of the buried	Abs	Abs	Sct	Sct	Centph	Sct	Abs	Abs	Sct	L
Orientation of the head of buried			?	?	Abs	?			?	N
Sex of buried			?	?		?			?	F
Age at death (years) of buried			Ad	Ad		Ad			Ad	30-35
Ceramic vessels		2	1	1	5	3				6
Seals										1 br
Mirrors										1 br
Another funeral inventory										2 br spiral earrings;

NoNo of graves	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280
Notes		In the sand	In the sand	In the sand		In the sand			In the sand	
NoNo of graves	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290
Construction of the grave	Sh?	Sh	Bp	Bp	Bp	Bp	Bp	Bp	Sh	Sh
Depth of the grave (cm)	85	150	100	45	45	35	103	85	80	100
Dimensions	?	190x100	110x260	65x50	D 70	72x65	74x46	65x45	140x75	150x100
Safety	-	-	+	?	?	?	?	?	-	+
Position of the buried	Sct	R	Supine	Abs	Abs	Abs	Abs	Abs	Sct	R
Orientation of the head of buried	?	W	W						N	Wwn
Sex of buried	F	M	M						M	F
Age at death (years) of buried	30-35	25-30	15-16						35-40	35-40
Ceramic vessels	1	6							4	4
Beads										2 st biconical; 1 st
Mirrors										1 br
Another funeral inventory	1 br fr D 20									
Notes	In the sand									
NoNo of graves	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300
Construction of the grave	Sh	Bp	Sh	Sh	Sh	Sh	Sh	?	Sh	Sh
Depth of the grave (cm)	150	85	130	120	160	120	120	140	135	110
Dimensions	?	100x50	?	?	?	?	310x120	?	?	?
Safety	-	?	-	-	-	-	-	-	-	-
Position of the buried	Sct	Abs	Sct	Sct	Sct	Sct	Sct	Sct	Abs	Sct
Orientation of the head of buried	?		?	?	?	?	Nnw	?		?
Sex of buried	F	?	?	?	?	?	?	?		M
Age at death (years) of buried	Ad		Ad	Ad	?	Ad	Ad	Ad		35-40
Ceramic vessels	7		1	9	2	1	6	2	1	1
Beads			1 biconical			1 st biconical				1 st biconical
Seals										1 br
Applicator										1 br
Cosmetic spades										1 br
Cosmetic flacons										1 br
Another funeral inventory					Kaolin	1 faience turtle			Kaolin	
NoNo of graves	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310
Construction of the grave	Sh	Sh	Sepult	Bp	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	120	115	115	80	100	105	90	105	140	120
Dimensions	?	?	140x150	70x80	?	?	?	?	?	?
Safety	-	-	-	+	-	-	-	-	-	-
Position of the buried	Abs	Abs	Sct	Sct	Abs	Abs	Abs	Sct	Abs	Sct
Orientation of the head of buried			N	N				?		?
Sex of buried			?	F				?		?
Age at death (years) of buried			?	11				?		Ad
Ceramic vessels	1	3	1		3	1	5	5	5	3
Beads			1 st							
Miniature column						1 st fr				
Another funeral inventory			Kaolin	Ash			Kaolin	Kaolin		
Notes			A hearth, a table							
NoNo of graves	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320
Construction of the grave	Sh	Sh	Bp	Sh	Bp	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	120	140	60	110	?	90	120	110	130	80
Dimensions	180x60	?	80x55	180x70	?	?	?	?	210x130	?
Safety	-	-	?	+	?	-	-	-	+	-
Position of the buried	Sct	Sct	R	R	Abs	Sct	Sct	Sct	R	Sct
Orientation of the head of buried	N	?	S	Nw		?	?	?	N	?
Sex of buried	F	?	?	F		?	F	?	F	?

NoNo of graves	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320
Age at death (years) of buried	30-35	?	17-18	25-30		Ad	30-35	Ad	30-35	Ad
Ceramic vessels	4	2		5		2	2	1	1	
Beads	2 st; 1 gold			2 st biconical			1 st			
Seals	1 silver									
Cosmetic spades	1 br									
Cosmetic flacons	1 br									
Another funeral inventory	1 br vessel									
NoNo of graves	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330
Construction of the grave	Sh	Bp	Bp	Sh	Sh	Sh	Sh	Sh	Bp (double)	Sh
Depth of the grave (cm)	130	60	?	210	180	190	145	170	85	140
Dimensions	?	85x50	?	205x100	190x100	240x110	235x110	255x130	218x100 D95/D90	220x100
Safety	-	?	?	-	-	-	-	-	-	-
Position of the buried	Centph	Abs	?	Sct	Sct	Sct	Sct	Sct	Abs	Sct
Orientation of the head of buried	Abs		?	N	N	N	N	Nne		W
Sex of buried			?	?	?	?	?	M		?
Age at death (years) of buried			Ad	?	?	?	?	25-30		?
Ceramic vessels	5	1		2	4	2		3	2/2	2
Beads								1		
Seals								1 br		
Another funeral inventory							Kaolin			
NoNo of graves	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sepult	Sh	P	Bp
Depth of the grave (cm)	90	110	105	160	125	120	105	145	15	50
Dimensions	260x130	165x95	200x75	210x95	220x110	180x100	215x190	180x80	90x60	70x60
Safety	-	+	-	-	+	-	-	-	+	?
Position of the buried	Sct	Centph	Sct	Sct	Double R/R	Sct	Sct	Sct	R	Abs
Orientation of the head of buried	W	Abs	E	Wwn	Wwn/ Nnw	Wwn	Nw	W	Nne	
Sex of buried	F		?	?	M/M	?	?	?	?	
Age at death (years) of buried	25-30		?	?	60-70/ 20-25	?	?	?	?	
Ceramic vessels	5	4	1	5	3	4	5	3	1	
Beads						1 carnelian	2 steatite biconical; many gypsum			
Seals							1 br			
Hair pins							1 br with head like goat			
Another funeral inventory		Kaolin			Kaolin		1 br vessel; fr of silver	Kaolin		
Notes					1 skeleton in the shaft; the second-on the dromos					
NoNo of graves	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350
Construction of the grave	Sh	Cist	Sh	Sh	Sh	Sh	Sh	Sh	P	P
Depth of the grave (cm)	115	55	100	140	105	100	115	130	20	60
Dimensions	245x100	140x85	190x100	245x120	180x95	210x90	170x95	200x100	152x70	240x120
Safety	-	+	-	-	-	-	-	-	+	-
Position of the buried	Sct	R	Sct	Sct	Sct	Sct	Sct	Sct	R	Triple R/ Sct/Sct
Orientation of the head of buried	Nw	Nnw	Wwn	Nnw	Nw	W	Nw	Nw	Nnw	Nw
Sex of buried	?	M	?	?	F	?	M	?	F	F/FCh
Age at death (years) of buried	?	25	?	?	12-14	?	12	?	16	30-35/ 50- 60/5-6

NoNo of graves	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350
Ceramic vessels	5	5	3	8	4	2	3	1	2	8
Beads				18 gypsum;						
Seals				1 br						
Hair-pins				1 bone						
Another funeral inventory							Kaolin			
NoNo of graves	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360
Construction of the grave	P	Sh?	Sh?	Bp	Bp	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	20	95	105	95	106	130	130	130	140	110
Dimensions	145x75	210x80	140x70	85x60	85x55	220x90	205x90	225x110	245x110	190x85
Safety	+	-	-	?	?	-	-	-	-	-
Position of the buried	R	Double Sct/Sct	Sct	"Head down- legs up"	Abs	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	N	Nnw	?	Down		Wwn	Nne	Nw	Nne	Nw
Sex of buried	?	M/F		F		?	F	M	?	?
Age at death (years) of buried	?	Ad/Ad		45-50		?	60-70	12-14	?	?
Ceramic vessels	1	3				2	2	1		3
Beads			3 steatite; 1 white st			1 st biconical			1 st biconical; 1 shell	1 steatite biconical
Seals			1 faience				1 fiance		1 fiance	
Another funeral inventory			1 br fr							1 gypsum vessel
Notes				The skeleton situated 15 cm up the ash lay						
NoNo of graves	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370
Construction of the grave	Sh	Sh?	Sh	Sh	Sh (huge)	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	95	115	140	160	200	170	105	155	90	105
Dimensions	205x120	210x140	170x85	235x110	330x180	270x110	165x80	270x155	205x100	190x90
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Wwn	?	N	N	N	N	Nw	W	Nnw	Nnw
Sex of buried	F	F	F	?	M	?	M	F	F	?
Age at death (years) of buried	50-60	13-14	8	?	35-40	?	17-18	30-35	40-50	?
Ceramic vessels	4	4	2	3	3	2	1	4	3	3
Arrow heads					1 flint					
Miniature column					1 st fr					
Another funeral inventory					1 fr of st staff	1 silver earring; 1 br fr				
NoNo of graves	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380
Construction of the grave	Sh	Sh	Sh	Bp	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	115	145	105	30	135	85	105	140	120	85
Dimensions	180x70	280x120	205x95	107x80	260x165	170x85	200x100	245x110	200x100	145x50
Safety	-	-	+	?	-	-	-	-	-	+
Position of the buried	Sct	Sct	R	Abs	Sct	Sct	Sct	Sct	Sct	Supine
Orientation of the head of buried	Nnw	Nne	N		Wwn	Nnw	Nne	Wwn	Wwn	Nnw
Sex of buried	?	?	F		M	M	?	F	M	M
Age at death (years) of buried	?	?	40-50		18-20	25-30	?	25-30	17	30-35
Ceramic vessels	3	3	3		3	2	3	4	5	1
Beads			Many small gypsum		1 st biconical; 1 gypsum					
Seals			1 br							
Mirrors			2 br							
Cosmetic spades			1 br							

NoNo of graves	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380
Cosmetic flacons			1 br							
Arrow heads										1 br
Sticks			2 br							
Another funeral inventory			1 br vessel (a cap)					Kaolin		1 br mace head like a horse head; 1 br vessel; 1 br plate; 1 br knife; 1 br semi- cylindrical artefact; 1 br 4-toothed mace head; fr of linen
Notes										Fr of textile under the left leg, in which was br plate like a small scale
NoNo of graves	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sepult	Sh?	Sh
Depth of the grave (cm)	140	115	150	105	105	190	120	115	160	165
Dimensions	165x100	120x60	250x120	200x100	240x110	290x145	200x90	400x260	?	220x110
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	R	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Wwn	Nw	Wwn	Wwn	Nnw	Nnw	Nw	N	?	Nw
Sex of buried	?	F	M	F	M	F	F	?	?	?
Age at death (years) of buried	?	35-40	25-30	40-50	40-50	9	12-13	?	?	?
Ceramic vessels	4	2	1	1	2		4	9	6	3
Beads	1 gypsum biconical					1 st biconical	3 gypsum; 1 st			
Hair-pins							1 bone with engravings			
Sticks							2 br			
Another funeral inventory								1 fr of st staff		
NoNo of graves	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400
Construction of the grave	Sh	Sh?	Sh	Bp	Cist	Bp	Cist	Sh?	Sh	Cist
Depth of the grave (cm)	110	95	115	75	110	60	90	95	90	35
Dimensions	260x140	?	205x100	85x55	170x110	80x60	130x120	240x75	240x120	250x130
Safety	-	-	-	?	-	?	-	-	-	-
Position of the buried	Sct	Sct	Sct	Abs	Sct	Supine	Sct	Sct	Triple Sct/ Sct Sct	Sct
Orientation of the head of buried	Wwn	?	N		Nw	Sw	Sw	?	Nw	N
Sex of buried	F	?	6		?	F	?	?	F/M/M	?
Age at death (years) of buried	50-60	?			?	35-40	?	?	50-60/ 45 -50/16	?
Ceramic vessels	6	6		3	10			6	4	9
Beads								1 st biconical		
Hair-pins		1 bone						1 silver		
Statuettes										1 fr of gray clay

NoNo of graves	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400
Another funeral inventory	Kaolin; fr of br				1 fr of st staff; 1 fr of faience artefact					Small fr of br
Notes						The skeleton of the ash lay				
NoNo of graves	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Bp	Bp	Bp
Depth of the grave (cm)	115	155	135	140	140	95	155	60	75	70
Dimensions	210x70	220x70	305x100	180x80	260x100	180x80	195x80	116x70	80x70	80x60
Safety	-	-	-	-	-	+	-	?	?	?
Position of the buried	Sct	Sct	Sct	Sct	Sct	R	Sct	Abs	Abs	Sct
Orientation of the head of buried	Een	Nnw	Nnw	N	N	Wwn	Nnw			N
Sex of buried	?	M	?	?	?	F	M			?
Age at death (years) of buried	?	14-18	?	?	?	18-20	20-25			?
Ceramic vessels	5	3	1	2	5	3	4		1	2
Beads			1 st							
Seals										1 br
Arrow heads			1 flint							
Another funeral inventory					1 fr of st staff	1 br axe				
Notes										Human remains - 15 cm up the ash lay
NoNo of graves	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420
Construction of the grave	Sh	Sh	Bp	Sh	Sh	Sh?	Sh?	?	Sh	Sh
Depth of the grave (cm)	155	115	50	120	105	120	130	?	140	165
Dimensions	155x55	210x60	70x50	180x70	130x65	160x120	190x140	?	?	285x130
Safety	-	+	?	-	-	-	-	-	-	-
Position of the buried	Sct	Double R/Sct	Abs	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nne	Nne		Nnw	Nne	W	Sw	?	?	Nnw
Sex of buried	?	F/F		?	?	?	?	F	F	?
Age at death (years) of buried	?	25-30/50		?	?	?	?	18-20	20-25	?
Ceramic vessels	3	5		4	3	1	1	1	2	14
Beads		1 steatite biconical; 1 steatite								1 faience biconical; 2 lapis lazuli; 1 steatite; 1 faience; 1 chrystal; 1 agate;
Seals		1 silver								
Hair-pins		2 br								
Sticks										2 br
Another funeral inventory										Small fr of gold foil; 1 st fr
Notes					In the sand	In the sand				A double owen in the east wall
NoNo of graves	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430
Construction of the grave	Bp	Sh	Sh	Sh	Cist	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	80	115	120	135	35	90	165	115	130	100
Dimensions	90x50	210x100	200x90	220x105	154x110	220x100	240x150	205x100	180x90	215x100
Safety	?	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	R	Sct	Sct	Sct	Double Sct/Sct	Sct	Sct	Sct

NoNo of graves	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430
Orientation of the head of buried	W	Nw	Nw	Nnw	W	Nw	Nnw	Wwn	Nw	Wwn
Sex of buried	?	?	M	?	?	M	F/M	?	F	M
Age at death (years) of buried	?	?	35-40	?	?	35-40	30-35/ >60	?	35-40	25-30
Ceramic vessels	2	6	3	7	8	7	3	3	1	4
Beads						1 st; 1 st biconical				
Hair-pins						1 br				
Cosmetic flacons								1 st		
Statuettes							1 men terracotta			
Another funeral inventory		Kaolin; 1 white st fr	Kaolin				1 fr of st staff; 1 st fr		Kaolin	
NoNo of graves	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Bp	Sh	P	Sh	Cist
Depth of the grave (cm)	120	140	190	175	125	?	90	55	155	85
Dimensions	195x95	205x80	280x140	260x110	210x75	?	200x120	155x90	195x110	150x85
Safety	-	-	-	-	-	?	-	-	-	-
Position of the buried	R	Sct	Sct	Sct	Sct	Abs	Sct	4 persons		
Sct	Sct	Sct								
Orientation of the head of buried	Een	Ne	N	N	Nnw		Nnw	Wwn	Ne	N
Sex of buried	?	F	?	?	?		M	M/M/F/M	F	?
Age at death (years) of buried	?	30-35	?	?	?		14-16	40-50/ 8-9/7-8/ <6 month	45-50	?
Ceramic vessels	2	6	5	2	1		6	2	5	9
Beads			1 gypsum							1 st
Another funeral inventory		Kaolin							Kaolin	Kaolin; fr of lapis lazuli
NoNo of graves	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Bp	Sh	Sh	Sh	Sh
Depth of the grave (cm)	130	95	135	125	180	50	150	160	150	150
Dimensions	122x50	140x65	245x80	195x85	210x105	80x60	190x80	160x70	240x90	240x100
Safety	-	-	-	-	-	?	-	+	-	+
Position of the buried	Sct	Sct	Sct	Abs	R	Abs	Sct	L	Sct	R
Orientation of the head of buried	Nnw	N	N		N		Nnw	N	Nw	N
Sex of buried	?	?	?		F			?	?	F
Age at death (years) of buried	?	?	?		50			?	?	40-50
Ceramic vessels	2	2	3	2			6	4	3	7
Beads			1 st biconical							
Seals										1 fience
Applicator										1 br
Cosmetic flacons										1 faience
Sticks										1 br
Another funeral inventory					The skeleton in the dromos					
NoNo of graves	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460
Construction of the grave	Bp	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sepult
Depth of the grave (cm)	70	150	135	130	130	115	175	145	175	135
Dimensions	80x70	125x45	165x65	170x65	185x70	150x65	235x75	230x70	185x75	340x150
Safety	?	+	+	-	-	-	-	-	-	-
Position of the buried	Abs	R	R	Abs	Abs	Abs	Sct	Sct	Abs	Sct
Orientation of the head of buried		Nne	N				N	N		N
Sex of buried		F	M				F	F		?
Age at death (years) of buried		17	25-30				30-40	35-40		?
Ceramic vessels		3	2	2	5	1		6	6	12

NoNo of graves	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460
Arrow heads								4 flint		4flint
Another funeral inventory									Kaolin	1 br perforated tube L 38 cm d 0,8 in a large cer vessel; silver fr
Notes					1 double vessel					A table
NoNo of graves	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470
Construction of the grave	Sh	Sh	Sh	Cist	Cist	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	115	115	160	70	70	120	115	110	140	125
Dimensions	150x55	160x70	220x110	140x75	150x85	200x90	200x90	230x110	175x95	240x120
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	R	Sct	Sct	Sct	Double Sct/Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nw	N	Nnw	Nnw	Nnw	E	Nnw	Nw	Ne	Nnw
Sex of buried	M	F	?	M	F/M	?	?	?	?	?
Age at death (years) of buried	40-50	60-70	?	35-40	35-40/ 35-40	?	?	?	?	?
Ceramic vessels	1	3	2	6	22	2	1	3	4	5
Beads		1 steatite biconical								
Sticks					1 br					
Another funeral inventory		1 fr of faience		Kaolin	1 stone vessel					
NoNo of graves	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480
Construction of the grave	Sh	Sh	Sh	Sh	Cist	Sh	Sh	Sh	Bp	Cist
Depth of the grave (cm)	155	120	85	90	80	190	80	180	80	80
Dimensions	200x130	200x110-	220x110	145x70	160x100	280x140	220x95	210x105	D 105	130x70
Safety	-	-	-	+	-	-	-	-	?	-
Position of the buried	Sct	Sct	Sct	Centph	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	Nnw	Wwn	Wwn	Abs	Nnw	Nnw	Nnw	Nnw	?	Nnw
Sex of buried	?	F	?		?	?	?	?	M	?
Age at death (years) of buried	?	35-40	?		?	?	?	?	18-20	?
Ceramic vessels	4	4	4	8	5	6	4	4	1	
Beads				1 steatite biconical; 1 christal; 1 lapis lazuli; 1 onyx;						
Seals				1 br						
Mirrors				1 br						
Cosmetic spades				2 br						
Cosmetic flacons				1 br						
Applicator				1 br						
Statuettes	1 fem terracotta			1 clay human "model"						
Sticks				1 br						
Another funeral inventory				1 br earring; 1 br vessel (a cap)					A fr of marbled limestone	
Notes				a piece of clay in the 10 cm from the "model"	The walls had a clay salvation					
NoNo of graves	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490
Construction of the grave	Sh	Sh	Sh	Sh	Sepult	Sh?	Sh	Sh	Sh	Cist

NoNo of graves	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490
Arrow heads								4 flint		4flint
Depth of the grave (cm)	120	115	105	130	70	85	130	105	115	75
Dimensions	225x100	200x80	200x100	240x100	200x170	?	200x100	180x80	140x70	165x120
Safety	-	-	-	-	-	-	-	+	-	-
Position of the buried	Sct	Sct	R	Sct	Sct	Sct	Sct	R	Sct	Sct
Orientation of the head of buried	Nnw	Wwn	Nnw	Nw	Nw	?	Nnw	Nnw	Nw	Nnw
Sex of buried	?	?	?	F	?	?	?	F	?	F
Age at death (years) of buried	?	?	?	30-35	?	?	?	25-30	?	30-35
Ceramic vessels	4	3	3	4	9	2	2	3	3	
Beads	1 steatite biconical							Some faience; 7 carnelian		3 steatite biconical; 1 st biconical
Seals										1 faience
Hair-pins								1 bone; 1 br		
Mirrors								1 br		
Cosmetic flacons										1 br
Cosmetic spades										1 br
Bangeles										2 br
Applicator										1 br
Miniature column					1 st					
Another funeral inventory					1 st staff fragment of ? artefact					
NoNo of graves	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500
Construction of the grave	Sh?	Sh	Sh?	Sh	Sh	Sh?	Sh	Sh	Sh	Cist
Depth of the grave (cm)	135	160	?	145	95	130	135	145	110	105
Dimensions	?	240x110	270x95	205x85	180x80	?	135x100	230x110	210x80	170x120
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	?	Nnw	N	Nnw	Nnw	?	Nnw	Nnw	Nnw	N
Sex of buried	F	?	?	?	?	?	?	?	?	?
Age at death (years) of buried	16	?	?	?	?	?	?	?	?	?
Ceramic vessels	3	4		2	2	2	2	2	3	2
Beads		2 steatite biconical								
Another funeral inventory							Kaolin	Kaolin		
Notes	In the sand		In the sand							
NoNo of graves	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510
Construction of the grave	Sh	Sh	Sh	Sh?	Sh?	Sh?	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	170	175	160	160	140	145	140	170	90	75
Dimensions	190x75	205x75	140x50	?	?	?	?	250x80	120x60	135x50
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Abs	Abs	Sct	Sct	Sct	Sct	Sct	R	Sct
Orientation of the head of buried	N			?	?	?	?	N	Nw	Nw
Sex of buried	?			?	F	?	?	?	M	?
Age at death (years) of buried	?			?	15	?	?	?	40-50	?
Ceramic vessels	5	3	4	4		2	1	3	2	2
Hair-pins								1 bone		
Arrow heads		1 flint								
Notes				In the sand	In the sand	In the sand	In the sand			
NoNo of graves	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520
Construction of the grave	Sh	Sh	Sh	Sh	Sh?	Sh?	Sh?	Sh?	Sh	Sh
Depth of the grave (cm)	170	95	120	115	135	140	105	115	100	105
Dimensions	240x100	160x50	155x70	160x80	?	?	?	?	160x75	190x100
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Abs	Abs	Sct	Sct	Sct	Sct	Sct	Sct

