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# Sarazm: An Agricultural Center of Ancient Sogdiana

A. I. I S A K O V

Historians have long speculated about the origins of agriculture in Sogdiana. However, until the first extensive remains of an agricultural settlement were recovered by archaeologists in the 1970s, investigations concentrated primarily on the nomadic steppe culture. Some elements of farming had been identified in the settlement and burial ground at Zamanbaba, on the Zarafshan,<sup>1</sup> but most of the material there, including funerary items, was left by the cattle-raising people known as the Bronze Age Steppe Culture. Articles by Terenozhkin,<sup>2</sup> Litvinskii,<sup>3</sup> and Zeimal<sup>4</sup> all described an axe-adze found in the village of Eri on the upper reaches of the Zarafshan as an agricultural tool.

Nevertheless, the existence of ancient agriculture in the Zarafshan valley remained a matter for conjecture until the discovery of the settlement at Sarazm on the upper reaches of the river, 15 km west of the early medieval fortified settlement of Panjikent. In the first excavation of the site, in 1976, initial trial trenches and excavations yielded the remains of a farming culture. After fifteen seasons of work, which I directed in collaboration with Tajik and French archaeologists, it can be stated with assurance that Sarazm is a unique (and so far the only) agricultural site in the Zarafshan valley dating from ancient times. Although only one ha of the 100-ha settlement (nine separate areas and twelve trial trenches) has been excavated, it is possible to set forth a number of significant conclusions.

The excavations revealed complexes that are distinct in function. For example, excavations I, II, VI, VII, and VIII were residential areas containing dwellings with multiple rooms concentrated in a few units. Excavation III was a communal granary with living quarters for the managers of the granary.<sup>5</sup> Excavations IV and IX revealed religious complexes. At V, the "Temple of the Sun"

was erected in the Late Aeneolithic period, and in the Early Bronze Age a palace and religious complex occupied the area. So far, at Sarazm four types of buildings, distinguished both by function and form of construction, have been found.

The stratigraphy of the site demonstrates that Sarazm developed over a period of more than one thousand years, from the mid-fourth to the third millennium B.C. Four stratigraphic horizons for different periods of habitation have been identified: Sarazm I and Sarazm II date from the Late Aeneolithic period, and Sarazm III and Sarazm IV from the Early Bronze Age.<sup>6</sup>

## The Late Aeneolithic Period (Sarazm I and Sarazm II)

Trial trenches and excavations have demonstrated that not all parts of the settlement were occupied contemporaneously. Urbanization and a concomitant expansion in area took place at several stages of social development. Although there is reason to suspect that habitation began well before the Late Aeneolithic, as yet there is no substantive reason to date the first settlement at Sarazm before that period. The sites contain the remains of buildings and ceramic, metal, stone, clay, and bone artifacts dating from the Late Aeneolithic. Only small sections of the buildings of the Sarazm I period have been investigated and two preliminary horizons of these excavations revealed in their entirety to date. However, some individual ceramic, metal, and stone articles from Sarazm have parallels in sites from the Middle Aeneolithic Namazga II period of southern Turkmenistan.<sup>7</sup> The earliest materials were found in excavations II and V (horizons 1-2) and IV (a necropolis, stage A-A1).