NoNo of graves	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520
Orientation of the head of buried	Nnw	Nnw			?	?	?	?	N	N
Sex of buried	?	?			?	?	?	?	?	?
Age at death (years) of buried	?	?			?	?	?	?	?	?
Ceramic vessels	8	2	4	4	2	2	5	2	3	2
Beads			1 steatite biconical	1 st			1 st biconical			
Hair-pins							1 bone with engravings			
Cosmetic flacons	1 steatite									
Applicators	1 br									
Spade	1 br									
Another funeral inventory	1 faience trump; 1 br vessel (a cap)									
Notes	Bones of do- mestic animal					In the sand	In the sand	In the sand		
NoNo of graves	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530
Construction of the grave	Sh?	P?	Sh	Sh?	Sh?	Sh?	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	100	70	185	165	115	80	115	140	130	130
Dimensions	?	120x60	150x60	?	?	?	?	200x70	175x60	220x80
Safety	-	-	+	-	+	-	-	-	-	-
Position of the buried	Sct	Abs	R	Sct	L	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	?		N	?	N	?	?	Nw	Nw	Wwn
Sex of buried	?		F	F	M	M	?	?	?	?
Age at death (years) of buried	?		50-60	50-60	40-50	40-50	?	?	?	?
Ceramic vessels		2			1	4	2	3	3	5
Beads							1 gold			
Seals								1 br		
Notes	In the sand	In the sand	In the sand		In the sand					In the sand
NoNo of graves	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	110	120	125	125	130	145	140	110	135	155
Dimensions	240x100	260x90	160x60	180x75	220x90	280x140	190x90	205x70	210x70	250x65
Safety	-	-	-	-	-	-	+	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Centph	Sct	Sct	R
Orientation of the head of buried	Nnw	W	Wwn	N	Nw	Nw	Abs	Nnw	N	Nw
Sex of buried	?	?	?	?	?	?		?	?	?
Age at death (years) of buried	?	?	?	?	?	?		?	?	?
Ceramic vessels	2	2	2	1	2	4	3	3	3	3
Another funeral inventory	1 st vessel					1 shell				
NoNo of graves	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550
Construction of the grave	Sh in Bp	Sh	Sh	P	Sh in Bp	Sh	Bp	Sh	Sh	Sh
Depth of the grave (cm)	125	155	95	65	80	105	50	145	95	125
Dimensions	110x70	220x90	185x110	160x90	90x55	150x60	80x65	160x75	205x70	185x80
Safety	+	-	-	+	+	-	?	-	-	-
Position of the buried	R	Sct	Sct	R	R	Sct	Abs	Sct	Sct	Sct
Orientation of the head of buried	Wwn	Nnw	Nw	N	Nne	Nw		N	Nnw	Nnw
Sex of buried	M	?	?	?	Ch	?		?	?	M
Age at death (years) of buried	9	?	?	?	?	?		?	?	16-17
Ceramic vessels	2	2	2	4	2	5		2	2	2
Beads				1 st		1 steatite biconical				
Seals										1 st cylinder with Akkadien inscription

NoNo of graves	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550
Cosmatic flacons				1 gypsum						
Applicators				1 br						
Sticks										
Another funeral inventory			Kaolin	1 br vessel; 1 br spade-like object				1 br fr		
NoNo of graves	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560
Construction of the grave	Sh	Sh	Sh?	Sh	Bp	Sh?	Sh?	Bp	Sh	Sh
Depth of the grave (cm)	145	155	120	105	60	120	160	85	140	145
Dimensions	200x90	205x80	?	195x80	95x75	?	?	70x65	230x100	250x110
Safety	-	-	-	-	?	-	-	?	-	-
Position of the buried	Sct	Sct	Sct	Sct	Abs	Sct	Sct	Abs	Sct	Sct
Orientation of the head of buried	Nnw	N	?	n		?	?		N	W
Sex of buried	?	?	?	?		?	?		?	?
Age at death (years) of buried	?	?	?	?		?	?		?	?
Ceramic vessels	2		3	2		2	1		4	4
Hair-pins										1 bone
Notes			In the sand			In the sand				On the 90th depth – a burned niche 22x19
NoNo of graves	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570
Construction of the grave	Sh	Sh?	Sh	Sh	Sh	Sh?	Sh	Sh	Sh?	Sh
Depth of the grave (cm)	165	130	135	155	135	125	140	140	130	145
Dimensions	260x95	?	205x80	220x120	170x70	?	220x80	165x80	?	240x90
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Centph
Orientation of the head of buried	Nw	?	N	Nnw	N	?	N	N	?	Abs
Sex of buried	?	?	?	?	?	?	?	?	?	
Age at death (years) of buried	?	?	?	?	?	?	?	?	?	
Ceramic vessels	1	1	4	2	3		3	2	2	4
Beads	2 st biconical; 6 gypsum; 1 st									
Another funeral inventory								1 br ring		
NoNo of graves	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580
Construction of the grave	Sh	Sh?	Sh?	Sh	Sh?	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	160	145	135	165	145	125	130	120	160	175
Dimensions	245x90	?	?	235x90	?	180x85	235x90	165x100	250x100	180x65
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Sct	Abs	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	N	?	?	Nnw		Nnw	N	Nnw	N	Nnw
Sex of buried	?	?	?	?		?	?	?	?	?
Age at death (years) of buried	?	?	?	?		?	?	?	?	?
Ceramic vessels	2	2	4	3	1	1	5	2		4
Beads							1 gypsum biconical; 2 gypsum		1 gold	
Miniature column									1 st	
Sticks							1 br			
Another funeral inventory			1 gypsum mace head						1 fr of st staff	
Notes			In the sand		In the sand					
NoNo of graves	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Bp	Bp	Sh
Depth of the grave (cm)	160	140	160	120	150	155	165	85	60	145

NoNo of graves	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620
Cosmetic falcons		1 ceramic								
Applicators		1 br								
Another funeral inventory			Kaolin				1 st staff L 92	Kaolin		
NoNo of graves	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630
Construction of the grave	Sh	Sh	Sh	Sh	Sh?	Sh?	Sh?	Sh	Sh	Sh
Depth of the grave (cm)	140	120	145	170	130	120	120	140	125	130
Dimensions	220x90	130x40	200x80	210x90	?	?	?	160x55	120x80	180x75
Safety	-	-	+	+	-	-	-	+	+	+
Position of the buried	Sct	Sct	R	R	Sct	Sct	Sct	Prone	Centph	Centph
Orientation of the head of buried	Nw	N	N	Nnw	?	?	?	Wwn	Abs	Abs
Sex of buried	?	?	F	M	?	?	?	M		
Age at death (years) of buried	?	?	18-20	30-40	?	?	?	30-35		
Ceramic vessels	3	3	4		1	4	5	5	12	3
Beads			20 gypsum; 1 st						1 br; 1 st	
Mirrors									1 br	
Cosmetic facons			1 ceramic							
Applicators			1 br							
Cosmetic spades									1 br	
Sticks									1 br	
Another funeral inventory										Kaolin
Notes					In the sand	In the sand	In the sand		1 ceramic vessel – ritual – with the goby on the corolla	
NoNo of graves	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640
Construction of the grave	Sh	?	Sh	Sh	P	Sh	Sh?	Sh	Sh	Sh?
Depth of the grave (cm)	160	135	165	125	140	165	135	140	150	150
Dimensions	230x80	?	250x110	185x80	135x80	210x120	?	200x100	180x55	?
Safety	-	-	+	-	+	-	-	-	+	-
Position of the buried	Sct	Sct	R	Sct	L	Sct	Sct	Sct	Double R/R	Sct
Orientation of the head of buried	Nw	?	N	N	N	Wwn	?	N	N	?
Sex of buried	?	?	?	?	M	?	?	?	M/F	?
Age at death (years) of buried	?	?	?	?	16	?	?	?	50-60/17	?
Ceramic vessels	3	3	5	3		1	3	2		8
Beads			1 st biconical						1 st	
Notes		In the sand					In the sand			In the sand
NoNo of graves	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650
Construction of the grave	Sh	Sh	Sh	Sh?	Sh?	Sh?	Sh	Sh	Sh	Seput
Depth of the grave (cm)	190	165	155	110	120	140	185	130	135	180
Dimensions	190x100	240x110	240x95	?	?	?	210x100	200x70	280x100	370x270
Safety	+	-	-	-	-	-	-	-	-	-
Position of the buried	R	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Double R/Sct
Orientation of the head of buried	Nnw	N	Wwn	?	?	?	Nnw	N	N	N
Sex of buried	M	?	?	?	?	?	?	?	?	M/F
Age at death (years) of buried	17	?	?	?	?	?	?	?	?	30-35/ 25-35
Ceramic vessels	3	1	2	4	2	1	2	1		16
Beads						1 st		1 st		1 st composite (white and black)

NoNo of graves	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730
Depth of the grave (cm)	155	155	200	190	160	180	205	175	235	?
Dimensions	200x75	180x75	230x95	230x105	170x80	270x80	280x100	200x90	205x75	?
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Abs	Abs	Abs	Sct	Sct	R	R	R	Sct
Orientation of the head of buried	N		N		Nnw	N	N	N	Sw	?
Sex of buried	?		?		?	M	M	M	F	F
Age at death (years) of buried	?		?		?	35-55	Ad	40-50	35-40	Ad
Ceramic vessels	4	1	7		3	8	9	6	1	3
Beads									1 st biconical	
Miniature column						1 st				
Arrow heads								2 flint		
Another funeral inventory									Fr of br artefact	
Notes							The floor of shaft is burned			
NoNo of graves	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	160	140	160	155	180	145	145	130	110	70
Dimensions	190x90	190x80	205x90	190x90	210x90	200x90	240x95	215x105	210x85	140x50
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	Double Sct/ Sct	Sct	Sct	Abs	Sct	R	Sct	Sct	Centph	R
Orientation of the head of buried	N	Nnw	N		Sw	N	N	?	Abs	N
Sex of buried	Ch/F	?	?		F	F	M	?		M
Age at death (years) of buried	?/50-60	?	Ad		20-30	45-55	Ad	?		30-35
Ceramic vessels	3	2	3		5	5	3	4	1	2
Beads	1 gypsum									
Hair-pins	1 bone with a head like fist									
Another funeral inventory								Kaolin		
Notes							In the NE angle of dromos – traces of burning			
NoNo of graves	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	115	135	135	130	125	145	110	125	100	90
Dimensions	200x70	230x75	175x80	200x80	170x75	290x120	150x80	210x90	145x70	160x60
Safety	-	-	-	+	-	-	-	-	-	-
Position of the buried	Sct	Sct	Sct	Centph	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	N	N	N	Abs	Wwn	N	N	N	N	N
Sex of buried	?	?	F		?	?	?	?	F	?
Age at death (years) of buried	?	?	50-60		?	?	?	?	35-40	?
Ceramic vessels	3	4	5	3	2	5	2	1	3	1
Beads				1 gypsum						1 steatite biconical
NoNo of graves	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760
Construction of the grave	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct
Orientation of the head of buried	N	N	Nmw	N	Nnw	abs	Nnw	N	Nnw	Nnw
Sex of buried	?	?	?	F	F		F	?	?	M
Age at death (years) of buried	?	?	?	30-35	30-35		50-60	?	?	50-60
Ceramic vessels	6	4	1	2	1	6	5		1	4
Another funeral inventory						Kaolin				1 br axe with a boar

NoNo of graves	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	125	95	120	95	105	110	130	125	110	95
Dimensions	240x100	170x70	205x75	220x100	155x85	215x90	140x65	200x60	235x95	205x95
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Sct	Centph?	Abs	Abs	Sct	Sct	Sct	Sct	R	Sct
Orientation of the head of buried	N	Abs			Wwn	N	Nnw	Nnw	Wwn	Nnw
Sex of buried	?				?	?	?	?	?	F
Age at death (years) of buried	?				?	?	?	?	?	18-20
Ceramic vessels			2	3	3		2	2		11
Beads					3 st			1 gypsum		Some from steatite
Hair-pins										Fr of 2 bone
Another funeral inventory	Kaolin						1 fr of st staff			1 silver ring with spirals; gypsum small plates for mosaics
Notes										
NoNo of graves	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	90	115	105	115	95	95	80	75	75	105
Dimensions	210x60	200x85	205x65	270x100	200x60	200x75	160x60	170x80	160x75	235x95
Safety	-	-	-	-	-	-	-	-	-	-
Position of the buried	Abs	Sct	Sct	Sct	Abs	Sct	Abs	Abs	Abs	Sct
Orientation of the head of buried		Nw	Nnw	Nw		Nnw				N
Sex of buried		?	?	?		?				F
Age at death (years) of buried		?	?	?		?				17
Ceramic vessels	6		5	1	2	1	2	2	1	9
Beads										1 steatite; 2 lapis lazuli 2 gypsum and 1 st biconical;
Hair-pins										1 bone
Statuettes										4 fr (hairs; 2 hands; fr of gress) of composite (steatite)
Another funeral inventory								Yellow kaolin		1 gypsum plate disc
Notes										
NoNo of graves	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790
Construction of the grave	Sh	Sh	Sh	Sh	Sh	P	Sh	Sh	Sh	Sh
Depth of the grave (cm)	105	105	105	115	110	50	80	80	110	55
Dimensions	160x60	140x60	205x75	180x65	230x95	130x80	190x75	205x75	230x110	?
Safety	-	-	-	-	-	-	-	-	-	+
Position of the buried	Sct	Sct	R	Sct	R	R	Abs	R	Sct	R
Orientation of the head of buried	Nnw	Nnw	N	N	N	Nnw		N	N	N
Sex of buried	?	M	?	?	F	F		?	M	F
Age at death (years) of buried	?	9	?	?	35-40	Ad		?	35-40	50-60

NoNo of graves	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790
Ceramic vessels	4	1	4	3	2		3	4		12
Beads										30 cylindrical, 1 round 1 gypsum; 1 lapis lazuli; 1 st biconica
Seals										1 silver with scorpion
Hair-pins										1 silver with "masaron"; 1 br;
Mirrors										1 br
Cosmetic flacons										1 br
Applicators										1 br
Cosmetic spades										1 br
Statuettes										1 gypsum model with ornament
Sticks										2 fr of br
Another funeral inventory										2 silver earrings
Notes			Without skull							
NoNo of graves	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800
Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh
Depth of the grave (cm)	75	60	55	50	45	50	65	55	95	105
Dimensions	140x80	?	110x55	?	?	210x80	?	?	145x60	220x80
Safety	+	+	-	-	+	-	-	-	-	-
Position of the buried	R	Centph	Sct	Supine	R	Sct	Abs	Abs	Sct	Sct
Orientation of the head of buried	Nnw	Abs	N	Nnw	N	N			N	N
Sex of buried	F		?	F	F	?			?	?
Age at death (years) of buried	11-12		?	20-30	15	?			?	?
Ceramic vessels	6	6		6	1	2	2	2	5	1
Beads	1 round, 1 cylindrical gypsum			2 st; 1 cylindrical gypsum; 1 lapis lazuli; 1 turquoise; many small gypsum	2 steatite; 1 lapis lazuli; 2 cylindrical, 1 round gypsum;	2 gypsum		Many small gypsum		
Mirrors				1 br						
Cosmetic flacons				1 br						
Applicators				1 br						
Cosmetic spades				2 br						
Statuettes	1 fem terracota									
Sticks				1 br						
Another funeral inventory	1 br spiral ring			2 br spiral earrings	2 silver earrings					

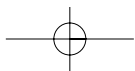
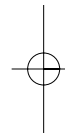
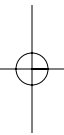
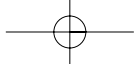
No	No of graves	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810		
	Construction of the grave	Sh	Sh	Sh	Sh	Sh	Sh	Sh	Sh?	Sh	Sh?		
	Depth of the grave (cm)	60	140	110	55	130	80	90	80	85	70		
	Dimensions	?	190x90	235x95	?	230x80	160x60	160x100	?	145x60	?		
	Safety	-	-	-	+	-	-	-	-	-	-		
	Position of the buried	Sct	Sct	Sct	Double R/Sct	Sct	Sct	Sct	Sct	R	Sct		
	Orientation of the head of buried	N	W	N	Nnw	N	N	N	?	Wwn	?		
	Sex of buried	?	M	?	F/Ch	?	?	?	?	?	?		
	Age at death (years) of buried	?	35-40	?	40-50/ Juv	?	?	?	?	?	?		
	Ceramic vessels	6	2	4	1	2		3	2	7	3		
	Beads				1 st			1 lapis lazuli		2 st biconical	1 st biconical		
	Seals				1 faience					1 br			
	Hair-pins				1 bone								
	Sticks									2 br			
	Another funeral inventory									Kaolin			
	Notes								In the sand		In the sand		
No	No of graves	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820		
	Construction of the grave	Sh	Sh	Sh	Sh	Sh?	Sh	Sh	Sh?	Sh	Sh		
	Depth of the grave (cm)	105	105	115	165	130	150	140	165	120	105		
	Dimensions	260x120	175x65	265x115	285x120	?	265x120	270x90	?	270x90	160x70		
	Safety	-	-	-	-	-	-	-	-	-	-		
	Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct		
	Orientation of the head of buried	Nw	Nne	Nw	N	?	N	N	?	Nnw	Nw		
	Sex of buried	?	?	?	?	?	?	?	?	F	F		
	Age at death (years) of buried	?	?	?	?	?	?	?	?	30-40	9		
	Ceramic vessels	2	2		4	2	2	5	2		1		
	Notes					In the sand			In the sand				
No	No of graves	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2944
	Construction of the grave	Sh?	Sh	Sh?	Sh	?	Sh	Sh	Sh	Sh	Sh	Sh	Bp
	Depth of the grave (cm)	80	135	110	125	75	50	105	80	85	150	90	85
	Dimensions	?	195x90	?	260x110	?	230x120	200x80	190x120	225x90	215x90	170x80	85x55
	Safety	-	-	-	-	-	-	-	-	-	+	-	?
	Position of the buried	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	Sct	R_Supine	Sct	Abs
	Orientation of the head of buried	?	Nnw	?	N	?	Nw	W	N	N	Nw	Nw	
	Sex of buried	?	?	?	?	?	?	F	?	?	M	?	
	Age at death (years) of buried	?	?	?	?	?	?	30-40	?	?	30-40	?	
	Ceramic vessels	2	3	2	4	1	5	11	4	4	5	3	
	Beads							1 faience biconical; 26 round and 3 corrugated steatite					
	Seals							1 faience					
	Cosmetic spades							1 br					
	Sticks							1 br					
	Another funeral inventory							1 br vessel; 7 faience, 2 silver sheets; 1 faience semiartefact	Kaolin		Kaolin		
	Notes	In the sand		In the sand				In the sand			One fr of kaolin 15x11,5 x(1- 3,3) cm		

North Gonur Palace

NoNo of graves	1	2	3	4	5	6	7	7/2	8	9
Room	22	8	8	6	7	11	Near the NW tower	On the SW of pylon	8	Near the SW tower
Position of the buried	Double R/R	Double L/L	L	R	L	R	R	R	L	R
Orientation of the head of buried	N	W	W	W	W	Sw	N	Nw	N	N
Sex of buried	M/F	Ch/Ch	Ch	Ch	?	?	?	?	Baby	Juven
Age at death (years) of buried	?/?	2-4/2-4	3-4		Ad	Ad	Ad		?	?
Ceramic vessels		3					5	2	2	2
Seals							Fr of 1br			
Bangeles							2 br			
NoNo of graves	10	11	12	13	14	15	16	17	18	19
Room	8	In the W corridor	8	8	8	Corridor near the NW angle tower	Near the NE tower; between 1 and 2 pilasters	Near the NE tower; 2 pilaster	19	Before gates
Position of the buried	L	Sct	L	Double R/?	B	R	R	L	R	?
Orientation of the head of buried	N	?	N	N/NW	N	N	N	S	N	?
Sex of buried	Baby	?	?	?/?	Ch	?	Ch	?	Lamb without head	Ch
Age at death (years) of buried		?	?	?/?	?	Ad	?	Ad		
Ceramic vessels		1	2	12	3	11	1		25	
Bangeles				1 br		1 br				
Another funeral inventory				1 br ring					Miniature column; 1 br knife in the lamb vertebrae; ivory inlites	
Seals						1 br ring				
Hair-pins						1 br with the spheric head				
Notes	Cover by large ceramic vessel fr			Up the skeleton – a sheep skull and bones					3 chamber sepultura; camal skeletons	Cover by large ceramic vessel
NoNo of graves	20	21	22	23	24	25	26	27	28	29
Room	Before gates	Before gates	17	38	38	32	8	W corridor between 12 and 13 pilasters	19	17
Position of the buried	Sct	Sct	?	R	R	L	B	R	R	Sct
Orientation of the head of buried	?	?	N	Nw	N	W	N	N	W	?
Sex of buried	Ch	Baby	Baby	?	?	Ch	Ch	Ch	Ch	Ch
Age at death (years) of buried	?	?	?	Ad	Ad	?	?	?	?	?
Ceramic vessels	2	1	2	1			2			3
Notes		Cover by large vessel fr	Cover by large vessel fr				Cover by 3 large vessel fr			
NoNo of graves	30	31	32	33	34	35	36	37	38	39
Room	38	29	29	31	29	29	29	30	19	On the south from "kelyas"
Position of the buried	R	L	R	R	R	L	R	R	L	R
Orientation of the head of buried	N	?	N	N	N	N	S	N	S	N
Sex of buried	?	Ch	Ch	Ch	Ch	?	?	?	?	Ch

NoNo of graves	142	143	144	145	146	147	148	149	150	151
Rings										1 br
Earrings										2 br
Cosmetic flacons										1 steatite
Notes						Destroyed				
NoNo of graves	132	133	134	135	136	137	138	139	140	141
Room	227	245	229	265	265	269	254	254	254	254
Position of the buried	?	L	R	R	Centph	R	?	?	?	R
Orientation of the head of buried	?	W	Nw	N		N	?	?	N	N
Sex of buried	Baby	?	Ch	Ch		?	M	Ch	Baby	Ch
Age at death (years) of buried	?	Ad	?	?		Ad	10-12	?	?	?
Ceramic vessels						12	2			
Beads							10 crystal; 1 lapis lazuli; 9 carnelian; 4 gold;			
Earrings							2 silver			
Bangeles							2 br			
Mirrors							1 br			
Statuettes							1 composite			
Another funeral inventory					Lead mace head	1 br knife				
Notes	In a large ceramic vessel					In the cist; in the S of cist – a whole lamb skeleton	In a large ceramic vessel; 1 black paint on the skull	Destroyed	Destroyed	
NoNo of graves	142	143	144	145	146	147	148	149	150	151
Room	288	143	191	312	312	274	275	286	288	288
Position of the buried	R	L	?	L	L	R	R	R	R	R
Orientation of the head of buried	N	Sw	?	S	S	S	N	N	N	N
Sex of buried	Ch	Baby	Baby	?	Baby	?	?	Ch	Ch	Ch
Age at death (years) of buried	?	?	?	Ad	?	Ad	Ad	?	?	?
Ceramic vessels	1			1		12	10		1	2
Beads				1 gypsum			1 steatite biconical			
Hair-pins							1 br			
Another funeral inventory							1 br artefact			
Notes						In the chamber covered by clay			Covered by fr of large ceramic vessel	Covered by fr of large ceramic vessel
NoNo of graves	152	153	154	155	156	157	158	159	160	160
Room	288	286	255	313	313	237	312	257	257	255
Position of the buried	R	R	Centph	R	R	L	?	R	L	L
Orientation of the head of buried	N	N		N	N	N	?	N	S	Ssw
Sex of buried	Ch	Ch		Baby	Ch	Ch	?	Ch	Ch	Ch
Age at death (years) of buried	?	?		?	?	?	Ad	?	?	?
Notes		Covered by fr of large ceramic vessel					Only a skull in the rubbish			
NoNo of graves	162	163	164	165	166	167	168	169	170	171
Room	255	255	255	255	255	255	255	255	255	318
Position of the buried	R	L	L	R	R	L	R	R	R	R
Orientation of the head of buried	Ssw	S	S	Wwn	W	W	W	W	E	N
Sex of buried	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Juven	Ch

NoNo of graves	162	163	164	165	166	167	168	169	170	171	
Sex of buried	Ch	?	Ch	Ch	?	Ch	Ch	Ch	?	?	
Age at death (years) of buried	?	Ad	?	?	Ad	?	?	?	Ad	Ad	
Ceramic vessels				1	9	3		3			
Another funeral inventory									St cylindrical artefact near legs		
NoNo of graves	172	173	174	175	176	177	178	179	180	181	
Room	312	246	155	267	267	267	In the corridor	319	126	308	
Position of the buried	L	L	L	R	R	R	?	R	L	R	
Orientation of the head of buried	W	W	S	N	N	?	?	W	W	N	
Sex of buried	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	?	
Age at death (years) of buried	?	?	?	?	?	?	?	?	?	Ad	
Ceramic vessels	1			1							
Notes	Covered by fr of large ceramic vessel					Covered by fr of large ceramic vessel		Destroyed			
NoNo of graves	182	183	184	185	186	187	188	189	190	191	
Room	126	326	312	308	220	276	218	348	348	349	
Position of the buried	R	R	?	R	R	?	?	L	L	?	
Orientation of the head of buried	W	W	W	Se	W	W	N	W	N	?	
Sex of buried	Baby	Ch	?	Baby	Ch	Ch	Ch	Ch	Ch	Baby	
Age at death (years) of buried	?	?	Ad	?	?	?	4	?	?	?	
Ceramic vessels						3					
NoNo of graves	192	193	194	195	196	197	198	199	200	201	
Room	346	276	267	S wall of the r 185	S wall of the r 185	S wall of the r 185	Right side of the front yard	Right side of the front yard	378	308	
Position of the buried	R	R	L	?	?	?	?	?	R	R	
Orientation of the head of buried	N	Nw	W	?	?	?	?	?	N	Nw	
Sex of buried	Ch	Ch	Ch	Ch	Ch	Baby	Baby	?	?	?	
Age at death (years) of buried	?	?	?	12-13	2-3	?	?	Ad	Ad	?	
Ceramic vessels	1								2	2	
Notes										Very bad preservation	
NoNo of graves	202	203	204	205	206	207	208	209	210	211	
Room	219	219	219	219	350	390	383	388	374	382	
Position of the buried	R	?	R	R	L	R	R	R	Belly	R	
Orientation of the head of buried	N	W?	N	Nw	Ne	N	W	N	S	Ne	
Sex of buried	Ch	?	Ch	Ch	?	Ch	Ch	Ch	?	?	
Age at death (years) of buried	?	Ad	?	?	Ad	?	?	?	Ad	Ad	
Ceramic vessels				1	9	3		3			
Another funeral inventory									St cylindrical artefact near legs		
NoNo of graves	212	213	214	215	216	217	218	219	220	221	222
Room	406	357	345	347	367	367	367	368	368	368	349
Position of the buried	R	R	L	R	R	L	R	R	?	?	R
Orientation of the head of buried	N	N	N	N	N	W	S	N	Nne	N	N
Sex of buried	?	?	?	?	?	Ch	Ch	?	Ch	Ch	Baby
Age at death (years) of buried	Ad	Ad	Ad	Ad	Ad	?	?	Ad	?	?	?
Ceramic vessels	1	20	4	6	3			2		3	
Another funeral inventory											
Notes				A burial in the sepulture						Destroyed	



3

APPENDIX



GONUR CITY LINENS OF THE SECOND MILLENNIUM BC

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The Gonur burial site has yielded endless superb findings which demonstrate a very high level of local civilization, together with remarkably close contacts of the Margush kingdom with Elam, Sumer, more distant Egypt and other ancient civilizations of the time. Numerous imported items add to the variety of Margush treasures and emphasise the extent to which both material and spiritual bonds united the ancient world. Such imported items can, however, also confuse those seeking to understand the local culture, making it difficult to distinguish Margiana artifacts from imports. The problem becomes acute where no in situ material data exists, for comparison. This is precisely the dilemma in the case of the linen textile fragments and threads, a study of which is reported here.

The first item to be considered, is a charming piece of soft linen cloth, of pale-green colour, which originates from a warrior's grave (#2380), excavated in the digging season of autumn 2001 (Fig. 1). The tomb escaped robbing, thus preserving most of the initial inventory, including numerous bronze artifacts

and precious fragments of a beautiful tabby cloth. To describe this as precious might be an understatement, since not a single other example of contemporary weavings -- or even any evidence of these -- from this particular region has been found, next in time materials originate from the Erk-kala site and date to the second half of the first millennium B.C.¹

Interestingly, the fragments discussed here were discovered not during the actual excavation, but only several months later, when Nadezhda Dubova, the expedition anthropologist, studied the skeleton of the buried warrior. While cleaning the right leg shin, she noticed traces of bronze oxides, and then something soft in between. She recalls she was initially alarmed, but then realized that what she saw was a cloth. Four thousand years old, soft and thick, and in numerous fragments -- the discovery was an unfor-

1. Plain weave linen textile fragments. Gonur, warrior's grave, #2380.



gettable experience! It was obvious that originally the cloth was folded together several times and then wrapped round a bronze «ladder» (objects of this type are found sometimes in warriors' graves and are thought to identify the owner's position in the society²). Bronze oxides are known to have a biocidal action and thus to preserve organic materials including textiles, as appears to have been here the case. This conservational action apart, the metal oxides appear to have dyed the fragments to a pale-green colour as well.

The circumstances surrounding the finding of this item are amusing. Being in Margush in autumn 2001, the author begged Viktor Sarianidi, half in jest, to locate at least one small piece of textile in his excavations, as it seemed unfair that in a site of such an enormous size and with such a diversity of findings, not a single fragment of cloth had up till then been found. Made as half a joke, this «request» was miraculously fulfilled. Thus when Nadezhda Dubova found the textile remnants, Victor informed me about it and then Nadezhda sent me a square centimeter for examination (Fig. 2), and a complete photograph of the finding.

The tiny pale-green fragment looked absolutely superb and showed the following structural characteristics: — **material:** linen, Z1 — **structure:** balanced plain weave, with 16_18x19_20 threads per sq. dm — **colour:** pale-green, dyed with bronze oxides.

The piece has no edge and thus it is difficult to identify the warps from the wefts. However less closely-woven threads (16_18 per cm) have a much stronger twist compared to the more closely-woven ones (19_20), suggesting that the first group constitute the warps, the second one the wefts.

The texture of the weaving, with its open, totally unmatted appearance, made it easy to identify the structure; also it was clear that the fibers are of vegetable origin, most probably flax. Confirmation of this conclusion was sought from forensic specialists at the Biological Laboratory of the St.-Petersburg Office of the Public Prosecutor. They confirmed that the fiber was flax³, known as linen when used in textiles. Thus this question was resolved. A second problem was to determine the place of origin of the cloth. In the absence of any known analogous samples for comparison, this would prove difficult.

On hearing of «pre-historic» linen textiles, Egypt immediately comes to mind, as linen was the predominant woven fabric used in the country since the pre-Dynastic period and was known as one of the glories of the Nilotic textile culture. A hypothesis based on an Egyptian origin is not unrealistic, bearing in mind Egyptian artifacts found in Margush sites, especially Gonur. However the structure of the piece argues against this conclusion. In order to explain, a brief

2. Detail, shows structure of linen fragment (grave #2380).





3. Drawing, shows Z and S-spinning.

review of the history of early weaving materials and techniques used in different regions, for making threads, more precisely spinning, is called for.

The craft of making textiles can be described as one of the earliest and greatest creations of mankind, and represents a skill which played an enormously important role in the development of civilization. A multi-millennia-long tradition of weaving links weavers of more recent times with those ones who once took fibers and joined them into a cord or a rope, thus making the first step towards the invention of weaving. However it took thousands of years to find a way of forming a textile from individual threads. During that long period people dealt with threads and cords used for sewing skins and making nets, ropes, etc. Everything we know today supports an assumption that the first domestically-used materials were bast fibers, such as hemp, flax, but also nettle, etc. It appears that over most of Eurasia, hemp was the most widely-used material. It is thanks to its natural twist that the custom of right-hand direction spinning, named «Z» in literature (Fig. 3)⁴, developed.

Other reasons for this choice have been suggested⁵, in any event, over 20 thousand years ago the thread-making population of the Eastern Mediterranean and Circumpontus lands adopted this method of spinning⁶. Over time, it became a tradition, and in fact a marker which helps to distinguish European and West Asian textiles from those originating in silk-weaving China or «linen» Egypt. The reason is in the fact that silk has kilometer-long fibers and does not need spinning, so Chinese silks show non-spun threads; while Egypt used the so-called clockwise (left-hand) – or «S» -- direction for spinning, which corresponds to the natural twist of flax fibers. The method became sacred, so most of the dynastic Egyptian textiles, not only linens, have S-spun threads, and this feature differentiates Egyptian fabrics from the Eurasian textiles. This point is of special importance, as it excludes our fragment from being an Egyptian import.

In fact, one does not need to go very far from Margush to find contemporaneous linens, since flax was the predominant textile fiber in Near and Middle Eastern textiles since the Early Neolithic period. Its wild progenitor, *Linum bienne* still grows along the Mediterranean and Atlantic coastal areas, and in the foothills of Iran and Iraqi Kurdistan⁷. The closest archaeological relative to the Gonur linen fragment seems to originate from the early levels of Susa, the great capital of the eastern neighbours of Mesopotamians, and lying to the south-west of the Margush dwellers. Specimens from fourth millennium Susa include both a print of a plain-woven linen cloth, found on a copper axe-head⁸, and a clear representation of a horizontal ground loom, as seen on an early cylinder seal designs⁹ (Fig. 4, 5).

This type of loom and predominance of linen as a basic textile material are known to be characteristic of the settled agricultural cultures of the regions considered here, during the entire Bronze Age. It is most probable that our linen fragment is of local Margush manufacture, at least insofar as Gonur is accepted as a north-eastern outpost of the ancient East Mediterranean civilization and its North Mesopotamian boundaries¹⁰.

While there is as yet no evidence for an actual loom in Margush, a substantial number of spindle whorls have been found, suggesting a well-developed craft of spinning. The whorls found have mostly conical, though sometimes bi-conical shape as well, and are made of clay or – more rarely -- carved from stone, and are found all over the city¹¹. In this period and in this cultural environment, this fact automatically indicates the presence of domestic (as opposed to palace or temple workshops) weaving, thus provide further confirmation of the author's assumption as to the origin of the textile on discussion¹².

The second linen artifact to be considered, is a beading cord from the «Necklace with Bulls», found

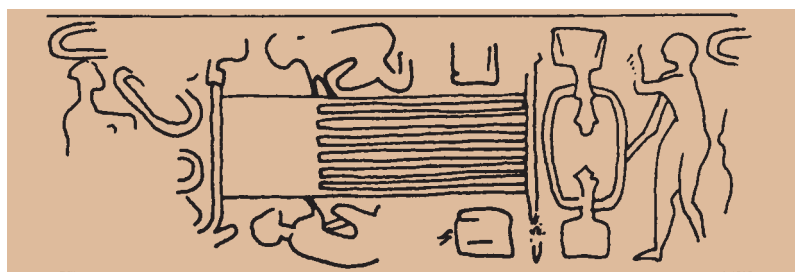
in 2002 in North Gonur (grave #2900). In terms of the discussion above, the thread, with its S-spun Egyptian-type twist, would appear to be a real gift of the Gods, allowing as it does, a visual comparison of both Z and S-spinning modes (Fig. 3). The so-called Egyptian-type twist should here be explained: different cultures spin fibers differently, the Europeans, for example, use tow, thus every fiber of each thread has a twist. Ancient Egyptians, on the contrary, are known to have joined two or sometimes three lengths of flax fibers (in fact, parts of stems), gradually adding each subsequent «portion» as required. As a result, the elementary components of their threads do not show any twist inside the strands. Grave #2900 necklace threads show this exact type of spinning, and thus the evidence points to an Egyptian origin of the cord (Fig. 6). Prior to this study of the threads, just from the outlook of the piece Victor Sarianidi assumed that the necklace might be of Egyptian origin, thus the author's observations on the cord support his initial impression. However attractive, the idea is very far from being proved, and there should be further thorough investigation to make final conclusions on the place of manufacture of «Necklace with Bulls»¹³.

Though one cannot be categorical, it might well be that the necklace was taken from the workshop where it was manufactured and brought to Gonur very much in the form in which it was found by archaeologists, some five thousand years after its production. The threads are as clean and soft as if they were made yesterday, and however emotional it sounds, one feels a pride in mankind which made and preserved such wonderful things, allowing our contemporaries to find and study them, trying to understand the «spun» and «woven» chronicles of the past.

It should not be assumed that the foregoing discussion is mere idle speculation because it is based on two very unusual and rare artifacts. Production of textiles started so early, and formed so vital an element in the life of the peoples who made and used them, that every stage of their manufacture was accepted as a sacred act, at least in traditional societies where spinning and weaving were women's work¹³. Thus it is that, when studied in sufficient depth, traditional textiles, even where only tiny individual fragments remain, provide perfectly good markers of the cultures which produced them. On this basis this alone, the Gonur linen findings are of outstanding interest and importance.



4



5



6

4, 5. Horizontal ground loom, as seen on an early cylinder seal designs from Susa, 4th millennium B.C., in a usual for that period manner of showing looms «from above».

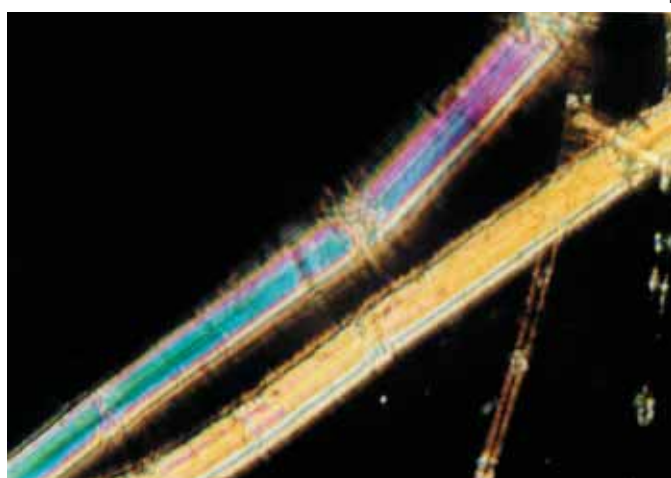
6. Beading cord fragments, «Necklace with the Bulls», North Gonur, grave #2900.

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NOTES

1. Textile fragments: cotton, but also wool, were found in Erk-kala, as described by Usmanova Z. I. in: *Novye nahodki fragmentov drevnih tkanei iz Erk-kaly v Starom Merve* (New findings of ancient textile fragments from Erk-kala in Old Merv). – *Izvestiya AN TSSR, SON*, 2; also: Erk-kala. – *TYUTAKE* (Studies of the South Turkmenistan Archaeological Expedition, Ashkhabat), XII, pp. 70, 72_73.
2. Similar in meaning items were used in Ancient Egypt (now called «burial amulet in a shape of a ladder»), and are thought to be connected with the idea of Celestial Ladder (Manfred Lurker. *Egyptian Symbolism*. Rus. Ed. Moscow, 1998).
3. My great thanks to the specialists of the Laboratory, who not just made the test, but showed a real interest in this research, and helped with identification of linen fibers from the Pazyryk tombs as well.
4. When wet, hemp fibers start to curve, if drawn, the diagonal central line of the thread matches to the slope of the center of letter Z, as shown on Fig. 3.
5. M. Barber thinks that another reason could have been in a different kind of spindles, as Eurasians used spindles with whorls at the lower end, while Egyptians – the one with the whorl at the upper end (Barber 1992, Part I.2. Spinning).
6. The earliest representation I saw is a clay female figure from Gagarino, dated to the 20th millennium (collections of the MAE). The figure «wears» a kind of an apron, made of strongly spun and plied cords.
7. Helbaek 1959, 105_7.
8. Lacaisne 1912, pl. 43.
9. Drawing in Barber 1992, Fig. 3.4.; published in Le Breton 1957, 106 Fig. 20 no. 20; Amiet 1961, pl. 16.275.
10. The fact that there are no flax seeds still found in Margush does not mean much, as similar was a situation in Anatolia, the most simple explanation to be found is an assumption that local population could have used flax for weaving only, not for making oil. The linen-flax is a young one, which dies not have seeds yet, so in this condition there could be none, so nothing to find.
11. Information of Victor Sarianidi.
12. What adds to the picture are representations of costumes. Many of that ones found in Gunur show people in Sumerian type of clothes, but also in textiles with smooth surface. This subject needs special thorough investigation, and can give some very interesting results.
13. Judging from some technical and artistic peculiarities it is possible to make a preliminary assumption suggesting composite character of the necklace, with beads, of Egyptian work, and pendant, of different origin.
14. One can say that Ancient Egypt gives a different picture, as there were many men involved into the textile industry, but we should not forget that most of Egyptian workshops belonged to the temples with the latter strictly regulated life and all kinds of activities.



STUDY OF A TEXTILE FRAGMENT FROM BURIAL #2380, GONUR NECROPOLIS

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1, 2. Microphotograph of microfibrils (filaments) of weft and warp threads of textile fragment from burial #2900, 2nd millennium B.C. (Gonur, Margiana, Turkmenistan) viewed by optical microscopy in transmission mode under polarized light (because of equal width of threads warp and weft identification should be recognized as conditional) (Microscope polarizer and analyzer were mounted perpendicular to each other).

The Center of Historic and Traditional Technologies of the Institute of Heritage, Moscow, Russia, was requested to study samples of fibers from a fragment of textile found by V. Iv. Sarianidi at a burial site in Margiana (Turkmenistan), dated to the second millennium B.C.

The textile was woven in a **balanced plain weave**, with Z-spun warps and wefts. The aim of research was to **identify the composition of the warp and weft fibers**. To this end, **analysis was carried out using the following experimental methods**

- Morphological characteristics were studied using optical transmission microscopy under polarized light (microscope of type «Polam R-211», 400x magnification. The fibers were compared with reference samples from the collection of the British Museum, London).
- Use of histochemical dyestuff staining, to identify animal protein and vegetable cellulose cotton and bast fibers of different species.

The fibers were identified by comparison of the results with the collection of standard fibers held at the Center of Historic and Traditional Technologies, and also from published data (Identification..., 1985; Catling, Grayson, 1982).

The completed research provided the following results

Microphotographs of the warp and weft fibers as seen under optical transmission microscopy and polarized light are shown in Fig. 1, 2.

Microscopic analysis highlighted the following morphological peculiarities of the fibers.

- The threads consist of separate fibers, not twisted fiber bundles.
 - The fibers are well bleached.
 - The fibers display an intense iridescent interference colouring.
 - The fibers are formed by a chain of cells with a central inner channel which passes through all cells of the chain.
 - Projection of the borders of a single cells shows near-rectilinear form.
 - Y-shaped projections of the borders, which are typical for flax fibers, were not observed (Fig. 1).
- It is noteworthy that virtually no soil dirt or damage was observed on the thread fibers.

Histochemical analysis made it possible to identify the following peculiarities of the fibers

- The fibers show very poor reaction to protein dyeing.
- The fibers show intense colouring after cellulose dyeing.

Fiber walls and the borders between individual cells show colouring after lignin dyeing.

From the data obtained, the following conclusions can be drawn:

1. The most probable source of bast cellulose fibers is either hemp -- or probably, flax, but neither jute nor ramy.
2. The textile reveals a high degree of technological skill in the making of bast fibers:
 - The fibers were carefully cleaned from the organic residues of supplementary bast.
 - The fibers were carefully separated from each other.
 - The fibers were well bleached.

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INVESTIGATION OF A TEXTILE FRAGMENT

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In conjunction with this research the authors drew on the following literature:

1. S. I. Sokolov. *Sudebno-himicheskaya ekspertiza vetchestvennyh dokazatelstv* (Forensic-chemical examination of material evidence). Moscow, 1964.

2. "Kriminalisticheskoye issledovaniye voloknistyh materialov i izdelii iz nih" (Forensic examination of fiber materials and artifacts). Vyp. II. Moscow, 1983.

The subject of this investigation is a fragment of textile, of light yellow-greenish colour, with small quantities of solid yellow-green substance. The fragment in question was woven using a balanced plain weave technique, characterised by the identical appearance of both front and rear sides.

Microscopic investigation

1) under white light:

An optical microscopic study (microscope type MBS-1 using mixed and reflected light, 16x magnification) showed that warp and weft threads consist of loosely twisted primary fibers.

Use of a second optical microscope (Ergaval instrument; artificial light, 250x magnification) showed that both warp and weft threads consisted of white primary fibers of cylindrical form. In addition, complex bundles of similar fibers, but glued together, were observed. Bundles of similar fibers with this feature are characteristic of technical natural fibers;

b) Optical microscopy using polarized light:

Dark-field microscopy using a Biolar-Pi instrument (at 250x magnification) showed that both separate fibers and bundles of fibers have cross dislocations characteristic of bast fibers.

Chemical study

1. The Ganausek (??) reaction to distinguish between flax and hemp. The fibers are placed into a droplet of chromic acid mixture, covered with a cover glass and observed under a microscope. Flax fibers swell quickly, fall to pieces and dissolve. Hemp fibers also swell and then dissolve, but the process takes much longer, and ends of fibers expand.

The species under study responded as one would expect for flax fibers.

2. Berens (??) reaction to distinguish jute from flax and hemp. The fibers are exposed to concentrated hydrochloric acid and a crystal of potassium chlorate, then pressed between sheets of filter paper and treated with aqueous ammonia solution. Jute fibers exhibit colour shades from brown-red to blood-red, while flax and hemp remain uncoloured.

The species under study did not show any colouring.

Taking into consideration the results of the two chemical tests, the morphology of the fibers, and the results of optical microscopy using polarized light, one can conclude that the threads from the textile fragment consisted of flax fibers. The threads of the textile fragment under study consist of flax fibers.

4

APPENDIX



RADIOCARBON DATING OF SAMPLES FROM THE NECROPOLIS OF GONUR IN TURKMENISTAN

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Samples of charcoal collected at different locations in the excavation area were submitted for radiocarbon dating. A list of the samples is collected in Table 1 together with information about the site of collection, the laboratory number and the results from dating. The samples were handled in normal way. After mechanical removal of sand and root fragments a chemical acid-alkali-acid treatment was applied before drying and combustion. Either conventional gas counting or the AMS technique was then used to measure the radiocarbon content in order to determine the age of the sample. The results were corrected for isotopic fractionation based on the measured $\delta^{13}\text{C}$ values as given in the Table.