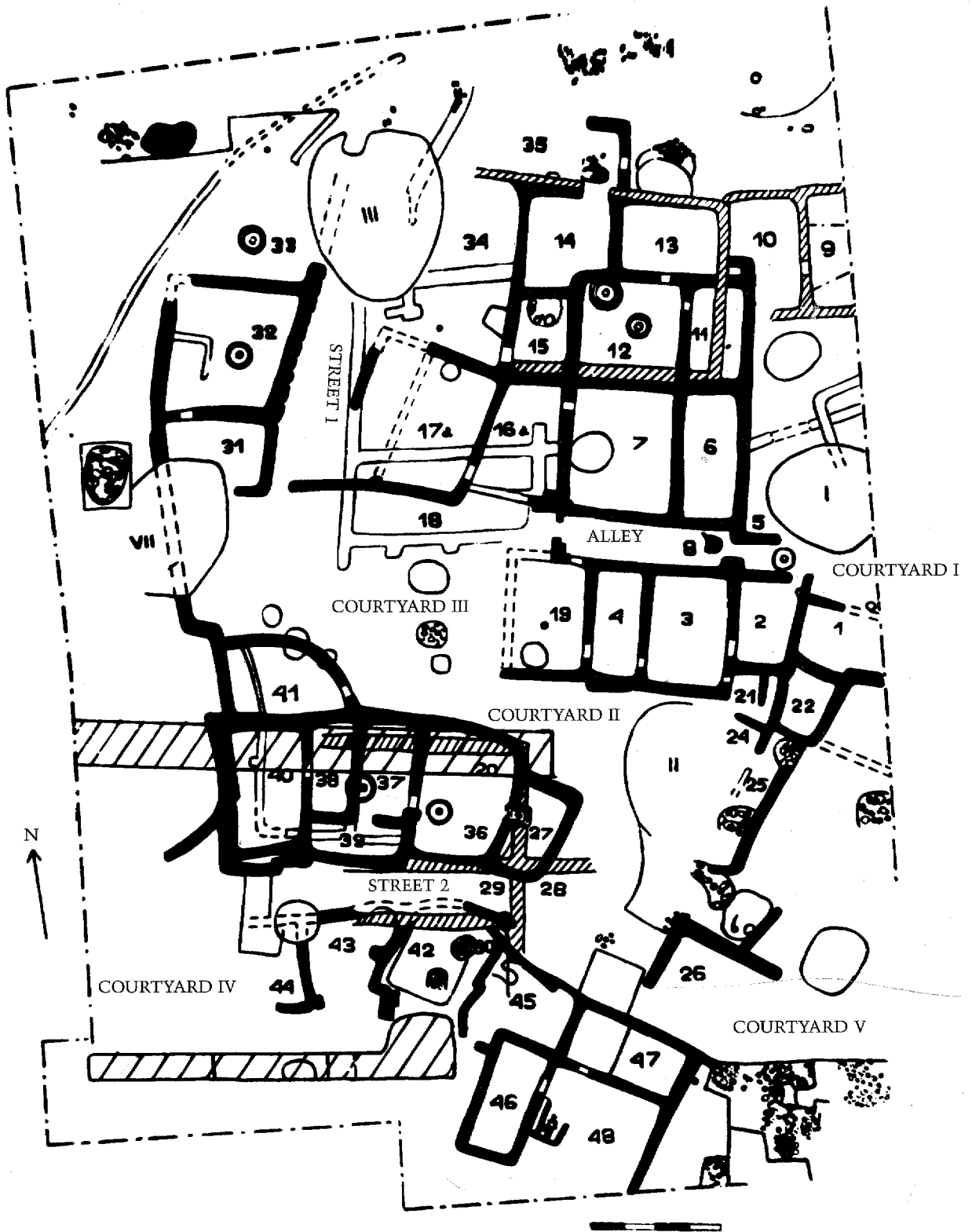


Fig. 1. Sarazm. Plan of excavated area II, with indication of structures in the dwelling horizons.

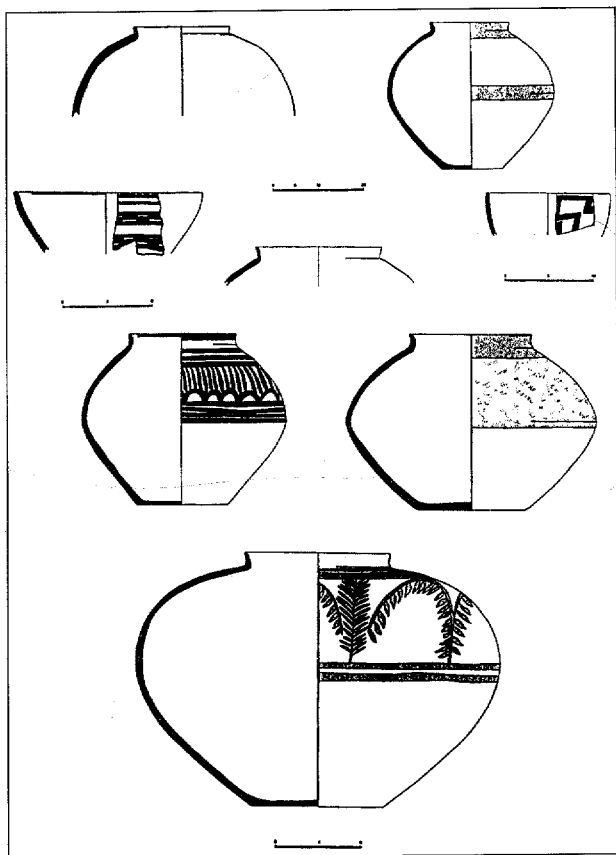


Fig. 2. Types of pottery.

### Architecture

The two- and three-room dwellings of excavation II (fig. 1) and the narrow corridor-like granaries of V are characteristic of Late Aeneolithic settlements. Family religious sanctuaries also appeared at this time (II), and separate public temples with disk-shaped altars as well as the curious "Temple of the Sun" are found toward the end of the period. The walls of religious edifices in area IV were painted with red ocher. Individual and collective burials in specially constructed edifices are also typical of the period.

### Artifacts

Objects dating from the Late Aeneolithic include pottery, terra-cotta female statuettes, and a significant collection of bronze objects.

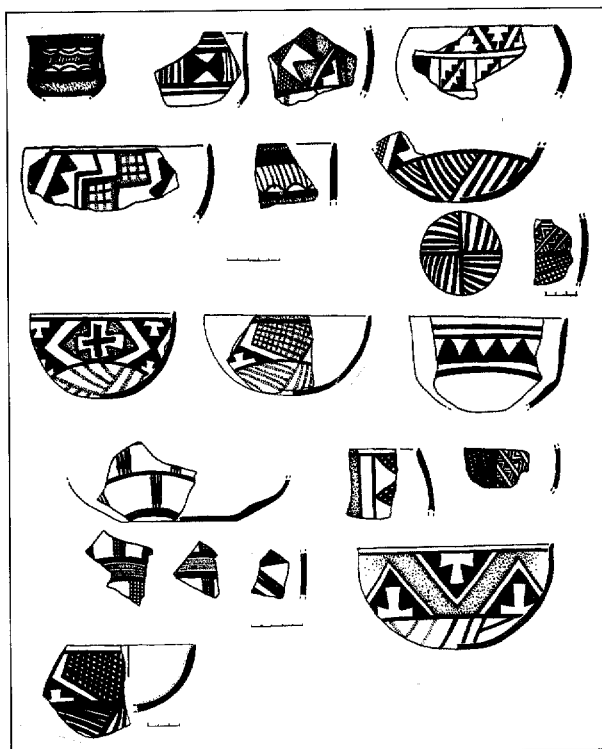


Fig. 3. Types of pottery.

The pottery is typically modeled in a limited variety of shapes: cubical, spherical, biconical, hemispherical (bowls), and ovoid (the vessels called *korchagas*).<sup>8</sup> It is usually either monochrome or gray and black on a light background. Among the polychrome objects are hemispherical cups, *korchagas* with a spherical body, conical vessels, and biconical miniature vessels. The two types of painted pottery differ in their ornamentation (figs. 2, 3). The subjects of the monochrome decoration are directly analogous to those of the Namazga II period from the Yalangach-depe settlement,<sup>9</sup> Qara-depe,<sup>10</sup> and Göksür I.<sup>11</sup> Some types of ornament have analogies in the pottery painting of Sialk I, the Quetta culture, and the settlement at Sur-Jangal II.<sup>12</sup>

The decoration of the polychrome pottery shows many similarities to that from monuments in southern Turkmenistan (Anau II, Qara-depe, Mullali-depe,<sup>13</sup> Chong-depe, and Göksür VII<sup>14</sup>), and the influence of that region, especially of the Göksür school, can be traced in the type of designs as well. Some parallels can also be found in the decorated pottery of Baluchistan

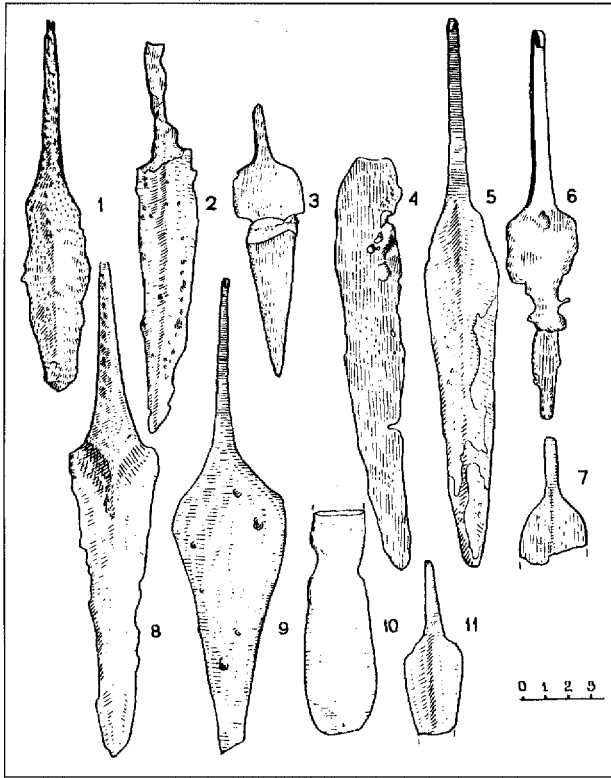


Fig. 4. Bronze knives, daggers, and dart and spear tips.