The $\delta^{13}\text{C}$ values clearly fall into two different groups having values around -25 and -10 ‰ respectively. This reflects that the charcoal originates from either C3 or C4 plants, i.e. plants using different photosynthetic pathways. Difference in age for these different species can, however, not be seen. The problem with charcoal being older than the occasion to be dated due to the age of the tree used for burning can therefore not be solved by comparing the dates for the C3 and C4 plant charcoal.

For the moment the Table only gives dates for 13 out of the 20 samples submitted. The final results for all samples will be published in the near future. Fig. 1 gives the results after calibration. The calibration was done using the Ox.cal programme (Bronk Ramsey, 2001) and the calibration data by Stuiver et al. (1998). The calibrate dates concentrate around 2000 calBC with the youngest age at about 1600 B.C. and the oldest about 2400 B.C. A more detailed discussion taking into account the different constructions connected to the samples can be made when all samples have been dated.

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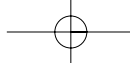
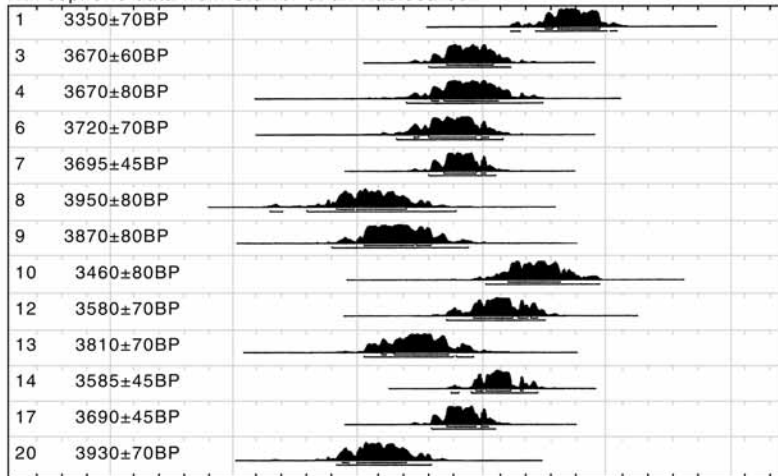


Table I. Charcoal samples from the necropolis of Gonur submitted for radiocarbon dating

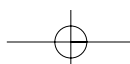
Table I

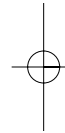
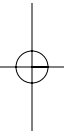
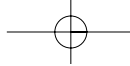
-	Name	LAB _	δ ¹³ C	AGE	Sigma
1	Area 5, burial #2900	Hel-4629	-10.3	3350	70
2	Palace, room #189	Hel-4628	-26.5	3670	60
3	Palace, Inner Hall, the upper part of the North Wall. The last period, the final decay of the settlement	Hel-4620	-10.3	3670	80
4	Area 5, Encircling wall, (sample 2) near the burial #2951	Hel-4623	-10.4	3720	70
5	Area 5, burial #2953	Hela-671	-25.8	3695	45
6	Area 5, room #99 (in the west wall of hearth, near the burial #29)	Hel-4617	-10.5	3950	80
7	Area 5, room #84, from the oven	Hel-4621	-24.6	3870	80
8	Area 5, room #87, from the oven	Hel-4625	-11.3	3460	80
9	Area 5, room #70, under the animal burial of the tomb #2900	Hel-4627	-24.9	3580	70
10	Area 5, room #78	Hel-4616	-11.1	3810	70
11	Necropolis, burnt pit, burial #2935	Hela-672	-25.0	3585	45
12	Necropolis, burnt pit, burial #2944	Hela-673	-26.0	3690	45
13	Area 5, Encircling wall (sample 4, oven at the virgin soil under the wall)	Hel-4618	-25.0	3930	70

Atmospheric data from Stuiver et al. Radiocarbon



3500 Cal BC 3000 Cal BC 2500 Cal BC 2000 Cal BC 1500 Cal BC 1000 Cal BC





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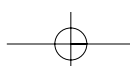
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APPENDIX



NEW DATA ON ANTHROPOLOGY OF THE NECROPOLIS OF GONUR-DEPE

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The study of human remains from the burials of the Gonur necropolis was conducted by different specialists, including Italian researchers A. Sperduti, L. Bondioli and R. Machiarelli from the Department of Anthropology of the special unit of the L. Pigorini National Museum of prehistoric ethnography (Rome, Italy) (Sperduti, Bondioli, Macchiarelli, 1995; Item, 2002) and B. Hemphill (USA). From 1998 to 2001 a research fellow from the Institute of History of the Cabinet of Ministers of Turkmenistan (Ashkhabad) O. Babakov was engaged in determining sex and age of the buried individuals and conducted examination of the bone material. His data is now published (Babakov, 2002). In autumn 2000, thanks to the kind consent of the head of the archaeological expedition of the Gonur V. Sarianidi, a group of anthropologists from the Institute of Ethnology and Anthropology of the Russian Academy of Sciences traveled to the necropolis for field studies. The first results of this trip, including demography, craniology, odontology, osteology and short sketch on paleopathology, are now published too (Babakov et al., 2001). O. Babakov, S. Borutskaya and S. Vassiliev (Vassiliev et al., 2001) described special skeletal pathology (dwarf skeletal morphology). The necropolis of Gonur-Depe is dated by the late third – mid-second millennium B.C. It is located 200 m west of the North Gonur palace, which is found more than 80 km to the north – North-west of Bayramali city of the Mary district of Turkmenistan. The predominant landscape of these territories today is semi-desert while in the Bronze Age it was here that the Murgab river's delta was situated and allowed successful agriculture and domestic cattle-breeding.

As according to archaeologists, Gonur was the capital city of Margush, situated in the Murgab delta. The material obtained here could help in shedding light on the fine questions of the emergence of several anthropological variations in the territory of Middle Asia of the Bronze Age while earlier characteristic of the entire area had been one and the same more or less homogeneous Mediterranean anthropological type. This site's materials with their so well elaborated attribution of the graves, a great number of versatile ceramic items, seals, amulets, glyptics and other rich grave goods make it possible not only to tie it to the cultural complexes of other territories, including outlying ones, but also to suggest that the specific anthropological characteristics of the population of the area were formed either through mixing with alien newcomers or through transformations of some more ancient morphological types, including transformations involving ecology. Moreover, this striking and quite thoroughly studied object of the Bactrian-Margiana archaeological complex (BMAC) occupies a special place among the historical sites of the third millennium B.C. along with such cemeteries as Swat in Pakistan, Sapallitepa in South Uzbekistan, upper levels of Altyn Depe, Anau in Turkmenistan and others.

All palaeoanthropological investigations show, that in the Aeneolithic and Bronze Ages the huge terri-

tory of Middle Asia was distinctly divided into two historical-cultural areas. The first of these, i.e. the southern one, embraced modern southwestern and southern Turkmenistan, southern and to some extent modern central Uzbekistan and southern Tajikistan, and was an area of formation of protourban-type civilizations. The second, i.e. the northern one, embraced the northern plain part of Middle Asia – northern Turkmenistan and northern Uzbekistan – was the periphery of the southern civilizations. The permanent contacts between tribes of the south and north could not but affect ethnic history of the two historic-cultural areas of Middle Asia. These complex ethno-cultural contacts between the south and north involved, no doubt, also population residing far beyond their geographical boundaries. According to the data of archaeology in the Aeneolithic and Bronze Ages the population of southern Turkmenistan was drawn into the sphere of cultures of Fore-Asia. All of this makes it necessary to analyze available palaeoanthropological material both from Middle Asia proper and from the adjacent areas.

Rather clear-cut anthropological differences between the southern and northern regions of Middle Asia are observed beginning from the Neolithic and especially from the Bronze Age. The northern steppe zones were inhabited by tribes of proto-European while the southern ones – by those of Mediterranean appearance. The proto-European complex of traits was registered among the Neolithic tribes of the Keltiminar culture in the west of the Khorezm oasis (Tumekkichijik). The southern zones were the home of tribes of Mediterranean appearance – who were carriers of the Neolithic Hissar (Tutkaul) and Jeitun (Ovadandep, Chagallydepe, Chopandep and others) cultures. A similar anthropological type had been characteristic of the earlier Mesolithic population of the Surkhandarya river valley (Machaj cave). In the Bronze Age the northern steppe zones of Middle Asia remained inhabited as before by tribes of the proto-European type. This complex is typical of the carriers of the Andronovo, Tazabagyab and logged-grave cultures. The line of demarcation between the proto-European and Mediterranean complexes ran mainly along the lower reaches of Amudarya, middle and lower reaches of Zerafshan and upper reaches of Syrdarya rivers.

The material from necropolis of Gonur, as previous seasons demonstrate, is represented mostly by the gracile and more massive variations of the Mediterranean race, but also by some people, who have Veddoid traits like prognathism, large skull height but small another dimensions, very straight and wide frontal bone. These are characteristic not only of the local population of the southern and to some extent central regions of Middle Asia of the Neolithic and Bronze Ages but also of the synchronous and earlier populations of Fore- and South Asia.

By the present time 2843 graves have been excavated in the necropolis. Five types of graves are selected: shaft-

type (79,38%), ordinary pit (8,31%), burned pit (7,43%), cysts (1,98%) and chamber tombs (sepultures) (1,79%). Burned pit graves are those with the burnt inside to the bright red color walls (in a few cases only with a burnt floor). Burnt in such graves usually are only the walls while on the floor there is merely a layer of black or gray ash or sand about 10 cm thick. Over 80% of the graves were robbed already in the Bronze Age and most probably in the nearest years (or, which is not excluded, months) after the interment, because the robbers' manholes are found exactly in the head's area of the buried where most of the accompanying inventory is concentrated. In many cases this resulted in the complete loss or significant destruction of the bone remains (71,22% of skeletons were scattered).

In the overwhelming majority of cases the bodies lay contracted (with hands at the face and bent legs), almost all on the right side (81,17%), more rare on the left one (12,27%), very rare supine (5,31%) or prone (1,25%). Predominant head orientation is north (25,53%), north-north-west (36,87%), north-north-east (10,86%) and north-west (9,49%) – totally 82,74%. Placed in the graves were ceramic vessels, decorations, arrowheads, bronze and sometimes silver seals and some other things, including golden. As it is pointed out in the main text of the present book a certain relationship is traceable between the type of a grave hole and richness of its funeral gifts. There are some differences in the funeral inventory (set and number of gifts) between male and female burials, which are described in the main part of this book by V. Sarianidi.

Some correlation between numbers of buried and types of tomb can be noted (Table 1 of the main text of this book). At first it must be mentioned, that differences between the real cenotaphs and empty tombs is very difficult to see. Those graves, during engraving of which neither any remains nor robber's manholes were found, were named as cenotaphs. Graves, in which the extortionate manholes were fixed, but bones were not detected, were marked as empty graves. The sex and age of buried and the number of buried in one tomb were determinate by some stages. First of all, anthropologists, who worked as members of expedition during the excavations, made it. Their names were cited above. All long bones', skull's and teeth's traits were used, if it was possible. Then, the sex and age were determined by the samples of teeth. It must be said, that the difference between the teeth- and bone age is about 10, sometimes 15 years. The teeth eruption is more larger than in synchronous populations, but a condition of the skull's sutures shows earlier dates. For many reasons, that partly will be discussed below, in section devoted to palaeopathology, the preference was given up to sex-age determinations by tooth system indicators. The last stage of analysis includes study of the bone's and teeth's dimensions variation, all cases, which is significant (more than on 3 sigmas) differed from basic group, specially were analyzed also position of the individual in relation to this or that sex-age group was accordingly changed.

During the investigations of the teeth samples, which did O. Babakov collect in the main part in 1998-2000 years, it was revealed, that many burials, were marked previously as single, contained teeth belonging two, three, four and in one case even nine individuals. There was a supposition, that the data of a grave can represent not simultaneous, and successive burial places. The cited above Table from the main text of the book shows, that all burial types can be used many times, but the largest part of multi-persons burials have sepultures (43,8%), the lowest – burned pits (2%).

Double burials in significant majority of cases were, most likely, simultaneous. Some percent of double ones – such burials, in which besides the rather well saved remains of one individual but small-sized fragments (more often - separate teeth) of second (or greater number of the people) were found – apparently, can be referred to successive bury. To define precise number of last ones is not obviously possible due to the bad safety of bone material and because of impossibility to exclude completely a carry of separate teeth by small-sized animals, including rodents. At the same time the detection in the same tomb three, four (in one case - nine) rather complete sets of

teeth unconditional testify the successive bury, when in one burial facility the bodies of died were placed with significant large period. The share of such graves can be evaluated on the average approximately in 3-4 % (Table 1). It should be noted that all this evaluations are very probable due to different reasons

The real frequency may be less than so in the Table because it is not very easy to differentiate the successive burials and the ordinal ones. The cists usually have a roof, but didn't have an entrance. That is why it is very difficult to put remains of one more dead person to the buried ones after some years. But if we compare a number and share of such graves among different types of tombs, we can see that a share of serial burials among sepultures unconditionally prevailed that can be a good confirmation to the reality of successive burials exactly in sepultures. It can be supposed that various funeral traditions are resulting from the different ethno-cultural roots of the people buried at this necropolis. But this conclusion contradicts the archaeologically proven fact that all graves revealed the same type of burial for the human remains: a crouched position, predominantly on the right side, with the head oriented to N-NW and with one set of funeral gifts placed by the head. Based on this one may assume that the variation in the type of burial constructions is explained by the social position of the dead rather than by their ethno-cultural affiliation.

Based on observing the three types of burials, one may say that Margiana society consisted of: (1) the rich who were buried in cists and chambered tombs (sepultures) and made about 4% of the population; (2) the middle class – 87% and (3) the poor – 9%. The cost of funeral construction also reflects the status in a certain social class: the chamber tombs and cists demanded more material expenses compared to shaft graves and pits. It is natural to suggest that every class had its own subdivisions that at the moment are impossible to define. At the same time judging by the indirect evidence we may say that funeral offerings in some shaft graves were as rich as those from sepultures.

The present communication is based on new anthropological materials received during excavations at necropolis of Gonur in autumn 2001 and spring and autumn 2002. The excavations were made that time not only at necropolis, but also between the palace and north part of "defensive wall", at so named Area 5, as it was

Table I. Evaluation of a probable share of tombs with successive burials.

Table 1

Types of the graves	Probable number	Of the total number of several types, %	Of the number of several types of several types, where the human remains were not found, %
Sepultures	12	25,5	26,1
Cists	4	7,7	7,8
Pit graves	12	5,5	6,0
Shaft graves	49	2,4	2,6
Total	77	3,2	3,5

Table II. Anthropological material from the Gonur Depe

Table 2

	Necropolis			Area 5			In all			Totally
	Males (20 & more years)	Females (20 & more years)	Children (Less than 20 years)	Male 20 & more years)	Females 20 & more years)	Children (Less than years)	Males (20 & more years)	Females (20 & more years)	Children (20 & more years)	
Craniology	146	95	8	15	9	47	161	104	55	320
Osteology	25	20	6	13	12	47	38	32	53	123
Odontology	229*	327*		63*	44*	7**	292*	371*	7**	670

remarked by V. Sarianidi in the chapter 4. All field anthropological investigations in these seasons were made by N. Dubova, laboratory analysis of data – by both authors together and analysis of dental material – by G. Rykushina. The craniological and osteological series, as previously, are so specific that the excavated skulls had to be studied in a short period of time because all of them were to be reburied at the end of each field season (in the spring and autumn, respectively). The data collected during these excavations (from necropolis and from the Area 5) consists of a numerical series (more than 350 samples) of teeth from a majority of the cleared burials, craniometric (33 male and 26 female skulls) and osteological (35 male and 31 female skeletons) schedules. The whole series from the Gonur Depe consist now from the data, presented in the Table 2.

Burned pit graves

In spite of some peculiarities of the burned pit graves (BP) described in our first publication (Babakov et al., 2001, p. 221-222), they are of special interest and it seems worthwhile before supplementing this information to dwell on the specific features of these burials once more. That part of Bp which is very narrow and shallow is designated as Fire places (Fp) (one more previously marked type of tombs, which make only 29 items or 1,11% from the whole number of graves). In none of them the humane remains were found. The wider and deeper burned pits were named BP proper. The bones were absent in the majority of them (80,1%).

Most of those buried in the BP had different pathologies and their burial places just in burned pits were not random. Apparently it was supposed, that burning of walls, of a hole and the position of dead on a layer of pure sand and/or of ashes will protect pure ground from undesirable contamination of “dirty” (in this case - patient) flesh. The discovering of new Bp has confirmed this supposition.

Out of the fifty of the BP with any interments in them (Sarianidi, 2001. Table VIII, p. 172 and results of new excavation) four (10%) yielded skeletal remains of dogs (##258, 1939, 2087 and 87/2002). Unearthed in one grave (#1172) was a skeleton of an 8 years-old child marked with signs of delayed growth process and some fragments of the dog's skeleton (including a skull), and in another (#1800) separate bones of an adult human skeleton and dog's fang. In all other BP human bones as well as their fragments and separate human teeth and skulls were found.

Uncovered in six BP were children of two to thirteen years old (one of these has been already mentioned, i.e. the one with a dog – burial #1172). Skeleton of a child 2-2,5 years old from BP #1555 was marked with some bathrocephaly (Babakov, 2001). BP destroyed the ordinary pit burial. In the pit a woman (30-35 years old) was buried. It is possible to suggest that she was a mother of this ill child. The child's skeleton from the Bp #767 had an unusual orientation of the head – instead of some variants of north-north-west it was oriented to the east. That can be interpreted as a presence of some unusual habitués of this 5-6 years-old child.

The first adult (20-25 years-old) woman - one of the 17 adults burned in the Bp (26,7%)- lay on the left side, the head oriented east-east-south with no upper limbs (#907). Another adult woman (35-40 years old, Bp #2004) lay also on the left side but with the head to the west-west-north. She was badly ill (see palaeopathological section) and couldn't walk. Another one had the head of an adult person but extremely short and crooked bones of the extremities (Bp #1141). O. Babakov diagnosed the skeleton as a dwarf. The bones were described in details as it was mentioned above (Babakov et al., 2001; Vassiliev, Babakov, Borutskaya, 2001).

The grave #87/2002 was dug out in the late autumn 2002. It had a rectangular form (75x50) an unusual depth – 116 cm from the surface. On the south side of the Bp there was an extortionate manhole, which didn't reach the pit's floor. On the depth of approximately 90 cm the sand filled in the hole; on the depth 100-

105 cm a layer of sand with a gray ash begins. In that layer some small destroyed fragments of non-human bones and four teeth of carnivores (dogs?) were found.

Seven buried persons lay in a non-standard posture. A male person aged 35-40 (BP #370) (Fig. 1) lay supine with the head to the east-east-south; another adult's skeleton (whose sex and age could not be determined) (BP #2171) was found sitting on the floor of the grave hole, with the back resting on its wall, legs apart and thrusting with knee joints against the grave's walls, wrists in the area of the hip (Fig. 2). Unearthed in pit grave #1413 was a human skeleton with no accompanying items. Its sex belonging was determined by the hip-bone as male. Judging by the extent of seams obliteration and the state of dental system, the buried was 20-25 years old. The posture of the skeleton was unusual (Fig. 3): legs were bent at knees but the body was not lying on the hole's bottom but lay leaning against its wall; the position of ribs and spine indicate that the upper part of the body was turned at an angle to the waist section of the spine and to the hip-bone. The upper limbs were not folded at the face as it is usually done in other cases: the left one was thrown to a side in a slightly bent position and the right one was strongly and almost unnaturally bent, resting against the grave's wall. The skull was at an angle to the mandible which adjoined the wall.

This strange posture of the buried person could probably be explained by the fact that this person was not found soon after death and the body had had the time to stiffen, for which reason the people were unable to bury it in a proper position. Pointing to the difficulties encountered in making the body assume the traditional position is the broken right ulna (the radius was intact). The fracture could have taken place shortly before the death but in that case the fragments' location would have differed more strongly from the anatomic, whereas both fragments were discovered lying next to each other. The unnatural posture of the body could not be caused by the development of a pathological process because no signs of bone pathology (of, e.g., spondylosis, spondylitis, ankylosis spondyloarthritis or the like) are registered; in spite of the poor state of preservation of the bones all the vertebrae are well-formed and are easily separated from each other, with no deformation or accretion between them. At the same time, it is possible that this position of the body can be connected with the temporal nature of the interment of the given person and the misfit between the sizes of the person and those of the hole.

In the tomb #2004 was buried a woman (35-40 years). The hard osteoporosis was diagnosed on this skeleton. The long bones of the lower limbs were completely deprived of the relief, were "eaten away" by holes of different size. The disease was so strongly advanced, that at life time this woman could hardly move independently. A crossed position of the shins of buried speaks also about this.

In the tomb with the burned walls #2354 a woman 45-50

1. *The burial in the burnt pit #370.*

2. *The burial in the burnt pit #2171.*



1



2

years old was buried “head down-legs up”. But her skull was absent. All skeletal bones were in the right anatomical order. All of them were in the tomb. The legs were lying at the top of the burial, hands – near the neck on the bottom. The vertebrae preservation was bad, therefore it was no capabilities to define, how and at what place the skull was separated from the body. Without any doubt the full skeleton, but not its fragments, was put in such way in the BP.

A woman (35-40 years old) was lying supine in the BP #2396, head to the southwest. The right hand of the woman was between legs, left one – lying along the body and resting onto the wall.

Unearthed in pit grave #81/2002 was a human skeleton buried in shaft tomb with 3 ceramic vessels as accompanying items. The hipbone, bone dimensions and maturation as male determined its sex belonging. Judging by the extent of seams obliteration and the state of dental system, the buried was 20-30 years old. The posture of the skeleton was unusual (Fig. 4). His head was lying on the dromos of a distance 17-18 cm from the left scapula and thorax and was 15 cm higher than the whole skeleton. The vertebrae column and all other parts of skeleton lied on the right side in anatomical order. The lower limbs were bent in knees, the back was straight. The left hand was lying under the right angle to the thorax, the right hand was bent to the place where the lower jaw should have been, if the head would be on the normal place. The wall of north part of the dromos (where the head of buried lied) was burned to the red colour, as it can usually be seen in the BP.

During the clearing of this skeleton it was found out that it lacked both hands. First and second neck vertebrae were close to foramen magnum. The lower jaw was partly destroyed but it can be noted that the lower part of symphysis has specific damages, which can be determined as a track from impact by the cutting instrument. The same damages had the second vertebrae, which was near the first one and the skull. All this allows to make a conclusion that a given man was buried decapitated and without both hands. When were hands cut – during the life of this man or before decapitation – it is impossible to say. Now, after four thousands years since the ceremony it is difficult to explain why this man was buried in such a state. In now days in countries of Near East they chop off hands of thieves. Because of that it is possible to assume, that that custom existed in Bronze Age as well. The indirect confirmation that something in this individual - disease or his behavior - was condemned by his compatriots is the location of the head in the BP part of the tomb.

The skeletons in tombs ##2304, 2283 at the necropolis were in unusual position too. The first one belongs to the girl 11 years old. She was lying on the right side in crouched pose, the hands were near the face; her head was strongly turned downwards. The vertebrae were normal, no one of them was absent, but her chin was near the sternum. The floor of the BP was burnt up to black colour, which is very rare at the Gonur.

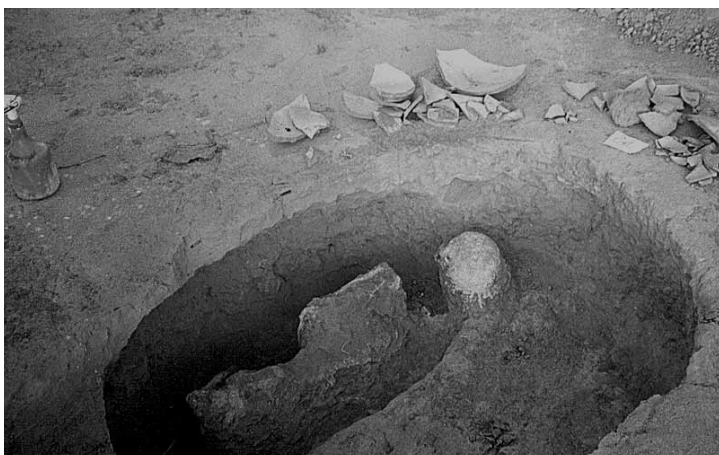
In the second BP (#2936) the adult person was lying supine on a thick ash-sand layer. The hands were put near the pelvis. Near his legs, slightly bent in knees, the large amount of black ash and carbon was placed. It is possible to assume that this individual was badly ill, espe-

3. Burial in the burnt pit #1413.

4. Burial in the burnt pit #81/2002.



3



4

cially his lower extremities. But the preservation of the skeleton is very bad and his main pathology cannot be analyzed. The bones or their tracks show that all of them were on their own anatomical places.

Not clear was a position of an adult man buried in the BP#2941 which dimensions were 80×60×35 cm. Only contours of a skull, lying on the right side with south-west orientation and some fragments of femur were found. The preservation of bones was very bad. The age at death determined by teeth was 30-40 years. It is possible to suppose that this was another fractional burial in the BP described by V. Sarianidi in the main part of this book. One pays attention to the large sizes of a pit and to full absence even of tracks of majority of the bones of a skeleton.

Rather indicative is tomb #2871 in the Area 5, where the strongly bent man 30-35 years old was buried. He lied prone, his knees were near the frontal bone, the right hand was lying along the body – to the foot, but with the left one he clasped the right shoulder. In such pose this individual was put inside the oven (Fig. 5). This man was very ill, his right leg was shorter than the left one. He had a strongly developed poliomyelitis: a specific form of thorax, the main part of ribs bears tracks of knitted fractures; both hip joints (more right) were strongly destroyed; the hip bones were not thick, they were loosen; the right head of femur was destroyed as a whole (Fig. 6). He lost all teeth of the upper jaw in the early years: all alveolar part was obliterated and palatine has tracks of the teeth of the lower jaw. The teeth row on the lower jaw was not straight respectively: some teeth were higher, some lower. But the skull's sutures are normal; their status corresponds with the teeth eruption. The hand's bones are strong, relief. This skeleton need to be studied more detailed in special publication.

Thirteen of the BP yielded separate bones, fragments, "bone medley", separate teeth (graves #250 and #1176), a skull and long bones of the upper limb (grave #1017). Unearthed from grave #1075 were two female skulls (adults, 25-30 and matures, 30-35 years old).

Unfortunately the poor state of preservation of the material in situ and the specific modern conditions of nature in the area of excavations (extremely low humidity, strong winds, and rather high solarisation) have not allowed as yet to collect a sufficiently representative series of osteological materials and strongly impeded the analysis of paleopathologic traits. At the same time, the absence of complete data on the diseases of the people buried in Gonur does not make it possible to draw the main conclusion that the data cited above indicate that most likely the BP were used to bury the dead with some physical (and possibly psychic?) diseases, and that the burning of the grave walls, as is justly suggested by the excavation leader V. Sarianidi, was done probably to protect the 'pure' land from its possible 'contamination'.



5



6

5. Burial in the oven #2871.
General view.

6. Burial in the oven #2871.
The skeleton.

Paleodemography

Age and sex of the dead

As it has already been noted above the sex and age belonging of the buried people was determined by different specialists and on the basis of different characteristics, i.e. the extent of knitting of skull bones, the degree of prominence of the relief of long bones and of skull bones, as well as the degree of ossification of teeth, their obliteration and eruption. When only teeth or only skeletal bones were found in a grave the determination of both sex and age belonging could of course, produce somewhat different results. We have undertaken an attempt to generalize all the accumulated data pertaining to sex and age determination in order to reconstruct main demographic indices of the population of Gonur-Depe. In this connection the data obtained by O. Babakov and those mentioned by the Italian researchers and B. Hampfill have been supplemented and specified by the data of our analysis of teeth samples. The main differences between the researchers (in the cases when operative diagnosis and teeth samples were available from a given grave) were mostly connected with the ages of children, and in some cases sex belonging was specified.

When paleomaterials are analyzed from the point of view of sex and age belonging some of them always fall into the category of «uncertain» which are marked in Table 3 with the sign «?». As it can be assumed the sex and age proportions in the «uncertain» part of the population coincide with those where sex and age belonging is rather clear-cut, these data were recalculated with due allowance for sex and age correlations. The total number of individuals included into the analysis is 1252 which is approximately a bit more than a half of the overall number of those buried in the necropolis. The results thus obtained are shown in Tables 4-6. They differ from those in Table 3 which is quite explainable, as it has been noted just above, in view of the methodological differences between the researchers.

Sex and age determination on the basis of dental system traits

The main object of our study is represented by teeth samples and mandible fragments of 358 persons. Age belonging of persons under 18 years old was determined with the accuracy of up to one year by degrees of their teeth' ossification and time of eruption (Altukhov, 1913; Brothwell, 1963), in the case of subsequent cohorts age was determined in accordance with the scheme of M. M. Gerasimov (1955) on the basis of the degree of their obliteration. Although the data obtained cannot fully represent the demographic situation as the material is too fragmentary, nevertheless, they are probably the only and sufficiently reliable at that indicator of social and biological processes in the population main correlations within which they have been registered with a certain degree of probability

In accordance with the obtained data the share of the early ages (up to 18 years) in the population was 36.5%, the number of children under three years of age being extremely small. From the archaeological description it is known that the ruins of Gonur palace have yielded a great number of children's graves not older than seven years (no age determination was carried out then). These, of course, were not children of those who were buried in this necropolis because during its functioning the palace and the surrounding structures were under construction and were inhabited later. But the very fact of finding in one place a cluster of exclusively children's burials makes it admissible to suppose that in the time of functioning of the necropolis an overwhelming majority of deceased children was buried in a specially allocated area too.

Table III. Main sex-age correlations in the population from Gonur-Depe (determined by characteristics of the dental system)

Table 3

Sex	Males		Females		?		Total	
	N	%	N	%	N	%	N	%
Age								
Infantilis I (up to 7 years old)	12	9,0	14	9,1	7	43,75	33	10,9
Infantilis II (7 – 14 years old)	28	20,9	14	9,1	7	43,75	49	16,1
Juvenis (15- 18 years old)	15	11,2	12	7,8	2	12,5	29	9,5
Adultus (19 – 34 years old)	22	16,4	39	25,3	0	0	61	20,1
Maturus (35 – 54 years old)	49	36,6	63	40,9	0	0	112	36,8
Senilis (more than 55 years old)	8	6,0	12	27,8	0	0	20	6,6
N	134	100	154	100	16	100	304	100

Table IV. Main sex-age correlations in the period of childhood and youth (up to 18 years, %) by summarized data (of craniology, osteology and odontology).

Table 4

Age cohort	Boys	Girls	Total
Infantilis I	40,9	10,5	24,4
Infantilis II	37,0	50,85	47,7
Juvenis	22,1	29,4	27,9
N	76	90	166

Table V. Main sex-age correlations among adults (older than 18 years, %) by summarized data (of craniology, osteology and odontology)

Table 5

Age cohorts	Males	Females	Total
Adultus	55,7	66,2	60,9
Maturus	40,8	31,2	36,0
Senilis	3,5	2,5	3,1
N	545	541	1086

Table VI. Main sex-age correlations in the population of Gonur-Depe (all age cohorts) by the summarized data (of craniology, osteology and odontology) (%)

Table 6

Age kohort	Males	Females	Total
Infantilis I	5,0	1,5	3,2
Infantilis II	4,5	8,1	6,3
Juvenis	2,7	4,7	3,7
Adultus	48,8	56,8	52,9
Maturus	35,8	26,8	31,2
Senilis	3,1	2,2	2,7
N	621	631	1252

According to the data of Achadi and Nemeskeri (1970), the share of children of the early ages was approximately two thirds of the aggregate number of children, i.e. in this given group their number could be 117 while there were five (195:39) children per one women in her reproductive period (from 16 to 34 years). With such a fertility index the population must have been growing rapidly but the mortality rate of children was very high amounting to 147,7% of the deceased adult population of the post-reproductive ages, i.e. only approximately one out of three born children lived up to the age of maturity. According to the data of studies in dental system the average lifespan was 36.6 years, that of men – 35.7 and of women – 37.1 years. Such high indices are an indication of a rather high life standard of this population. The average life span, including children (i.e. the length of one generation), was 28 years if alone the data obtained by us are taken into consideration. This is also a very high indicator. However, one should not be guided by it because in the materials studied there is no real information concerning children of early ages.

A special mention should be made of the rather essential difference in mortality rates between boys and girls in the second children's age cohort (infantilis II) and in the youth (juvenis) period. It cannot be excluded that involved were some rituals and, in particular, the ritual of boys' initiation which was accompanied by a heightened risk the subjects of initiation were exposed to at their testing and a poor state of hygiene. Beginning from their reaching the child-bearing age (from 16 years) the rate of mortality among women increases significantly and is at its maximum at the age of maturity (maturus) as also among men. Women lived up to the old ages more often than men. The high mortality rates among women of the child-bearing ages was, probably, caused also by the poor state of obstetrics and hygiene in the ancient society as well as by the high extent spreading of infectious diseases. An indirect indication of the latter is the prevalence of enamel hypoplasia whose frequency has been registered at 53.8% (n=165). Enamel hypoplasia is a consequence of undernourishment which appears as a result of temporal real shortage of food resources but most often it is a consequence of infectious diseases of the childhood period.

The ratio of the numbers of men to the numbers of women (85:133)×100%=63.9% testifies to the predominance of the latter in the population. As this situation stands in contradiction to the normal biological distribution of the sexes (1:1) it can be supposed that a portion of the women (about 36%) could be included into the population from outside or else that a group of some newcomers came to the new territory, pressed out some of the local men and incorporated local women into their own composition. From the point of view of archaeology no differences in the funeral ritual or funeral gifts are traceable in this monument, hence, if the second supposition is correct, the population that had founded Gonur-Depe and inhabited it did most likely come to this territory not in one but in several waves.

It is known that the population of Gonur-Depe existed for a rather long period of time, i.e. for about six or seven centuries, during which some 24-28 generation could replace each other (if the standard length of a generation was 25 years). In the 2323 unearthed graves 2383 people were buried because 4% of the graves were double ones (93 persons), 1% – triple (23 persons) and 3.4% proved to be empty (cenotaphs). Judging by these data the numerical size of the original population which laid the beginning to the existence of the Gonur civilization could be calculated by the arithmetical progression equation $=1/2 \{x + [x \pm (n-1)]\}n$, where $a=0.68$, $n=24$ (or 28) as being 87 (or 72) people, respectively.

Sex and age determination by craniometric and osteological traits

Sex and age determination by skulls and postcranial skeletons was carried out in accordance with the adopted in our home science method (Alekseev, Debetz, 1964). The data thus obtained (no Table is cited) have been verified by the data on the dental system; presented below are summarized data concerning the determination of sex and age belonging of the population buried in the necropolis of Gonur.

As it can be seen from the summary Table 4 eliminative selection in the population of Gonur was directed at reducing the male part of the population at early ages, mortality rates among boys of the first children's age being extremely high as caused probably by weakened immunity in their early childhood (infantilis II). These rates are somewhat lower in the second period when they remain rather high in the period of the boys' physiological (hormonal) prepuberty reformation and are at that time connected with certain rituals, while in the youth period (juvenis) these mortality rates among boys drop down drastically.

In the case of girls the highest rates of mortality are registered in the second period of childhood when (infantilis II) hormonal reformations begin and their immune system is somewhat weakened. In the youth (juvenis) period this indicator goes down significantly but remains at a rather high level compared to that of the boys.

When both sexes reach the age of maturity (matures) and enter the main reproductive stage in their life mortality rates grow up drastically in both cases. In the case of women the explaining factor can be complications in connection with child-bearing while high mortality rates among men – in the absence of military conflicts and in the peaceful conditions of life can be caused only by the spreading of infectious diseases, probably, of an epidemic nature.

About 39% of the adult population lived up to the mature and senile ages; their life span seems not to have exceeded 70 years and the cases of longevity among men were somewhat more numerous than among women. In the matus cohort men are positively more numerous than women.

A calculation of the duration of life of the adult population by the summarized data has produced the following results: average life-span of men – 35.1 years, of women – 33.5 years, and that of the adult

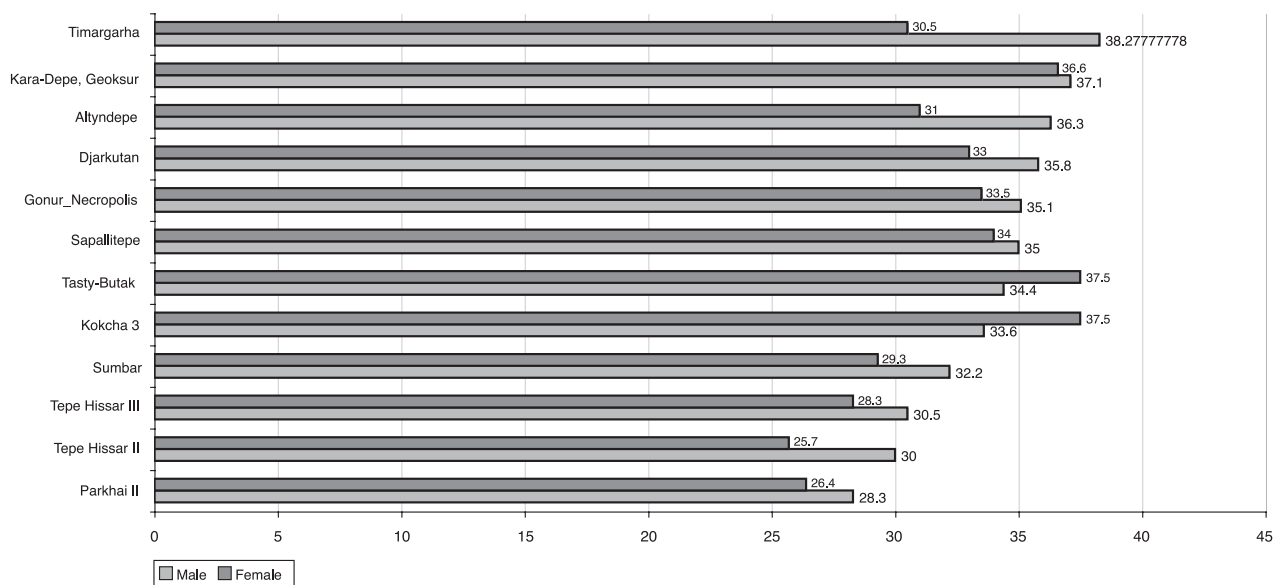


Fig 7. Life span in the Bronze age populations.

population as a whole – 34.3 years. The indices thus obtained are somewhat lower than those cited earlier and are close to those of the population of Jarkutan and Sapallitepa (Khodzhayov, 1977); such low indices are characteristic on the whole of the entire Middle Asian area (Alekseev, 1972). Such populations as Parkhai II, Sumbar (Kiyatkina, 1987) and Tepe Hissar II, III (Krogman, 1949) show lower indexes; Timargarha (Bernhard, 1967), Kara-Depe, Geoksyur, Altyndepe, Kokcha 3 and Tasty-Butak (Kiyatkina, 1987) – the larger ones (Fig. 7). Correlation between sexes is close to a unity although women are a bit more numerous than men M:F=0.98.

Proceeding from the above, the following conclusion is possible: The agrarian population of Gonur which included into its composition off-springs of the most ancient population of both South Turkmenistan and neighboring territories belonged, no doubt, to the range of south-Europoid populations which created a flourishing civilization. The long duration of life and high fertility of the population provided prerequisites for the population's rapid growth in urban conditions which in their turn became later the cause of the spreading of infectious diseases and epidemics. Medical knowledge was not of a sufficiently high level at the time which was, probably, the frequent cause of the loss of children in early ages and of child-bearing women in the main reproductive period.

Table 7

Table VII. Main craniometric parameters of new skulls from the Gonur necropolis (males).

Measurements and indices (No. by R. Martin)	N	M	S	min	max
Max. cranial length (1.)	20	187,8	5,22	180	197
Max. cranial breadth (8.)	20	131,3	7,34	115	142
Cephalic index (1:8)	19	70,26	4,08	61,83	77,22
Height from basion (17.)	16	135,1	3,49	128	141
Height-length index (17:1)	15	71,7	2,73	66,84	75,96
Height-breadth index (17:8)	15	102,2	6,64	93,43	115,83
Skull basis length (5.)	17	103,5	6,62	94	119
Minimum frontal diameter (9.)	17	92,7	5,27	78	100
Frontal-breadth index(9:8)	16	70,67	3,63	64,71	79,17
Facial basis length (40.)	9	99,22	6,16	87	107
Bizigomatic diameter (45.)	12	124,0	5,85	115	133
Upper facial height (48.)	19	69,79	6,36	55	85
Upper facial index (48:45)	12	55,32	4,66	46,83	63,41
Nasal height (55.)	18	53,4	5,73	35	59
Nasal breadth (54.)	18	23,9	2,28	19	29
Nasal index (54:55)	16	45,47	6,06	38,98	60,42
Orbital breadth (mf) (51.)	17	41,3	2,49	37,7	45,7
Orbital breadth (d) (51a.)	10	37,8	3,28	29,9	41,2
Orbital height (52.)	15	31,9	1,68	28,6	35
Orbital index (52:51)	15	77,89	6,43	70,14	92,11
Nasal projection angle (75(1).)	8	35,38	5,9	24	41
Maximum projective mandibular length (68(1).)	8	108,6	6,86	98	119
Mandibular length (68.)	14	87,6	8,21	71	98
Height of mandibula (70.)	16	64,1	6,56	54	76
Minimum breadth of mandibula (71_.)	16	34,6	2,34	30	39
Bicondylar breadth (65.)	5	115,2	8,47	102	125
Bigonial breadth (66.)	8	100	5,68	93	111

Craniometry

The series both from the necropolis and from the Area 5 (Tables 7-10) is characterized by dolichocrania. The available data describe a majority of the inhabitants of Margiana as having on the average a very long and narrow cranium and a high and not broad face with a strongly prominent nose. At the same time, however, there are three brachicranial skulls in the series, six male mezocranial and ten female mezocranial ones (See: Babakov et al., 2001, Tables 5-7, pp. 111, 112) which have been registered in the Bronze Age population of Turkmenistan for the first time. Some individual brachicranial skulls of the Bronze Age were registered earlier in Sialk and Tepe Hissar II on which basis it is possible to speak about connection between Gonur population and Fore-Asian brachicranial center as one of the most ancient. It is even more characteristic that brachy- crania in Gonur has been registered exactly among men while in the contemporary populations the cephalic index of women is always higher by 1.5 than that of men, i.e. women are more brachicranial than men.

In almost all the basic parameters sex dimorphism in the series is expressed as weak. Most probably the male and female groups from the Gonur necropolis belong to one and the same morphological type. On the whole the series shows vividly expressed Europoid characteristics. A preliminary analysis of craniologi-

Table VIII. Craniometric parameters of new skulls from the Gonur necropolis (females).

Table 8

Measurements and indices (No. by R. Martin)	N	M	S	min	max
Max. cranial length (1.)	20	180,4	4,11	173	188
Max. cranial breadth (8.)	20	125,4	6,61	116	139
Cephalic index (1:8)	20	69,20	4,49	61,86	69,20
Height from basion (17.)	14	129,1	4,84	121	141
Height-length index (17:1)	13	71,61	2,68	67,21	77,05
Height-breadth index (17:8)	12	102,21	7,01	90,3	113,7
Skull basis length (5.)	14	99,6	4,11	93	109
Minimum frontal diameter (9.)	19	89,3	5,89	77	101
Frontal-breadth index(9:8)	15	70,94	6,10	59,69	82,35
Facial basis length (40.)	10	96,7	7,01	83	106
Bizigomatic diameter (45.)	13	115,4	8,67	105	131
Upper facial height (48.)	16	63,8	6,25	55	78
Upper facial index (48:45)	12	56,07	4,71	50,38	65,71
Nasal height (55.)	15	48,9	4,08	43	56
Nasal breadth (54.)	14	22,8	2,38	18	26
Nasal index (54:55)	13	47,22	5,80	38,89	60,47
Orbital breadth (mf) (51.)	14	40,0	2,25	35,6	43,6
Orbital breadth (d) (51a.)	8	35,5	3,97	27,5	39,9
Orbital height (52.)	14	33,9	2,22	30,0	39,3
Orbital index (52:51)	14	85,02	6,27	74,07	91,57
Nasal projection angle (75(1).)	9	30,6	5,88	22	39
Maximum projective mandibular length (68(1).)	8	106,6	9,02	97	126
Mandibular length (68.)	10	84,3	8,35	71	94
Height of mandibula (70.)	13	57,2	6,3	48	66
Minimum breadth of mandibula (71_.)	16	31,6	2,94	26	37
Bicondylar breadth (65.)	6	109,8	7,14	98	117
Bigonial breadth (66.)	8	89,9	8,48	77	103

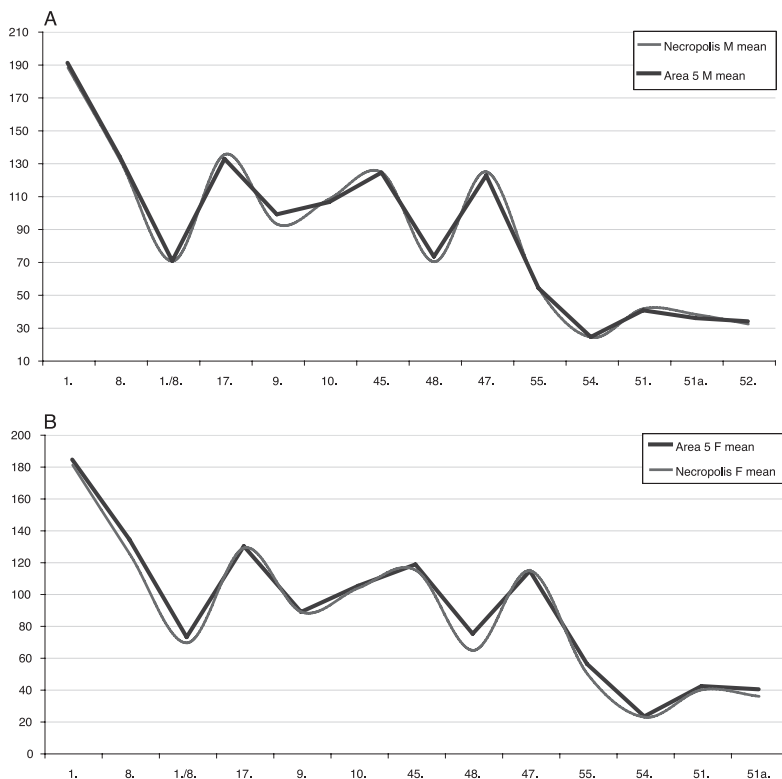


Fig 8. Comparison of the Gonur Necropolis and Area 5 of North Gonur by main craniological traits. A - Males; B - Females. On the abscissa - Nos. by R. Martin.

ically correct, since the sample from the Area 5 is rather insignificant on number, but nevertheless, any special deviations from the main group are not shown. That means that the latest population (Area 5) of the Gonur Depe represented the off-springs of the earliest one.