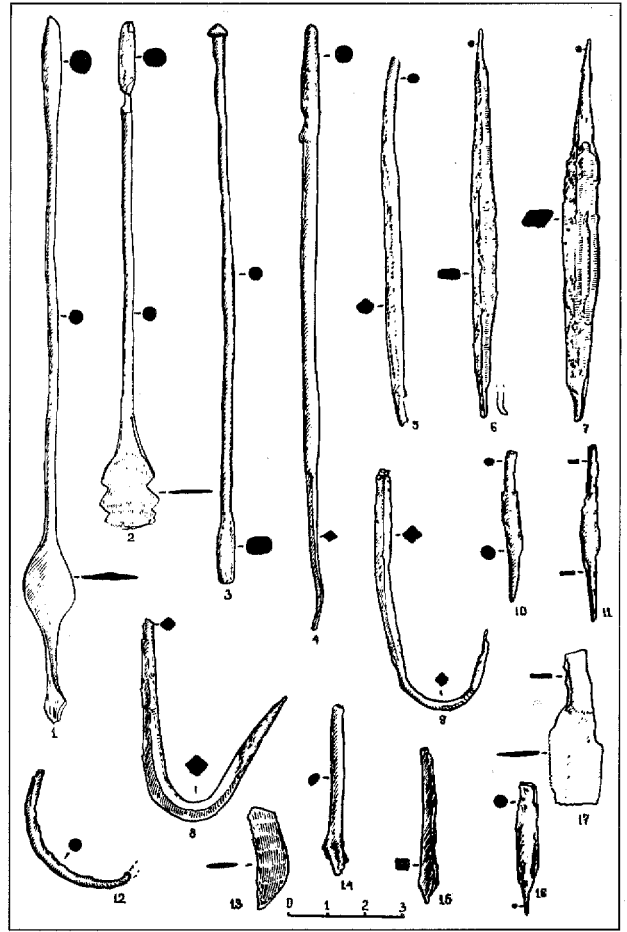


Fig. 5. Bronze domestic and cultural artifacts.

(Quetta, Kili Gul Mohammad,<sup>15</sup> and Sur-Jangal<sup>16</sup>) and the Iranian plateau (Sialk II<sup>17</sup> and Tall-e Eblis<sup>18</sup>).

Four terra-cotta statuettes were found, one in the necropolis in excavation IV, one on the floor of the second horizon of dwellings in II, and two in burial 5 in the necropolis of IV. The first statuette has an elongated neck, a bird-like head, slender waist, broad hips, and widespread legs: she is the personified image of woman as progenitor, or mother. Typologically she is related to terra-cottas from the Göksür site. Only the lower hips and closed legs of the second statuette have been preserved, but it is clear that in type the fragment resembles statuettes of the southern Turkmenistan complex (variant I, type II).<sup>19</sup> The other two statuettes, both shown in a seated position, are smaller in size and more primitive in execution. The third is a female figure 7 cm high. The hole in the neck of the fourth, 2-cm high statuette, suggests that it was used as a pendant or an amulet. Other clay objects include a

spindle whorl, pinheads, conical jetons, small votive vessels, metal-casting molds, and hearth stands.

Among the stone, metal, and bone articles are both ornaments and tools. Two arrow-straighteners are of particular interest: the first is conical and more than 6 cm long and 4 cm wide; the second is a flat, elongated stone with two grooves. Chisels, mortars, pestles, disks of potter's wheels (*podpiatniki*), and grooved plumb bobs have also been found. Analogous mass finds are known from the Aeneolithic sites of the Namazga I, II, and III periods at Qara-depe, Dashliji-depe, Aina-depe, Mullali-depe, Yalangach-depe, and Göksür VII. The only bone implements are awls, piercers, and needles, which were used along with bronze tools. The presence of sea or ocean shells



Fig. 6. Plan of structures in a section of excavated area IV and the necropolis.

indicates that Sarazm maintained relations with distant regions.