Osteology

As it was shown in the Table 2 new osteological material was collected during 2001-2002 years excavation both at necropolis and in Area 5. Main received statistical parameters and also the calculated statures are presented in the Tables 11-12. No material published earlier (Babakov et al., 2001) was included. The brackets in the Table show that these parameters were restored on by being available – right side by the left one, femur by tibia, radius by ulna and so on. The stature was calculated as an average between the several bones and several cited methods. The methods by Trotter and Glaser for Europoids (1952), G. Debetz (1971), V. Bunak (1961) and G. Olivier (1960) were used. During the calculations the heterogeneity of the group was confirmed: in some cases one formula in another gave deviated results. It can be said that Trotter and Glaser formula gave the most stable meanings in the majority of cases. The formula by V. Bunak, as it was known, gives best results in the groups with middle stature. And in our case, when the bones dimensions are quite small, this formula is more agreed with other methods dates. Sometimes the stature, calculated by proximal and distal segments of limbs differ very large. From our point of view that can be the evidence of presence of components with different constitutional characteristics in Gonur population. But the final conclusions are necessary to do on greater number of a material.

The average stature of men varies from 160 to 179,5 cm (mean 168,3) at necropolis and from 159,9 to

cal parameters points, on the one hand, to a morphological heterogeneity of the series, and to a combination of features belonging to archaic and progressive forms – on the other.

Here we present a statistical characters of only new data, collected during the 2001-2002 years at the necropolis and Area 5 respectively.

The submitted data do not contrast with earlier published main series from the necropolis (Babakov et al., 2001). An availability of different combinations of the craniological features and very large variation (sigmas in many cases are almost twice more than standard ones) stay the most important its characteristics. Six mezocranial individuals at the necropolis and one in Area 5 are found out – three men and four women. The comparison between populations, buried at the necropolis and Area 5 by the craniological traits shows that they presented the samples from one general unity, without any specific trend in time (Fig. 8). It is espe-

Craniometric parameters of new skulls from the Area 5 (males).

Table 9

Measurements and indices (No. by R. Martin)	N	M	S	min	max
Max. cranial length (1.)	13	190,7	9,07	176	204
Max. cranial breadth (8.)	9	134,7	7,30	128	147
Cephalic index (1:8)	7	70,98	6,51	64,71	83,52
Height from basion (17.)	10	132,1	6,15	124	142
Height-length index (17:1)	9	70,60	3,59	65,63	76,97
Height-breadth index (17:8)	6	97,82	9,05	84,35	107,81
Skull basis length (5.)	8	104,6	12,5	90	125
Minimum frontal diameter (9.)	6	101,4	7,99	90	108
Frontal-breadth index(9:8)	4	77,59	8,26	65,31	82,95
Facial basis length (40.)	4	95,7	6,81	88	101
Bizigomatic diameter (45.)	6	123,8	3,59	121	129
Upper facial height (48.)	10	69,4	4,31	64	74
Upper facial index (48:45)	4	55,34	3,35	52,89	60,16
Nasal height (55.)	12	52,1	5,09	46	63
Nasal breadth (54.)	11	23,6	3,25	18	29
Nasal index (54:55)	9	47,7	5,99	36,7	55,3
Orbital breadth (mf) (51.)	8	40,0	3,75	33	45
Orbital breadth (d) (51a.)	2	35,3	7,42	30	40,5
Orbital height (52.)	8	33,3	3,35	28	38
Orbital index (52:51)	8	83,42	6,38	73,33	92,01
Nasal projection angle (75(1).)	3	28,0	6,00	22	34
Maximum projective mandibular length (68(1).)	3	112,0	5,57	106	117
Mandibular length (68.)	3	81,3	4,51	77	86
Height of mandibula (70.)	9	55,9	7,93	47	69
Minimum breadth of mandibula (71_.)	10	32,2	5,03	24	39
Bicondylar breadth (65.)	2	122,5	13,4	113	132
Bigonial breadth (66.)	2	98,5	4,95	95	102

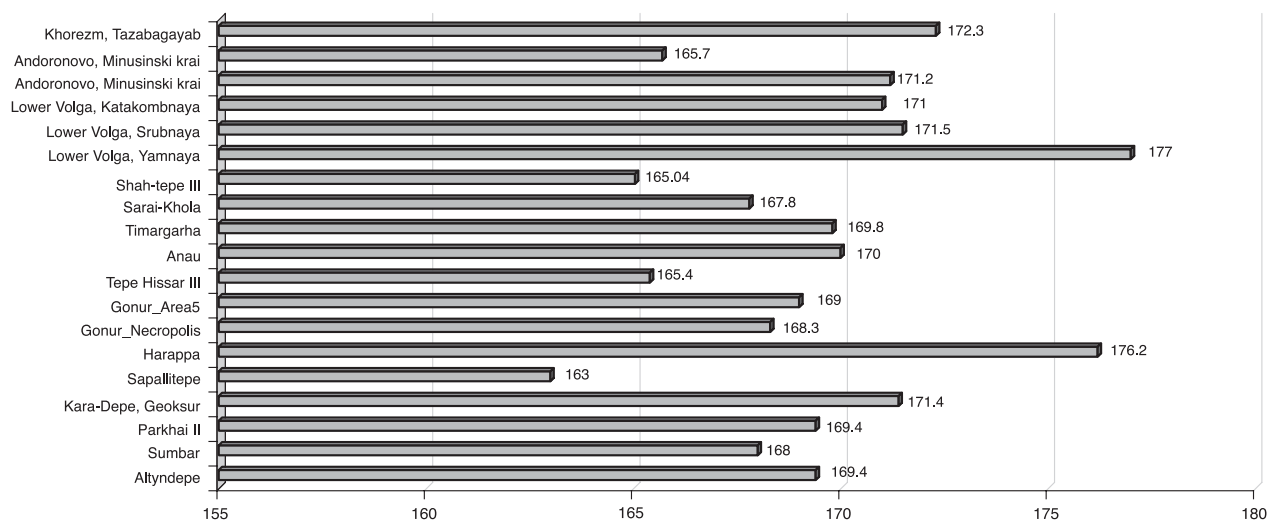


Fig 9. Stature of the Bronze age populations.

Table 10

Craniometric parameters of new skulls from the Area 5 (females).

Measurements and indices (No. by R. Martin)	N	M	S	min	max
Max. cranial length (1.)	5	182,0	5,34	173	186
Max. cranial breadth (8.)	3	133,7	9,71	123	142
Cephalic index (1:8)	3	72,40	5,49	66,13	76,34
Height from basion (17.)	4	129,5	6,45	125	139
Height-length index (17:1)	4	70,27	3,00	68,31	74,76
Height-breadth index (17:8)	3	98,2	5,72	92,65	104,07
Skull basis length (5.)	4	96,3	3,86	92	100
Minimum frontal diameter (9.)	5	88,2	9,26	78	99
Frontal-breadth index(9:8)	3	69,78	1,52	68,29	71,32
Facial basis length (40.)	3	97,7	7,23	93	106
Bizigomatic diameter (45.)	3	118,0	10,44	106	125
Upper facial height (48.)	4	74,5	5,80	67	81
Upper facial index (48:45)	2	62,65	12,80	53,60	71,70
Nasal height (55.)	4	55,5	6,24	48	63
Nasal breadth (54.)	5	22,8	3,67	17	26
Nasal index (54:55)	3	83,56	4,20	80,20	88,27
Orbital breadth (mf) (51.)	3	41,70	2,98	39,2	45,0
Orbital breadth (d) (51a.)	3	39,67	3,02	37,1	43,0
Orbital height (52.)	4	33,88	2,53	31,1	37,0
Orbital index (52:51)	4	43,79	2,37	40,32	45,61
Nasal projection angle (75(1).)	2	28,0	2,83	26	30
Maximum projective mandibular length (68(1).)	4	100,3	11,09	92	116
Mandibular length (68.)	4	83,5	10,08	74	97
Height of mandibula (70.)	7	53,0	7,87	41	66
Minimum breadth of mandibula (71_.)	7	38,9	16,43	31	76
Bicondylar breadth (65.)	3	105,0	11,53	93	116
Bigonial breadth (66.)	4	86,5	7,55	78	96

176,0 cm (mean 169,0) in Area 5, that can be interpreted as a medium or a little above the medium stature. Women, as usually, were something lower – their stature varies from 149,1 to 171,4 cm (mean 158,0) and from 150,5 to 164,4 cm (mean 156,8) respectively, that can be interpreted as a medium stature (Fig. 9). The differences between these data and stature published in 2001 (Babakov et al.) can be explained by application of various methods of calculation of the stature. In our first publication the methods of Dupertui & Haddon and Bunak's one were used. The previous results are stacked in limits of variation, derivated by individual determinations by different bones. Marked differences on stature between the men and women are characteristics of majority of Neolith-Bronze ages populations, though the individual variation is more significant (in the limits of normal one).

The standard deviations of the variation series of the osteological traits are significantly smaller than those of the craniological ones. Most likely it is stipulated by the close ecological conditions, in which the earlier and latest parts of Gonur population lived.

The comparison between the earlier (necropolis) and latest (Area 5) parts of population by some osteological traits shows the same results in addition to conclusion, which was received on craniological parameters – both of them are part of one general unity without large specific trends in time (Fig. 10).

The Fig. 11 shows that both men and women from necropolis as well as from the Area 5 are similar in their proportions but as it may be assumed male and female skeletons differ by their absolute dimensions.

Finishing the brief analysis of the variation of the skull's and bone's dimensions it is necessary to make a general conclusion, that investigated material demonstrates the very close likeness of the population of the necropolis with that from the Area 5. In spite of the fact that this group inhabited Murgab delta long time enough (about eight hundreds – one thousand years) and environmental conditions have changed because during this period the Murgab river has moved to the west and the sands have come, it is possible to say that no large changes in physical characters of the settlers took place. No significant wave of migrants from any region has come there later. But some genetic flow from the neighboring areas can be assumed. The cranial and osteological material confirms the previously made conclusion (Babakov et al., 2001) on the heterogeneity of Gonur population both from the point of view of the presence of more archaic (e.g., the encountered extremely low frontal bone inclination angles, the elongated and narrow form of the alveolar arc, relatively broad and low orbits) and more progressive forms, and from the point of view of the presence of a Veddoid admixture (facial and alveolar prognatism in a few skulls, expressed platirinnia) which testifies to the participation in the formation of the anthropological type of the Gonur population of a component traceable in its origin back to the most ancient population of Middle East (from Mesopotamia to North India).

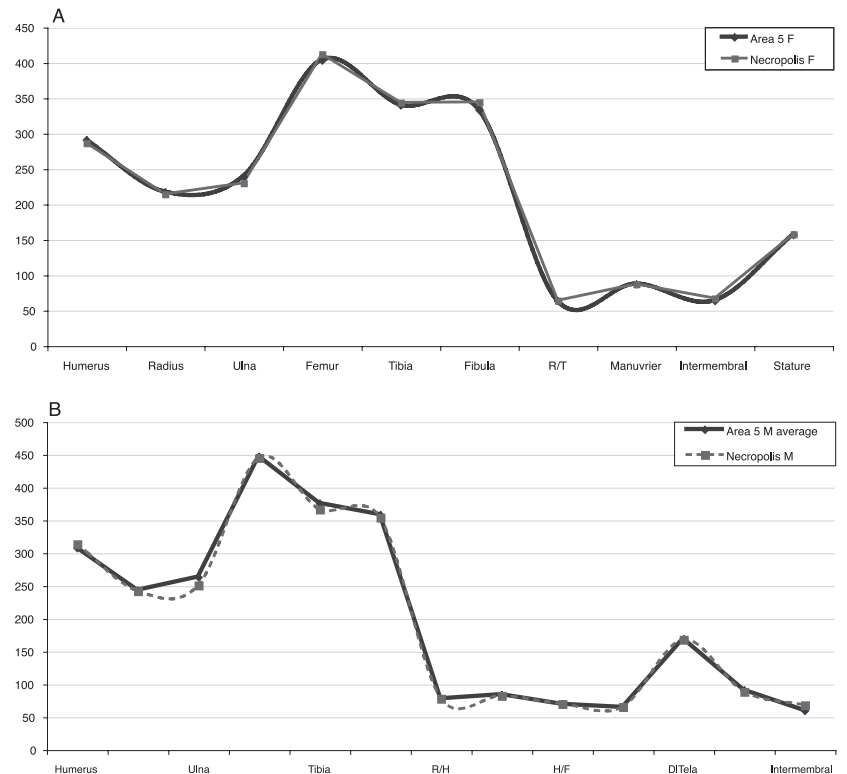


Fig. 10. Comparison of the Gonur Necropolis and Area 5 by the dimensions and proportions of the long bones. A - Males; B - Females.

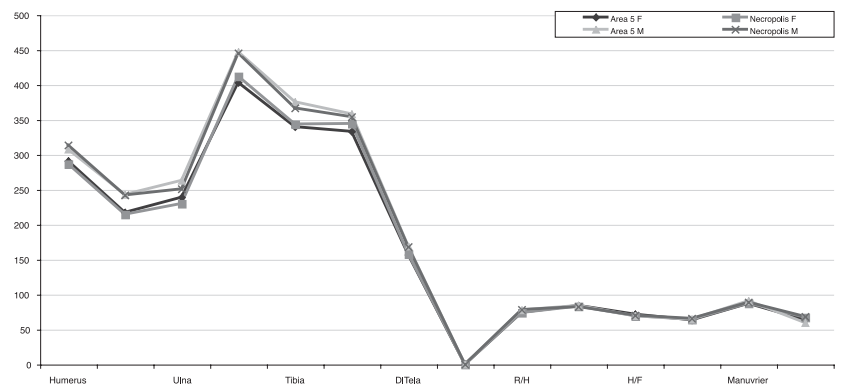


Fig. 11. Comparison of males and females skeleton dimensions of the Necropolis and Area 5.

Comparison of the Gonur craniological series with synchronous data

In the era of the Aeneolithic and Bronze Ages the huge territory of Middle Asia was distinctly divided into two historic-cultural areas. The first of these, i.e. the southern one embraced south-western and southern Turkmenistan, southern and to some extent central Uzbekistan and southern Tajikistan, and was an area of formation of protourban-type civilizations. The second, i.e. the northern one embraced the northern plain

Table 11

Some osteological parameters of the population of the Gonur necropolis.

Number of burial	Age	Humerus	Radius	Ulna	Femur	Tibla	Fibula	R/H	T/F	H/F	R/T	Trotter Glaser 1952	Debetz 1971	Bunak 1961	Olivier 1960	Average Stature	Inter-membral index	Index Manuvrier
2013	35-40	[333]	[247]	174	463	406	397	74,17	87,69	71,92	60,84	175,25	171,2	173,08	173,5	173,26	66,74	92,54
2014	40-50	353			463	[379]			81,86	76,24		174,67	175,94	169,84	173,67	173,53		89,10
81/2002	25-30	282	[222]	[239]	410	363	352	78,72	88,54	68,78	61,16	162,8	158,4	161,6	159,7	160,6	65,20	88,31
2029	40-45		211	226		[356]					59,27	161,33	160,71		157,7	159,95		
2335b	60-70		270	291								181,5	176,5		180,5	179,5		
2342	25	329	[259]	[269]	[473]	[364]	351	78,72	76,96	69,56	71,15	172,17	169,95	169,24	170,5	170,46	70,25	90,30
2380	30-35	349	[240,5]	256	451	[385]		68,91	85,37	77,38	62,47	172,8	170,03	169,12	170,2	170,54	70,51	90,13
2453	25-30	[352]			[471]	[370]	369		78,56	74,73		173,75	175,81	169,72	172	172,82		89,39
2461	40-50	302			437	359	336		82,15	69,11		164,87	167,87	164,32	163,37	165,11		88,47
2509	40-50	[321]	[278]	[299,7]	[430]	[359]		86,60	83,49	74,65	77,44	174,2	168,18	163,54	173,1	169,76	75,92	85,09
2525	40-50	320	259	267	507	423		80,94	83,43	63,12	61,23	177,2	174,74	180,4	174	176,58	62,26	98,29
2619	17	[283]	[229]	248	397	338		80,92	85,14	71,28	67,75	161,9	173,9	157	159,6	163,12	69,66	82,49
2624	30-40	[275]	[243]	[269]	430	[354]		88,36	82,33	63,95	68,64	161,6	160,45	160,08	164,5	161,66	66,07	89,05
2628	30-35	[281]	[204]	[210]	[397]	331	313	72,60	83,38	70,78	61,63	156,5	173,15	163,84	155	162,12	66,62	82,21
2635	16				439	353	341		80,41			165,5	180,86	163,84	165	168,8		85,93
2639a	50-60	323	245	258	477	[385]	358	75,85	80,71	67,71	63,64	171,5	169,75	172,48	169,5	170,81	65,89	93,21
2650	30-35				443	348	338		78,56			165	163,39	163,72	166,5	164,65		88,13
2670	17	[282]	[223]	[241]	409	319		79,08	78,00	68,95	69,91	160,2	173,15	156,16	157,4	161,73	69,37	82,41
2726	35-55				[445]	[390]			87,64	0,22		172,5	168,7	169	172	170,55		90,00
2740	30-35	[272]			[447]	[369]	364		82,55	60,85		166	162,95	166,72	164,25	164,98		91,05
2760	50-60	[323]										170	173,97		166	169,99		
2802	35-40				[413]	[346]			83,78			163	159,53	159,08	162,5	161,03		86,35
2830	30-40	[353]	[260]	[266]	[483]	[383]	377	73,65	79,30	73,08	67,89	175,67	173,89	172,72	173,92	174,05	70,79	91,68
"B"	40-50				467	[388]			83,08			174,5	171,11	171,4	174	172,75		91,12
Min		272	204	174	397	319	313	68,91	76,96		59,27	156,5	158,4	156,16	155	159,95	62,26	82,21
Max		353	278	299,7	507	423	397	88,36	88,54		77,44	181,5	180,86	180,4	180,5	179,5	75,92	98,29
Mean		313,71	242,18	250,98	445,3	366,7	354,8	78,21	82,52		65,62	168,93	169,76	166,52	167,43	168,26	68,27	88,82
S		29,65	22,11	32,42	29,71	24,46	22,72	5,64	3,24		5,32	6,56	6,06	6,04	6,63	5,57	3,54	3,88
Number		17	14	14	21	22	11	12	21		13	24	24	21	24	24	12	21
Females																		
2004	35-40	308										165	169,57		159,5	163,39		
2052	30-35	276	183	198	[393]	[318]		66,30	80,92	70,23	57,55	148	159,84	151,32	153	155,44	64,56	83,72
2354	45-50				428	[338]			78,97			159,75	156,31	157,92	163,5	159,37		88,17
2373	40-50	277			425	333			78,35	65,18		158,5	155,34	156,96	162,5	158,32		87,80
2396	35-40	284			428	[354]			82,71	66,36		159	156,54	159,84	161,33	159,18		90,35
2406	18-20	[292]			[457]	[375]	368		82,06	63,89		165,12	160,4	165,84	166,5	164,46		93,49
2412	50		[216]	232	373	[311]			83,38		69,45	153,12	147,26	148,08	154,87	150,83		83,01
2450	40-50				451	[376]			83,37			168	163,67	165,24	170,75	166,91		91,23
2452	17																	
2488	25-30	[315]	[250]	[260]	[476]	[411]		79,37	86,34	66,18	60,83	172	169,27	172,4	171,8	171,38	63,70	96,13
2523	50-60																	
2610	50-60	268										148	150,3		<150	149,15		
2616	25-30		[214]	[235]								157,5	147,59			152,54		
2620	50-60	[289]	[220]	[239]	388	[328]	[321]	76,12	84,54	74,48	67,07	155,83	153,8	151,92	157,5	154,76	71,09	84,69
2623	18-20	[292,5]	205	[224]	405	[309]		70,09	76,30	72,22	66,34	153	155,12	151,68	156,6	154,1	69,68	84,82
2672	30-40	274	214	223	392			78,10		69,90		153,3	150,52	152,16	155	152,74		
2705	35-40				[388]	[334]			86,08			154	151	152,64	154	152,91		86,51
2710	35-40	306			436	[383]			87,84	70,18		165,33	178,62	164,28	166,67	168,72		89,14
2755	30-35				[420]	[390]			92,86			166	161,62	163,2	178	167,2		88,94
2786	20-30	[294]			385	[321]			83,38	76,36		153	157,8	150,68	156,67	153,44		84,22
2794	20-30				[391]	309			79,03			151	164,27	150	155,5	155,19		82,57
2639b	17	[252]			[373]	[311]			83,38	67,56		144,5	150,14	148,08	153,75	149,12		83,96
Min		252	183	198	373	309	321	66,30	76,30	63,89	57,55					149,12	63,70	82,57
Max		315	250	260	476	411	368	79,37	92,86	76,36	69,45					171,38	71,09	96,13
Mean		286,73	214,57	230,14	412,3	343,8	344,5	74,00	83,09	69,32	64,25					157,96	67,26	87,42
S		17,51	19,90	18,79	30,76	33,22	33,2	5,58	4,07	3,94	4,90					6,82	3,67	3,96
Number		13	7	7	17	16	2	5	16	11	5					20	4	16

Some osteological parameters of the population of the Area 5 at the North Gonur.

Table 12

Number of burial	Age	Humerus	Radius	Ulna	Femur	Tibla	Fibula	R/H	T/F	H/F	R/T	Trotter Glaser 1952	Debetz 1971	Bunak 1961	Olivier 1960	Average Stature	Inter-membral index	Index Manuvrier	
2883	50	326	245	264	438	412	376	75,15	94,06	74,43	59,47	172,33	169,18	170,8	170,67	170,74	67,18	91,73	
2873	50-60	285	225	239	432	353	336	78,95	81,71	65,97	63,74	163,25	152,72	163	161,17	159,91	64,97	90,27	
2900(1)	>60	311	242	260	457	367	336	77,81	80,31	68,05	65,94	168,83	168,47	167,68	166,67	167,91	67,11	90,24	
2927	35-45		233	262	449	389	364		86,64		59,90	170,4	169,06	168,56	169,2	169,3		91,13	
2912	40-45		[274,5]	[290]	480	402	366		83,75		68,28	178	174,37	174,64	177,2	176,05		92,42	
2953	30-40	[318,5]	[244,5]	[266]				76,77				171	166,39		168	168,46			
2868	45-50	311	[252]	[269]	446	379		81,03	84,98	69,73	66,49	171	166,94	167,8	169,4	168,78	68,24	89,83	
2837	20-25	319	244	265	[426]	[326]		76,49	76,53	74,88	74,85	167,3	162,5	159,04	165,4	163,57	74,87	84,15	
2871	20-25	271	206	233	387	338	326	76,01	87,34	70,03	60,95	157,83?	153,06?	155,8?	155,5?	155,54*	65,79	85,35	
2906	>60	312	247	272	459	372	359	79,17	81,05	67,97	66,40	170,8	167,06	168,76	169,33	168,99	67,27	90,45	
2889	18-20	316	247	265	497	418	403	78,16	84,10	63,58	59,09	176	172,37	178,6	173,17	175,03	61,53	97,35	
2954	30-35		256	273								175,5	162,09		173,5	170,36			
Min		271	206	233	387	326	326	75,15	76,53	63,58	59,09	163,25	152,72	159,04	161,17	159,91	61,53	84,15	
Max		326	274,5	290	497	418	403	81,03	94,06	74,88	74,85	178	174,37	178,6	177,2	176,05	74,87	97,35	
Mean		307,72	243,00	263,17	447,1	375,6	358,25	77,73	84,05	69,33	64,51	171,31	166,47	168,76	169,43	169,01	67,12	90,84	
S		17,86	16,72	14,92	30,16	30,70	25,19	1,83	4,76	3,88	4,94	4,17	5,83	5,76	4,32	4,52	3,76	3,40	
Num		9	12	12	10	10	8	9	10	8	10	11	11	9	11	11	8	9	
Females																			
2869	50-60	[290]			404	[341]	314	74,72	82,67	72,25	65,30	155,5	155,16	155,4	158	156,01		87,56	
2841	35-40	[308,5]	[230,5]	[250]	[427]	[353]	[363]	73,97	89,60	71,75	59,23	163,17	158	159,6	164,17	161,23	69,10	88,81	
2842	45-50	[303,5]	[224,5]	[241]	[423]	[379]	[349]					162,5	160,67	162,24	163,33	162,18	65,84	91,03	
2846	35-40	[272,5]						73,71	84,34	69,08	60,37	154	151,58		150	151,86			
2839	25-35	[262,5]	[193,5]	[214]	[380]	[320,5]		76,23	81,98	69,19	64,33	148,8	147,98	150,06	156	150,71	65,10	85,10	
2902	20-30	265	202	224	383	314	307		85,82			150,67	148,77	149,64	153	150,52	67,00	84,77	
2905	50				388	333						156,5	150,88	152,52	158	154,47		85,47	
2913	40-50	304		256				73,82	81,02	71,18	64,86	165	163,25		164	164,38			
2840	17	[307,5]	227	[245]	432	350	351	73,86	84,96	76,69	66,67	162	160,06	159,84	163,17	161,27	68,35	89,03	
2900(2)	>60	306	226	243	399	339	315		84,01			158,17	157,18	157,36	159,42	158,03	72,09	85,51	
2952	30-35				394	[331]						154,25	151,36	153	158,5	154,28		86,07	
Min		262,50	193,50	214,00	380,0	314	307	73,71	81,02	69,08	59,23	148,80	147,98	149,64	150,00	150,52	72,09	84,77	
Max		308,5	230,5	256	432	379	363	76,23	89,60	76,69	66,67	165	163,25	162,24	164,17	164,38	65,10	91,03	
Mean		291,06	217,25	239,00	403,3	340,1	333,2	74,38	84,31	71,70	63,46	157,32	154,99	155,52	158,87	156,81	67,91	87,04	
S		19,24	15,47	14,81	19,58	19,29	23,84	0,97	2,49	2,54	2,96	5,33	5,19	4,52	4,65	4,91	2,53	2,18	
Number		9	6	7	9	9	6	6	9	7	6	11	11	9	11	11	6	9	

part of Middle Asia – northern Turkmenistan and northern Uzbekistan – was the province of the southern civilizations. The permanent contacts between tribes of the south and north could not but affect ethnic history of the two historic-cultural areas of Middle Asia. These complex ethno-cultural contacts between the south and north also involved, no doubt, population residing far beyond their geographical boundaries. According to the data of archaeology in the era of the Eneolithic and Bronze the population of southern Turkmenistan was drawn into the sphere of cultures of Fore-Asia. All of this makes it necessary to analyze available palaeoanthropological material both from Middle Asia proper and from the adjacent areas.

Rather clear-cut anthropological differences between the southern and northern regions of Middle Asia are observed beginning from the Neolithic and especially from the Bronze Age. The northern steppe zones were inhabited by tribes of proto-European while the southern ones – by those of Mediterranean appearance. The proto-European complex of traits was registered among the Neolithic tribes of the Kelteminar culture in the west of the Khorezm oasis (Tumekkichijik). The southern zones were the home of tribes of Mediterranean appearance – who were carries of the Neolithic Gissar (Tutkaul) and Jeitun (Ovadandep, Chagallydpe, Chopandep and others) cultures. A similar anthropological type had been

characteristic of the earlier Mesolithic population of the Surkhandarya river valley (Machaj cave). In the Bronze Age the northern steppe zones of Middle Asia remained inhabited as before by tribes of the proto-European type. This is a typical complex of the carriers of the Andronovo, Tazabagyab and logged-grave cultures. The line of demarcation between the proto-European and Mediterranean complexes ran mainly along the lower reaches of Amudarya, middle and lower reaches of Zarafshan and upper reaches of Syrdarya rivers.

While comparing the series means of the different populations of the Bronze ages from these two large regions, the fittings of Gonur one to a circle of the Mediterranean forms become obvious. But that conclusion would be hasty because of the many times previously mentioned heterogeneity of the last series of craniological traits. We need to repeat once more, that the sigmas (standard deviations) of the main part of craniological features are twice (or more) larger than the standard one for the balance population. The presence of different combinations of various morphological characteristics had to be mentioned once more here: some flatness of the naso-molar part of the face skeleton and very prominent nose, prognathic lower part of the face and a small skull height, the presence in series of low and high faces, very gracile and mature individual and so on. Among the published synchronous data such morphological variability shows by our point of view only series from Timargarkha (Bernhard, 1967). Some tendencies like this can be mentioned in the series from Sapallitepa (Khodzhayov, 1976). Because now there is no statistical method which gives a possibility to compare not the means, but variation of all craniological traits in one group with another, it will be better on the first stage of analysis to try to use the typological method. The comparison shows that among people represented Gonur, Timargarkha and Sappalitepa we can found same similarity. But, of course, this suggestion should be checked up by different ways, including and statistical analysis as well.

The craniological materials from the Gonur necropolis under study are represented mostly by the gracile and more massive variations of the Mediterranean race. These are characteristic not only of the local population of the southern and to some extent central regions of Middle Asia of the Neolithic and Bronze Ages but also of the synchronous and earlier populations of Fore- and South Asia.

At the same time, since in many of its craniometric and angular characteristics the Gonur series exhibit variations from the smallest to the greatest values, there are sufficient grounds to describe it as heterogeneous both from the point of view of the presence of more archaic (e.g., the encountered extremely low frontal bone inclination angles, the elongated and narrow form of the alveolar arc, relatively broad and low orbits) and more progressive forms, and from the point of view of the presence of a Veddoid admixture (facial and alveolar prognathism in a few skulls, expressed platynirria) which testifies to the participation in the formation of the anthropological type of the Gonur population of a component traceable in its origin back to the most ancient population of Middle East (from Mesopotamia to North India). Some of the series' skulls with rather expressed facial flatness (great values of the naso-malar and zygo-maxillary angles) and the general configuration of their brain and facial skeletons bring the series close to the population buried in North-western Pakistan (cemeteries in the Swat valley). A number of other characteristics (gracile leptoprosop structure, upper facial height) bring this group close to the population of the southern regions of Uzbekistan. And the mesocranial types among the female skulls of the group and, particularly, brachycephalic and mesocephalic skulls among the male ones serve as a piece of evidence of the groups unquestionable ties with an area of Fore-Asia, its central part.

Odontology

Programme of the study included the traditional set of traits supplemented with some other characteristics which indicated ecological specificity of the agrarian population – spreading of caries, parodontitis and tooth enamel hypoplasia as well as general morbidity of dental system (presence of the mentioned diseases in at least one individual). In addition the reasearch programme included some metrical indices of separate teeth. According to the adopted in our domestic odontology practice we are applying the method explicat-ed in the works of A. A. Zubov (1968, 1973).

The main goal of the present communication was to provide a description of the ancient agrarian pop-ulation of the Gonur necropolis and determine its place among the ancient populations. At the base of this investigation teeth samples of the 746 individuals, collected during 1998-2000 excavations at the necropolis of Gonur and in the Area 5 of the North Gonur were placed. Necropolis is dated from the late third – mid-dle of the second millennium B.C., Area 5 – middle of the second millennium B.C.

Basic markers of the dental system are shown in Table 13. From the odontological point of view the pop-ulation which left the necropolis in Gonur was characterized by the features of the western odontological stem: rather low frequency of the shovel-shaped upper incisors, very low frequency of the deflecting wrinkle of metaconid, additional intermediate cusp (tami), and significant though lower if measured by the Europoid scale frequency of the Carabelli cusp, low frequency of the variant 1eo(3) – 15.4%, a little bit increased fre-quency of the distal crista of trigonid, which is characteristic of southern Europoids. Gonur people exhibit a tendency though slight to have the upper lateral incisor (4,5% of point 1) reduced for all that the front teeth remain rather large by absolute sizes. Reduction processes in the upper jaw are expressed but weakly. Thus,

Basic odontological characteristics of the ancient agrarian population of Gonur.

Table 13

Data	Necropolis		R 5	
	N	%	N	%
Shovel-shaped I ¹	180	12,8	52	9,6
Shovel-shaped I ²	153	25,8	47	19,1
Reduction of I ² (1 point)	165	4,5	49	16,3
Carabelli cusp	189	37,0	57	71,9
M ² (3+,3)	251	31,9	40	35,0
Distal crista	135	12,6	57	7,0
Epicrista	130	6,9	56	7,1
Deflecting wrinkle	84	9,5	50	14,0
Tami M1	218	1,8	69	4,3
M1 6	243	8,2	73	16,4
M1 5	243	74,5	73	68,5
M1 4	243	17,3	73	15,1
M1 Y	158	84,8	64	84,4
M1 +	158	6,3	64	6,2
M1 X	158	8,9	64	9,4
M2 6	265	1,1	44	2,3
M2 5	265	13,6	44	9,1
M2 4	265	84,2	44	88,6
M2 3	265	1,1	44	0,0
M2 Y	237	18,6	39	25,6
M2 +	237	29,5	39	25,6
M2 X	237	51,9	39	48,7

general reduction of metaconus on molars is 1,850 points which is characteristic to the western stem on the whole. If measured by the modern scale the reduction of hypoconus is insignificant (three-cusped molars' frequency is 31,9%) but at the Scythian-Sarmatian time this value was most usual for Eurasian populations.

Pointing to the south-Europoid orientation of the group is such an odontoglyphic indicator as the variant 2med (II) whose frequency reaches up to 18,9% (n=82). The frequency of the epicrista on the upper molars is large (M1 – 87,0%, n=161), on the distal ones it seems to be quite Europoid: on M2 – 50,9% (n=169), on M3 – 26,3% (n=114). A very high frequency is characteristic of the splitting of the root of the first upper praemolar – 63,75% (n=160). Reduction in the numbers of cusps on the lower molars is essential: four-cusped forms are registered with high frequency on both the first and the second ones which fact points to the belonging of the population to the range of “gracile odontotypes”. Pointing to the south-Europoid origin of the population is the significant frequency of the form X5 on M1 (7,0%) and M2 (7,2%).

Table 14

Table XIV. Basic parameters of the crowns of permanent teeth of the population of Gonur.

Tooth	Size	Necropolis Gonur						R 5 Gonur					
		Males			Females			Males			Females		
		n	X	s	n	X	s	n	X	s	n	X	s
Maxilla													
I 1	MD	57	9,03	0,43	100	8,23	0,68	30	8,78	0,44	16	8,33	0,34
	VL	60	7,32	0,51	98	7,02	0,45	20	7,35	0,56	8	7,13	0,45
I 2	MD	48	7,22	0,59	88	6,64	0,60	28	6,69	0,59	17	6,39	0,47
	VL	50	6,66	0,56	89	6,36	0,55	14	6,51	0,52	11	6,22	0,37
C	MD	59	7,77	0,43	87	7,39	0,48	28	7,73	0,48	11	7,33	0,34
	VL	58	8,46	0,61	91	7,88	0,60	21	8,58	0,60	8	8,01	0,50
P 1	MD	63	7,13	0,43	96	6,75	0,55	24	7,14	0,37	8	6,94	0,50
	VL	63	9,48	0,47	98	8,77	0,70	18	9,30	0,65	10	8,77	0,59
P 2	MD	58	7,04	0,46	82	6,64	0,54	17	6,87	0,35	8	6,50	0,47
	VL	60	9,56	0,59	82	8,77	0,70	33	9,18	0,65	7	8,81	0,62
M 1	MD	62	11,23	0,60	94	10,34	0,56	33	11,07	0,60	15	10,29	0,41
	VL	74	12,23	0,60	110	11,45	0,65	31	11,71	0,55	13	11,19	0,52
M 2	MD	68	10,36	0,78	114	9,62	0,65	22	10,06	0,63	9	9,21	0,79
	VL	67	11,94	0,87	116	11,10	0,78	21	11,40	0,98	9	11,02	0,54
M 3	MD	45	9,49	0,71	65	9,03	0,80	8	9,33	0,71	7	8,77	0,67
	VL	42	11,19	0,70	64	10,39	0,92	8	11,18	0,79	6	10,08	0,61
Mandibula													
I 1	MD	42	5,77	0,45	77	5,44	0,44	30	5,59	0,37	12	5,42	0,27
	VL	41	6,10	0,43	78	5,89	0,45	20	6,11	0,39	8	5,86	0,23
I 2	MD	42	6,24	0,43	59	5,86	0,48	26	6,16	0,38	11	5,86	0,34
	VL	42	6,54	0,60	61	6,20	0,47	18	6,41	0,40	9	6,31	0,35
C	MD	59	7,11	0,42	66	6,66	0,47	23	6,92	0,45	10	6,60	0,32
	VL	55	7,93	0,64	75	7,41	0,46	20	7,89	0,53	6	7,28	0,26
P 1	MD	54	7,18	0,40	76	6,86	0,61	23	7,08	0,44	8	6,58	0,33
	VL	52	7,96	0,63	69	7,56	0,48	22	7,75	0,42	8	7,39	0,50
P 2	MD	50	7,45	0,46	69	7,00	0,48	21	7,30	0,57	8	6,84	0,62
	VL	51	8,72	0,75	70	7,96	0,58	21	8,18	0,50	7	8,14	0,58
M 1	MD	62	11,70	0,58	71	11,08	0,52	37	11,71	0,56	19	10,96	0,38
	VL	76	10,78	0,53	88	10,28	0,55	37	10,64	0,47	19	10,12	0,44
M 2	MD	76	11,30	0,61	99	10,68	0,59	23	11,07	0,78	13	10,30	0,69
	VL	78	10,49	0,53	104	9,83	0,61	23	10,12	0,57	12	9,93	0,64
M 3	MD	44	10,98	0,89	60	10,34	0,89	13	10,61	1,05	6	10,22	0,35
	VL	44	10,04	0,63	62	9,60	0,73	11	9,75	0,88	6	9,28	0,90

In spite of the mentioned traits in the reduction of some elements of the dental row, their sizes (Table 14) are very great which is characteristic rather of a more ancient population than the one under study. The early Neolithic Europoid population of the Fore-Asian area differed from the population of the territories lying farther north in the significant reduction of the frontal elements of dental system. Moreover, we should point out such specific features of the teeth of the ancient population Gonur as the very great thickness of their enamel and the presence of helicoid obliteration of the molars and their rather strong total obliteration, which is characteristic mainly of early Neolithic populations. In spite of the fact that the given urban population could not be hardly isolated from other groups of the peoples, we are compelled to assume the conservation of this characteristics among Gonur inhabitants.

Thus, the tendency to the reduction of some individual elements registered in different classes of teeth is accompanied in the group studied by the appearance of reduced forms of the upper lateral incisor, very

Modules of crowns (m cor) and indices of crowns (i cor) of permanent molars of the populations of Gonur

Table 15

Tooth	Necropolis Gonur				R 5 Gonur			
	Males		Females		Males		Females	
	M cor	I cor	M cor	I cor	M cor	I cor	M cor	I cor
M ¹	11,74 (60)	108,94 (60)	10,93 (92)	111,64 (92)	11,41 (30)	106,06 (30)	10,65 (12)	108,82 (12)
M ²	11,14 (65)	116,13 (65)	10,37 (110)	115,69 (110)	10,71 (21)	113,67 (21)	10,16 (8)	117,38 (8)
M ³	10,30 (42)	119,18 (42)	9,68 (61)	115,36 (61)	10,25 (8)	120,26 (8)	9,49 (6)	113,51 (6)
M1	11,22 (58)	91,69 (58)	10,66 (70)	92,59 (70)	11,03 (35)	89,14 (35)	10,57 (15)	92,11 (15)
M2	10,89 (72)	92,82 (72)	10,25 (98)	92,05 (98)	10,63 (22)	90,78 (22)	10,23 (11)	95,43 (11)
M3	10,51 (44)	109,45 (44)	9,96 (56)	93,37 (56)	10,14 (11)	92,79 (11)	9,75 (6)	90,77 (6)

Modules of molar crowns M 1 – M 3 (m cor) of the populations of Gonur

Table 16

Sex	Necropolis		R 5	
	M ¹⁻³	M1-3	M ¹⁻³	M1-3
Males	11,06	10,83	10,79	10,10
Females	10,33	10,29	10,60	10,18

high frequency of the four-cusped forms of the first lower molars, and by the presence of progressive types of patterns on M1-2. This complex of characteristics as accompanied by significant massiveness of teeth makes it possible to class this population among the range of gracile south-Europoid forms with an equatorial admixture (of the eastern odontological stem). Pointing to the latter circumstance is also massiveness of the crowns of the entire dental row and especially of molars which can probably be explained by inclusion into the composition of the Gonur population of that portion of the population which is genetically linked with the most ancient population of the Asiatic continent – Veddooids.

An important indicator from the point of view of racial diagnosis is the interdental index of upper incisors: relation of mesiodistal diameter of the lateral incisor to the similar parameter of the medial incisor. In the male and female portion of the population its frequency is 80,0%. In Europoid samples this index varies from 75 to 78%, in Mongoloid samples – from 82 to 84%, Equatorials as also the Gonur sample occupy an intermediate position by this index.

Crown moduli of both separate molars and of molar dentures characterize men as macrodental while in the case of women these indicators are found to be at the verge of meso- and macrodental (Tables 15-16), with the ex-

Table 17

*Frequency of enamel hypoplasia of permanent teeth (I1 – P2)
in the population of Gonur necropolis*

Age	Males				Females				Males and females			
	N	n*	N**	% in class	%	n	N	% in class	%	n	% in class	%
Infantilis I	4	9	44,4	4,0	0	0	0	0	4	9	44,4	1,9
Infantilis II	17	32	53,1	17,0	13	20	65,0	11,8	30	52	57,7	14,3
Juvenis	21	28	75,0	21,0	22	33	66,7	20,0	43	61	70,5	20,5
Adultus	17	34	50,0	17,0	25	45	55,5	22,7	42	79	53,2	20,0
Maturus	35	68	51,5	35,0	40	74	54,1	36,4	75	142	52,8	35,7
Senilis	6	10	60,0	6,0	10	23	43,5	9,1	16	33	48,5	7,6
Total	100	181	68,1	100,0	110	195	56,4	100,0	210	376	55,85	100

Table 18

Frequency of general caries of permanent teeth in the population of necropolis Gonur

Age	Males				Females				Males and females			
	n*	N**	% in class	%	n	N	% in class	%	n	N	% in class	%
Infantilis I	1	9	11,1	2,0	0	5	0,0	0,0	1	14	7,1	0,7
Infantilis II	5	36	13,9	9,8	1	26	4,2	1,2	6	62	10,0	4,5
Juvenis	6	32	18,75	11,8	5	36	14,3	6,1	11	68	16,2	8,3
Adultus	9	43	20,9	17,6	18	61	29,5	22,0	27	104	26,0	20,3
Maturus	19	48	39,6	37,2	42	70	60,0	51,2	61	118	51,7	45,9
Senilis	11	14	78,6	21,6	16	23	69,6	19,5	27	37	73,0	20,3
Total	51	182	28,0	100,1	82	221	37,1	100,0	133	403	33,0	100,0

Table 19

Frequency of parodontitis of permanent teeth in the population of necropolis Gonur

Age	Males				Females				Males and females			
	n*	N**	% in class	%	n	N	% in class	%	n	N	% in class	%
Infantilis I	2	9	22,2	1,8	0	1	0,0	0,0	2	10	20,0	0,8
Infantilis II	5	28	17,9	4,5	4	20	20,0	3,2	9	48	18,75	3,8
Juvenis	12	28	42,9	10,8	10	30	33,3	8,1	22	58	37,9	9,4
Adultus	22	40	55,0	19,8	28	52	53,8	22,6	50	92	54,3	21,3
Matrus	56	71	78,9	50,4	58	85	68,2	46,8	114	156	73,1	48,5
Senilis	14	15	93,3	12,6	24	31	77,4	19,3	38	46	82,6	16,2
Total	111	191	59,0	100,0	124	219	56,6	100,0	235	410	57,3	100,0

ception of the characteristics of the third molars which make men mesodontal and women microdontal. Representatives of the Equatorials are characterized by the molar denture modulus greater than that of the Europoids (10.75 mm), i.e. it is possible to say that the Gonur males had a significant equatorial admixture in them.

As to the dental pathologies it is significant to stay on the analysis of enamel hypoplasia (Table 17). Our investigation shows, that this pathology begins to be exhibited among one-two years old children. That can be caused by the finish of the breast-feeding and by change of the diet. Thus the organism of a child, which has not finally formed his immune system, in the urban environment often is subjected to a defeat of different infections and tests a dietary stress. At that infant period the peak of the death frequency is marked. More than a half of the children, who have died at infantilis II and juvenis cohorts, had experienced such stress on themselves. The enamel hypoplasia in that ages can be influenced by the endocrine transformations in the organisms. Thus the natural selection eliminated the loosed initially persons, boys at first. Differences between boys and girls in the periods of childhood and adolescent cause no doubts and testify to the greater resistance of the girls' or-

ganism to infectious diseases. Hypoplasia reaches 42,0% among boys and 31,8% among girls.

At the older cohorts the differences between sexes smooth out, though the frequency of hypoplasia among men are statistically larger than among women. The age dynamic (Fig. 12) of the distribution of this pathology marks the dietary differences between male and female parts of the population: the last more often used milk and products of it. The indirect evidence of that is the low frequency of hypoplasia among babies up to 2 years old. The male part of Gonur settlers very early changed their diet and used coarser food, that has caused (and more earlier among females) teeth obliteration. So, the persons, who didn't test the dietary stress in the early childhood, were the most viable in the Gonur population. The women, by all, had genetic and cultural premises to the higher resistance of the organism to the environmental effects.

The rate of spreading of caries is rather high for that historical period – 33,0%, which is indicative of the population's belonging to the western odontological stem in the case of whose representatives this disease has probably a genetic origin (Table 18). Among females caries is marked significantly often than among males (37,1 and 28,0% respectively). Its frequency enlarges by time, especially in the reproductive phase (Fig. 13). Among males this process is shifted to the end of adult ages that, probably, can be correlated with the total involutive processes in the organism (age diabetes and another diseases).