Leaf-shaped, almond-shaped and rhomboid arrowheads are typical of this period at Sarazm. In the collection there is one spear tip fashioned of black, gray, rose, and smoky flint and two chalcidony arrowheads. More than three hundred stone chips were recovered in room 5 of excavation V (Sarazm II), suggesting that it was a workshop that produced flint implements. Other stone objects include disk-shaped weights with specially adapted handles of the type found mostly in Aeneolithic strata (Anau I and Namazga II),<sup>20</sup> in strata of Hissar III<sup>21</sup> and Sialk III,<sup>22</sup> and at Mundigak.

The ten types of metal objects include a bronze dagger with a long haft and a distinct mid-rib (fig. 4, no. 1), a pin with a conical head, a two-

edged knife (fig. 4, no. 2), two bronze awls, rectangular in cross section (fig. 5, nos. 6, 7), and two bronze hooks (fig. 5, nos. 8, 9). A small silver cup, forty-nine pierced gold beads, and a bronze mirror with a long handle found in the necropolis round out the inventory of metal artifacts.

These objects provide evidence that during the Aeneolithic period, metallurgy and the craft of metalworking were in an early stage of development at Sarazm.

### *Burials*

Conforming to Sarazm burial rites, the plan of the funerary enclosure (15 m in diameter) is round (fig. 6) and is surrounded by a stone wall .70-.75 m high. It contained five burials, of which

two were single, two were double, and one was a collective burial for three. This last (burial 59), a round pit slightly over 3 m in diameter, contained the bodies of a woman nineteen or twenty years old, a man of twenty-one to twenty-three, and an adolescent of thirteen or fourteen.

In four burials, a variety of objects accompanied the deceased. For instance, in burial 1, where a child five or six years old was interred, over two hundred lazurite beads and twenty-two pierced silver beads were found near the neck and chest cavity. In one of the double burials (3), a marble bowl lay near the first skeleton, and there were two pinheads on the chest of the second; in the other (4), a large pottery cauldron with a tapering base and a miniature silver vessel were found. The triple burial yielded a unique set of artifacts. The woman was buried with a huge collection of cosmetic, toilet, and domestic objects of thirteen different types. The complex included artifacts of bronze (a mirror with a handle), gold (forty-nine pierced beads), and silver (twenty-four pierced beads); two clay statuettes; three stone mace heads; and a bone piercer. There was also an enormous collection of carnelian, lazurite, turquoise, and chalk beads (in numbers ranging from thirty to one thousand). Two bracelets fashioned of seashells are indications of the woman's high status.

The anthropologist T. K. Khodzhaiov determined that the skeletons in the funerary enclosure, and particularly the female and the male, who were dolichocephalic, with thin faces and strong profiles, displayed Europoid traits, indicating that the population of Aeneolithic Sarazm originated in the southern regions of Central and southwest Asia. Genetically, it seems that the people of Sarazm are most closely connected to the Aeneolithic population of southern Turkmenistan, primarily Göksür and Qara-depe. This raises the question of the role of the inhabitants of Sarazm in the later fate of the tribes of southeastern Central Asia. The cumulative data suggest that these tribes may have played a significant role in the formation of the population of the middle and lower regions of the Zarafshan valley. For instance, skulls from the early periods of Zamanbaba and Muminabad are very similar to those from Sarazm.

The economy of Aeneolithic Sarazm was based on agriculture and cattle-herding. The land was cultivated by using digging sticks with

weight stones (*utiashiteli*); seeds of two-rowed barley have been found. There is no evidence of irrigation.

The archaeological evidence demonstrates that the culture of Sarazm evolved from the Late Aeneolithic period in interconnection with the cultures of southwestern regions of Central Asia. Aeneolithic Sarazm appears to have been in contact with two agricultural centers in the Early Bronze Age: at an early stage with the southern Turkmenistan tribes of the Anau and Göksür cultures and later with the ancient agricultural centers of southern Afghanistan and Baluchistan.

### The Early and Developed Bronze Age (Sarazm III and Sarazm IV)

In the Bronze Age, Sarazm's geographical links broadened considerably, and materials from this period are much richer and more varied than those from the Late Aeneolithic complex. Several factors may be cited: first, for these periods the excavations cover a large and important area; second, Sarazm III was the high point of life at the settlement. By that time, when the population occupied a significant part of the site, construction techniques were improving and handicraft production was developing—a slow-rotating potter's wheel and a special type of round pottery kiln had appeared. There were primitive production communes in every aspect of the economy. Metallurgy and the production of metal objects took on a specialized character, and fine arts, jewelry-making, stonework, tanning, hand-spinning, weaving, and many other crafts that furnished the community with necessary goods became important.

#### *Architecture*

Types of architecture that differ both in construction and function are characteristic of the Early Bronze Age (Sarazm III).

*Residential areas.* First and foremost in this category are multiple-roomed dwellings that comprise living areas with adjoining storerooms, workshops, kitchens, and outbuildings (fig. 1). Streets and alleys and the placement of the

houses determined the layout of the residential tracts and the overall population distribution.

In areas I–IX, it was possible to excavate some two hundred dwelling rooms that are located in dozens of separate complexes. All the residential complexes we have explored consist of two to four dwelling rooms and one or two storerooms or workshops. The area of the dwelling rooms varies from 6 to 20 square m, with the adjoining facilities much smaller, often no larger than 4–6 square m. The living space in excavation II demonstrates that a family of four to five people occupied an area of 18–20 square m. The kitchens were outside the dwellings, as note the hearths in the small courtyards adjoining the residential complexes.

Judging from the layout, each dwelling room served a family of two to five people. A complex was occupied by several related families who evidently maintained a communal household, a type of structure that has also been found in southern Turkmenistan and which suggests that Sarazm had a patriarchal society. In courtyards ranging from 40 to 250 square m, workshops were set up for different types of manufacture, primarily of metalware and pottery. For example, there were three pottery kilns in excavations II, IV, and VII and the remains of foundries in the courtyard of VII.

*Monumental structures.* These structures are a prominent element of the proto-urban culture of the ancient East. Three types have been discovered in Sarazm: a communal granary (excavation III; fig. 7), a religious building (IV stage B, IX), and a palace complex (V).

The communal granary was built on a platform .75 m high and 15 × 15 m in area. Three of the twelve rooms, long corridors enclosed on all sides (rooms 1, 2, 12), may have been designed to store grain and other provisions for some sort of community association; the other rectangular rooms were residential. In arrangement and function, this building bears a certain similarity to public storage buildings in the “noble quarter” at Altyn-depe.<sup>23</sup>

The religious building consists of four rooms with a total area of 128 square m. Two rectangular altars located in rooms 1 and 2 indicate that they were sanctuaries. The plan of the building is very similar to that of Göksür, in which, according to V. I. Sarianidi, rooms 28–31 had ritual

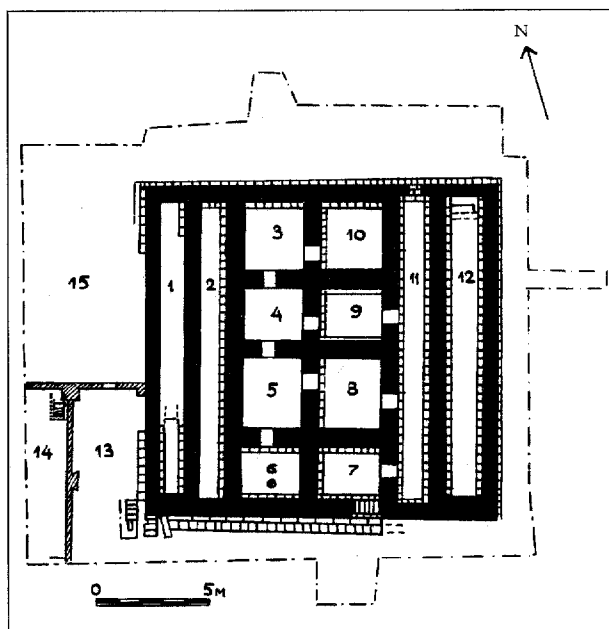


Fig. 7. Plan of communal granary in excavated area III.

significance.<sup>24</sup> The stage-B complex graphically demonstrates that the communal religious center was fully developed by the Sarazm III period.

The palace is a complex measuring 160 × 165 m overall and consisting of six rooms of different sizes and a rather narrow entrance corridor. The most important room was evidently a hall (measuring 3 × 7.75 m) located to the east of room 2 with a circular altar 1.3 m in diameter in the center. The nature of the complex's construction indicates that it served both as palace and temple, as did structures in third millennium B.C. Sumer.