The parodontosis (parodontitis) was the most frequently encountered disease among Gonur settlers. In the Gonur population we marked this pathology with the frequency of 57,3% (Table 19). In the case of our study its frequency is unquestionably understated because the material was too fragmentary to allow registering the second and third stages of the disease.

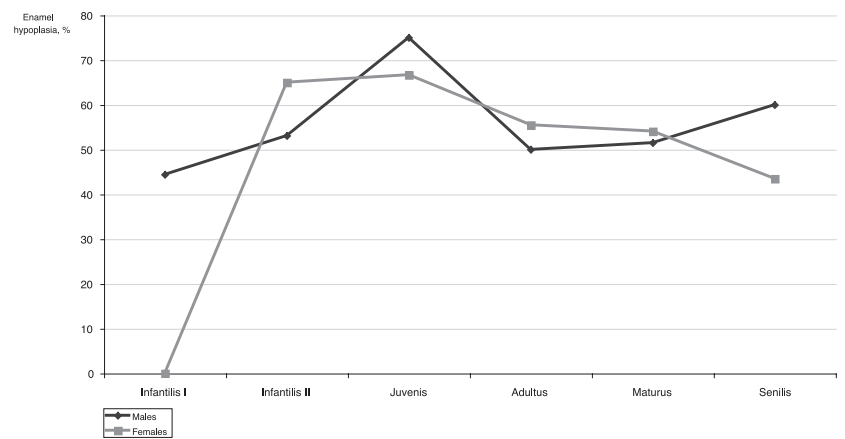
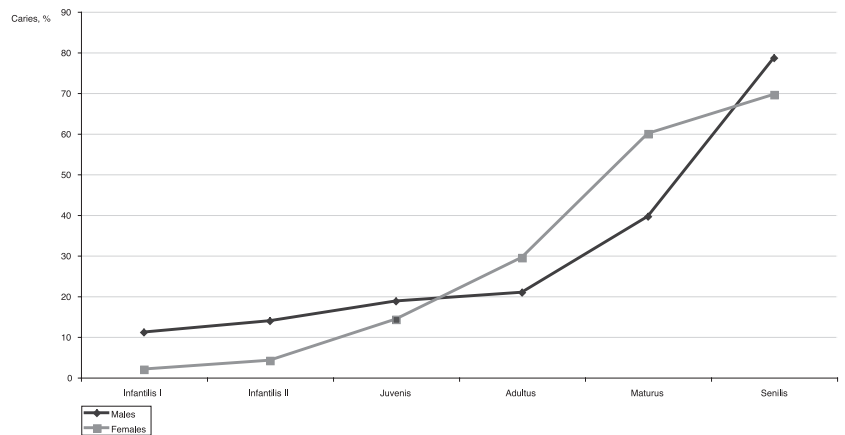
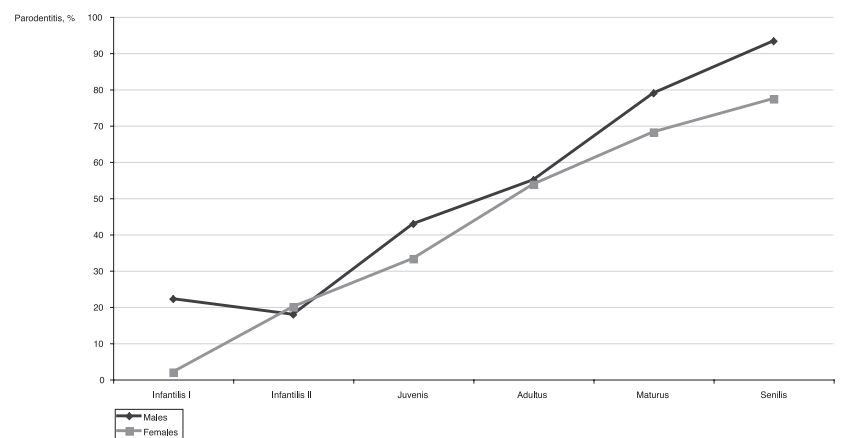


Fig.12. Age dynamics of the enamel hypoplasia.



13. Age dynamics of the total number of caries.



14. Age dynamics of the frequency of parodontitis.

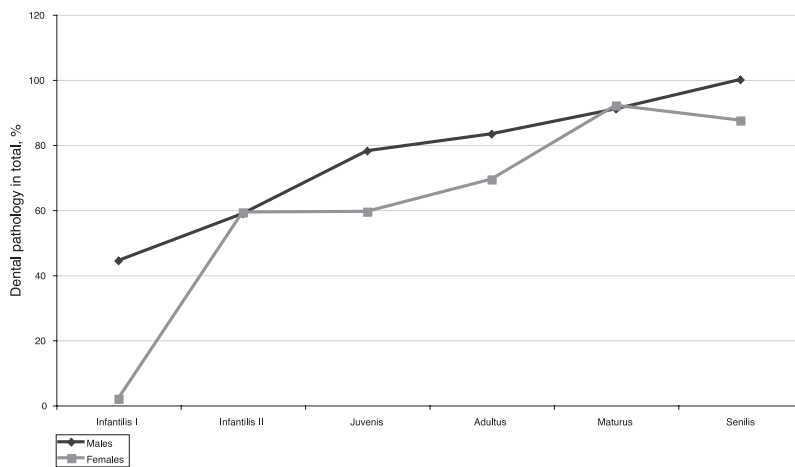


Fig. 15. Age dynamics of the frequency of the total dental pathology.

very high (78,1%, Table 20) and reflects, no doubt, both deficit of some microelements in the food and water and the not quite favorable on the whole ecological situation in the population's habitat, which influenced the genetic pool of the population indirectly. This indicator shows the same tendency, which was described for the separate diseases – among males its frequency is larger than among females and it increases with the age (Fig. 15). This is probably the explanation why the selection process resulted in the diminution of the male portion of the population.

The Area 5 population can be characterized by the more clearly than at the necropolis expressed features of the west odontological stem: lower frequency of the shovel-shaped upper incisors, more clear expressed tendency to the reduction of the upper lateral incisor, what can be confirmed statistically (Table 21). Thus the decreasing of the dimensions of all classes of the teeth can be marked. Interincisor's index at the Area 5 population is much below the same of the necropolis: among males – 74,9%, among females – 75,9% that is a good indicator of the Europoid populations. The Carabelli's cusp frequency at Area 5 is very large (71,9%) that almost twice exceeds those inherent for necropolis.

The markers of the east odontological stem are changed in time something differently. Though as a whole the deflecting wrinkle and distal crista parameters at the Area 5 are not large, but ratio them is differ from the necropolis. At the necropolis the frequency of the distal crista is larger than those of the deflecting wrinkle, what is a characteristic feature of Europoid population with a significant presence of the eastern component, but at Area 5 the inverse proportion must be mentioned. Both populations are very close one another by the frequency of the epicrista, that enables to speak about participation of the same component of the equatorial origin in the formation of their odontological types. The lower frequencies of tami testify to it east origin. The high frequencies of four-cusped lower molars, marked among representatives of Gonur population of the earlier and later times, as a whole is not characteristic of the African populations. It gives the additional basis to search common component for both parts of population among the representatives of the eastern odontological stem.

The speed of the upper molars' reduction during second millennium B.C. changed not significant; the frequency of the three-cusped upper molars stayed low. The metaconus reduction went faster, and the general reduction point at Area 5 reaches 2,094, that is characteristic of modern representatives of

The first phase – adjournment of the tooth stone – was marked already in the infantilis I cohort. We should note on the high frequency of the cases of parodontosis among ancient populations which were due to a higher load on the dental-maxillary apparatus (food cooking technology, use of teeth as a “tool” to process plant and animal fibre, etc.). With age (Fig. 14) this parameter is increased, and in all age cohorts their frequencies among males are larger than those among females..

The summary index of dental diseases is

Frequency of the total dental pathology in the population of Gonur necropolis **Table 20**

Age	Males				Females				Males and females			
	n*	N**	% in class	%	n	N	% in class	%	n	N	% in class	%
Infantilis I	4	9	44,4	2,3	0	5	0,0	0,0	4	14	28,6	1,1
Infantilis II	20	34	58,8	11,6	16	27	59,3	8,2	36	61	59,0	9,8
Juvenis	25	32	78,1	14,5	22	37	59,5	11,3	47	69	68,1	12,8
Adultus	35	42	83,3	20,3	43	62	69,4	22,1	78	104	75,0	21,3
Maturus	71	78	91,0	41,3	58	63	92,1	29,7	129	141	91,5	35,1
Senilis	17	17	100,0	9,9	56	64	87,5	28,7	73	81	90,1	19,9
Total	172	212	81,1	99,9	195	258	75,6	100,0	367	470	78,1	100,0

Comparison of the Gonur series by the basic odontological characteristics with ancient series of the Bronze Age and Antiquity. **Table 21**

Series	Gonur Necropolis	Gonur R5	Altyndepe	Sapallitepa	Jarkutan	Dalverzin	Gurmiron	Shakhristan	Estern Pamirs
Chronology	III-II millennium B.C.	II millennium B.C.	III – II millennium B.C.	II – I millennium B.C.	II – I millennium B.C.	2 c. B.C. – 3 c. A.D.	1 c. B.C. – 1c.A.D	9 c. A.D.	7 – 2 cc. B.C.
Researchers	Rykushina	Rykushina	Rykushina	Khodzhayov	Rykushina	Rykushina	Rykushina	Rykushina	Khaldeeva
Shovel-shaped I ¹	12,8	9,6	21,4	7,4	12,6	0,0	0,0	8,3	7,1
Distal crista	12,6	7,0	14,8	-	3,8	11,8	0,0	6,7	9,5
Deflecting wrinkle	9,5	14,0	23,1	-	11,0	14,3	0,0	13,3	11,9
M1 6	8,2	16,4	2,4	3,7	1,0	3,8	8,3	0,0	1,9
M1 4	17,3	15,1	18,1	33,3	5,3	32,2	8,3	23,8	22,6
M2 4	84,2	88,6	97,3	97,7	92,8	97,1	85,7	70,0	80,4
Carabelli's cusp	37,0	71,9	40,0	13,6	59,3	46,1	27,2	27,2	32,0

the eastern odontological stem. The frequency of the slanting crista was essentially reduced to the middle of the second millennium B.C. on the M1 (50,9%); on the M2 makes 40,0% and on M3 – 13,3%.

Both parts (earlier and later ones) of Gonur population are similar by the type of the patterns of the lower molars. By the number of cusps only six-cusped M1 selects Area 5 from the necropolis. The frequencies of another forms are similar. Especially it is necessary to underline that at Area 5 the large sizes teeth prevailed: the reduction has affected in main the forward classes of the teeth. That was a special characteristics of the synchronous population of the Fore-Asian region. Some decreasing of the sizes of molars didn't change their position: both females and males by the upper molars' module stay the macrodonts, by the lower ones – mesodonts.

The dental pathology is come across the population at the Area 5 with the same as at necropolis frequency (80,0%, n=75). The paradontitis stays dominant (65,5%, n=58); then enamel hipoplasia follows (63,8%, n=69). The prevalence of caries stays on the same place (30,4%, n=56). These data confirms once more the cultural, biological and social eligibility of the population in this territory. The differences marked above as a whole are the evidence of secular dynamics of the human tooth system and sometimes can be explained by the metisation with the neighbours.

The place of the Gonur population among the ancient and contemporary series can be determined by averaged radian characteristics of the eastern odontological stem' features (shovel-shaped forms I1, distal crest of trigonid, deflecting wrinkle of metaconid, M16) and of the western stem – Carabelli's cusp, M14, M24 (Table 21). Unfortunately it should be stated that we have

no original materials on many of the ancient series and that information on contemporary equatorial groups is also insufficient, although in the analyses of both descriptive and metric markers there are references to the presence of some equatorial admixtures. Nevertheless this type of analysis makes it possible to establish the main direction of ties. In order to determine the character of this admixture included into the summary diagram have been some groups from the territory of West and South Asia and of the East-African coast.

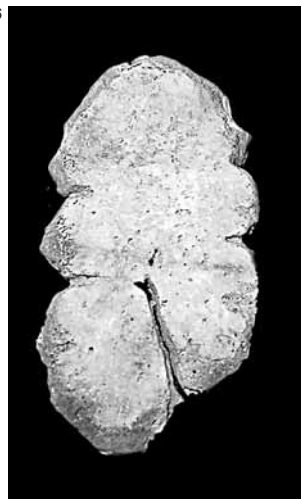
In the complex of its characteristics the Gonur series differs both from the ancient and contemporary Europoid series in that its traits of the western odontological stem are weakened and those of the eastern are expressed indistinctly. To define the population's odontotype a supposition about classing it within the group of undifferentiated types or about its metis character seems to be in order. In any case, the population buried in the necropolis of Gonur occupies a peripheral position and exhibits similarity to the ancient Europoid series in the level of traits of the eastern complex and comes close to the contemporary population of South and South-East Asia (Oraon, Munda and Viets) – in the degree of expression of the western complex. The latter circumstance enables a supposition that the certain specificity of the Gonur population is either conditioned by contacts with representatives of that area or it is a part of that ancient anthropological substratum which had been earlier widespread on the territory of Fore-Asia and North India.

On paleopathology of the Gonur-depe

Pathological changes in the osteological system

The materials, received due to the 2001-2002 years' excavations, can essentially supplement the previously published (Babakov et al., 2001) paleopathological data. Rheumatoid growths on the humerus was marked in the tomb #2904 (Area 5), where a baby 6-7 month(!) was buried and in the tomb #2906 (Area 5) on the femur and phalanges of the man older than 60 years old; in the sepulture #2650 (necropolis) on the femur of a man 30-35 years old and in the shaft grave #2639 (necropolis) on both femurs of the man 50-60 years old. Deforming arthroses was met on the phalanges of many skeletons - #2905 (female, 50); #2869 (female, 50-60); #2873 (male, 50-60); #2868 (male, 50); #2883 (male, senilis); #2900 (male and female older than 60). The diagnosis of

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16. The corpus of sternum from the burial #2921.

osteoporosis was delivered on three skeletons: as it was mentioned above – in the BP #2004 on both femurs and tibias; and on the tibias of male skeletons (#2624, 30-40 years and #2670, 17 years) as a result of traumatic damage.

On the boy's (#2898, Area 5, 10 years old) skeleton the spinal hernia of the neck vertebrae was marked. The arc of the first one was not closed; half-arcs didn't knit with the corpus. The same diagnosis can be mentioned on the skeleton of 16-years boy (tomb #2932, Area 5): the frontal bone was very thick and spongy; the upper part of the left orbit was smoothed without any sharp edge.

The traces of the hard inflammation were marked on the first and second vertebrae of the male skeleton (tomb #2912, Area 5, 40-45 years). On some babies skeletons there were the inflammation at the

porions area. It is possible to assume, what exactly the serious inflammation called by a respiratory infection was by the reason of death of these babies (#2897, male less than 2 month; #2891, male 14 month; #2915, female 5 years).

On the skull of a boy 1,5 years old the very early synostoses of all sutures were marked. The bregmatic area began to close even on the inner part. On the other side, the skull of the 4-years boy, the frontal bone of which has a methopic suture in the glabella, has fonticulus anterior 1,3x1,0 cm.

In addition to this last part the cases of the disturbance of bone growth processes must be mentioned: on the skeleton of the 8-years boy (tomb #2886, Area 5) the sternum was composed from the 5 free fragments; on the 9-years male skeleton (#2921, Area 5) the manubrium and corpus of the sternum didn't knit and the disturbance of the ossification centers of the corpus was marked (Fig. 16); the manubrium and corpus of the sternum didn't knit and on the male skeleton #2380 (30-35 years old, see below): on the female skeleton #2913(40-50 years old); on female skeleton from the tomb #2902 (20-30 years old) and from the female (older than 60 years old) one from the cist #2900.

Traumatic injuries of bones

We have registered some traumatic injures on the skeletal remains of the Gonur necropolis and Area 5. First of the "skeleton of the warrior" (male, 30-35 years old) from the burial #2380 had to be described. The skeleton was lying supine. Just after the cleaning the attention was concentrated on the specific position of the head (Fig. 17). The skull was lying on its base, near the vertex the sheep's scapula and some ribs were lying. During the cleaning of the skeleton was revealed, that the first and second vertebrae were broken, when the buried man was alive. Some traces of inflammation there were on this two vertebrae. The specific damage of the left side of the face skeleton (on the frontal and zygomatic bones especially) took place – the compacta was torn off and the traces of widespread inflammation can be seen. There were no traces of recover of this trauma. The small line-like traumatic damage was situated just near the fronto-parietal suture. It can be suppose, that this man has fallen from an altitude on the head and seriously damaged his neck and face. But he was not dead at the same time, because the inflammation had a time to widespread on the wide area of the face. As left clavícula was lying along the body, the supposition that the stretching or dislocation of the left articulation humeri took place after falling down can be made.

On the male skeleton (50-60 years old) from the tomb 2635a the almost completely healed wound on the upper side of the right orbit was marked. The eyebrow was dissected, but knitted when the man was alive. The traces of the widespread (d 2-2,5 cm) healed inflammation process on the frontal bone show that that trauma was not a cause of his death.

The male skull from the sepulture #2650 (30-35 years old) has a large hole (3,5x2,5x3,7 cm) on its base near the foramen magnum and one more near the sagittal line on the vertex (3,5x0,4 cm). No traces of the knitting were found, that shows that this two traumas were the cause of his death. The sepulture was plundered in antiquity; the skeleton was destroyed for some parts, that is why it difficult to say does it or not have some damages more.

The female skull from the shaft tomb #2616 (25-30 years old) without face skeleton had a large specific injury along the temporal line (4,7x0,5 cm). The ordinary axe can make the impact. There were no traces of knitting, the hole was very large and the trauma most likely is incompatible to life.

18. The left radius of the male skeleton from the tomb #2868.



The male skeleton 20-25 years old from the tomb 2335, which was lying on dromos has two holes on the occipital bone near the upper linea nuchae: one above it, another – below. Near the second one there was a small trace of the third hole(?), which can be knitted previously. Both holes have the traces of knitting too, but the inner surface of the skull has a very serious traces of inflammation process. The supposition about connection of death of the given individ with an obtained trauma is quite probable.

The small hole with rough edges was marked on the temporal bone near the zygomatic arc on the male skeleton #2830 (30-40 years old). On the inner side of the skull in the same place there was a widespread inflammation process. Near the right M2 and I1 and I2 there were fistulas in the alveolar part of jaws, knitted while the buried was alive.

The baby's skull (1 year old, #2892) bored traces may be of trauma: the frontal bone was burst in the area of frontal tubers. The juvenile male skeleton (#2670) on the upper third part of tibia has a trace of the hard impact, which was knitted when the boy was alive.

The left radius of the male skeleton from the tomb #2868 (older than 60 years) bears the perforation near the processus styloideus, which was derivated as a result of the wounds by a spear (arrow?) head. That wounds has called development of the osteomyelitis, but has partly knitted (Fig. 18).

The male skeleton from the cist #2900 had a good knitted trace of a large injury of the frontal bone, right orbit and zygomatic bone. Under the lower edge of right orbit on the zygomatic bone there was a small but very clearly expressed growth. The impact which has caused a trauma was so strong, that it is possible to suppose, that the eye of the man was hardly damaged also sight was either loosed or is lost completely. Under the left orbit there were traces of the widespread inflammation process, healed many years before the death of man.

Conclusion

The anthropological description of the craniological series from the necropolis of Gonur-depe allows making the following main conclusions. The agrarian population of Gonur which had absorbed descendants of the most ancient populations of both South-Turkmenistan and neighbouring territories, belonged unquestionably to the range of the South-Europoid populations which created a flourishing civilization. The long duration of life and high fertility of the population created prerequisites for its rapid growth in urban conditions which in their turn caused later the spreading of infectious diseases which were probably a frequent cause of the loss of children of younger ages and of child-bearing women of the main reproductive period. The registered by the results of the palaeodemographic research ratio between men and women show predominance of the latter in this population. As such a ratio does not correspond to the normal biological distribution of the sexes (1:1), it can be supposed that some portion of women (about 36%) could have been either included into the population's composition from outside or that a group of newcomers to the new territory could have elbowed out some portion of the local men and included local women into their own composition. No phasic differences are observed archaeologically either in the burial ritual or in grave goods so that if the second supposition is correct then the population which founded Gonur-depe and inhabited it had most likely arrived to this territory not in one but in several waves. The latest part

of the Gonur population, inhabited nears the palace at the middle of the second millennium B.C. didn't differ hardly from the first one, which we know by the data from necropolis. The craniological, osteological and odontological analysis shows the similarity of these two populations.

It is possible to say that no large changes in physical characters of the settlers took place. No significant wave of migrants from any region has come there later. But some genetic flow from the neighboring areas can be assumed. The cranial and osteological material once more confirms the conclusion on the heterogeneity of Gonur population both from the point of view of the presence of more archaic and more progressive forms, and from the point of view of the presence of a Veddoid admixture, which testifies to the participation in the formation of the anthropological type of the Gonur population of a component traceable in its origin back to the most ancient population of Middle East (from Mesopotamia to North India).

The odontological parameters of the Gonur series also show that in the complex of its traits it differs both from the ancient and from the modern Europoid series in the weakening in it of the complex of traits of the western odontological stem, while the eastern traits are expressed in it indistinctly either. It is possible to either class the Gonur population as belonging to the group of undifferentiated odontological types or to describe it as having a mixed (between western and eastern odontological stems) character. In both these cases the population of the Gonur necropolis occupies a peripheral position, while exhibiting similarity by the level of its eastern traits complex to a majority of the ancient Europoid series and coming closer to the modern population of South and South-Eastern Asia (Oraons, Munda and Viets) - in the level of expression of its western complex. The latter circumstance allows both linking the certain specificity of the Gonur population with their contacts with representatives of the same area, and including it into that ancient anthropological substratum which had formerly been rather widespread on the territory of Fore-Asia and North India.

The increased variation of the craniological traits is stipulated by the multicomponent structure of the Gonur population and also by the general polymorphism, what is a characteristic of the ancient population as a whole. The South Europoid peculiarities are found out by the traits of different systems. The features of the local anthropological complexes in the contemporary meaning of this unities, don't expressed. This suggestion confirms by the presence of the misbalanced complexes, combinations of the Equatorial traits with Eroipoid (west odontological) and with Mongoloid (east odontological) ones. That, probably, corresponds with the particular stage of the local unities formation - from the Neolith to the late Bronze period or the eve of our era. Differentiation and formation of the population in the Asian region is closely connected with the adaptation to the new environment at the settled territory.

On the whole, considering the mosaic state of knowledge in the complexes of anthropological characteristics of both modern and ancient populations of the Fore-Asian area, it should be pointed out that the population studied here exhibits a sufficiently unique complex of anthropological characteristics which might either be a consequence of some processes of mixing (which case seems to be less probable to the authors) or represent the most ancient population of the Middle East incomparable by the degree of differentiation of its anthropological characteristics with the modern inhabitants. Having a rather archaic morphology and a number of traits bringing them closer to Veddoids, in the variations of the basic parameters of their skulls the Gonur people find their nearest parallels with the population of the southern regions of Uzbekistan, North Pakistan and North India.

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