Archaeological excavations at Altyn-depe, Göksür, Tepe Hissar, Mundigak, Shahr-e Sukhte, and a number of other settlements have shown that the appearance of specialized buildings was typical of this period. Buildings of similar or identical structure have been variously interpreted: e.g., the building in Altyn-depe was called a chief's house by V. M. Masson.<sup>25</sup> The earliest elements of buildings of the communal palace type can be traced back to the Late Aeneolithic and Early Bronze periods. The definitive formation of true palace and religious complexes in early agricultural sites of Central Asia and in the Near East is characteristic only for



subsequent periods connected with proto-urban civilization.

### *Artifacts*

Finds at Sarazm III and IV included ceramics and objects made of metal, stone, and bone.

*Pottery.* The pottery can be divided into three groups. The first displays a light background and light yellow, light pink, or pink slip. It includes vessels of nine shapes, including conical, hemispherical, spherical, biconical, and cylindrical, and subtypes of all these shapes. The second, smaller group is gray with black slip, and the vessels either appear gray or glossy black. In cross section many of the gray vessels are pink. The glossy black pottery had been coated with thick black slip. This group comprises about ten fragments made of well-washed gray clay. The third group is painted. The polychrome type of painting in this period was severely restricted and marked the appearance of straight, horizontal, and diagonal lines or wide bands in simplified motifs (primarily rhombs, triangles, and checkerboards).

In the Early and Developed Bronze Age there were changes in the shapes of vessels, as in decoration. With the use of the slow potter's wheel, the vessels began to take on a more elegant appearance, displaying grooved rims and sharp, distinct ribs.

In addition to the enormous collection of pottery left by the agricultural culture, three fragments and two intact vessels typical of the Bronze Age steppe tribes were found. The appearance of this pottery at a settled farming site shows that, beginning in the Sarazm III period, there were contacts not only with early agricultural centers to the south and southwest but also with cattle-herding tribes in the northern regions of Central Asia.

*Clay artifacts.* The complex of clay objects of the later two phases at Sarazm is much richer than that of the previous periods and includes two smelting crucibles, several kinds of metal-casting molds, an implement for straightening arrows, a huge number of spindle whorls and rare examples of plugs, pinheads, sieves (two), small columnar dowels (five), and imprints of mats and barley or wheat stems. Only one zoomorphic

statuette has been found, in excavation IV of horizon III. A clay stamp (fig. 8, no. 1) is also unique in that it has no direct analogies among Bronze Age finds in Central Asia and adjoining regions. Unlike the specimen from Sarazm, the numerous stamps from southern Turkmenia, Afghanistan, and Baluchistan are typically made of stone or bronze and, as a rule, have projecting eyelets.

*Metal objects.* A large number of metal objects from Sarazm III and IV were recovered at almost every area of the site, including trial trenches. Metal products of the Early and Developed Bronze Age can be divided into eleven groups: knives, daggers, tips for spears and darts, axe-adzes, awls, pins or needles, piercers, shaving blades, stamps, mirrors, and beads and pendants (*kulony*). These articles were made of copper, bronze, lead, and gold. A bar of lead weighing almost 10 kg was found in the middle of a cultivated field.

The most numerous finds are the thirty-three knives of two types: thirteen knives with tapering hafts (fig. 4, no. 3) or long, flat, blunted hafts (fig. 4, no. 2); and fourteen knives with spade-like hafts. In addition, there are six knives that cannot be typed because the hafts and blades are deformed or have deteriorated and have been defined as non-standard knives, a group that includes those with shapes typical of the Bronze Age Steppe Culture.

There are twenty-three daggers from the Sarazm III and IV periods. Like the knives, most were found by local peasants working their plots and fields; only eight were discovered in archaeological strata. The daggers are divided into two types according to the various arrangements of the hafts and blades. Separate long, curved (hook-like) hafts made of wood or bone are characteristic of the first type, which are large (3 to 4 cm wide and 28 cm long), with blades ranging in length from 15 to 20 cm. There are eight daggers of the second type, which differ from those of the first in that they have longer hafts with blunt spade-like or tapered ends.

Five specimens of spear and dart heads of three different types were recovered: triangular tips with sharp blades and short, massive hafts (fig. 4, no. 8); long blades at a right angle to short massive hafts; and tips with long hafts (fig. 4, no. 11).

Only two axe-adzes, both made of cast metal, were found. They are identical in shape, with canted heads (*visloobushnye*) and straight,

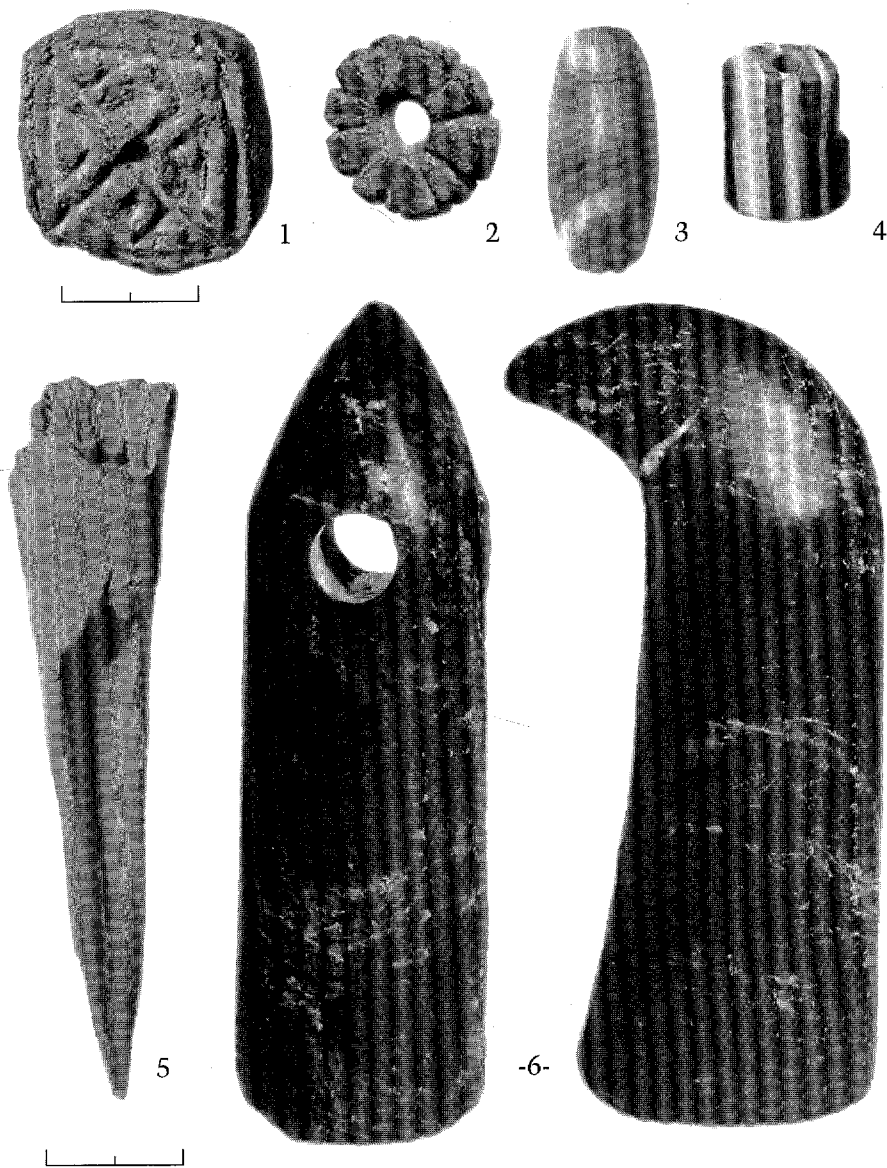


Fig. 8. Objects indicating social status, ornaments, and implements: 1. clay seal; 2. spindle whorl; 3. agate bead; 4. pendant made of veined stone; 5. bone piercer; 6. stone scepter.

wedge-shaped blades. The axe blade alone is 10 cm long, the adze is 9.5 cm long, and the shaft-hole (*proukho*) is 3 cm in diameter. The other axe-adze is shorter (14.5 cm long) and the back side is straight. The axe blade is 7 cm long, the adze is 5 cm long, and the shaft-hole is 2.5 cm in diameter.

Domestic and cosmetic objects and tools include bronze needles, fragments of a bracelet (fig. 5, no. 12), punches (fig. 5, nos. 14–16), pins (fig. 5, nos. 1–4), and shaving blades and other wares

(fig. 5, nos. 13, 17). In the category of objects denoting high social status are a small lead stamp or seal, three types of gold beads, a bronze mirror, and a gold, twelve-petalled rosette.

*Stone objects.* The nearly five hundred stone objects include various kinds of implements (mortars, pestles, grain-grinders, polishing tools, troughs, etc.), household articles, architectural details, lazurite beads (fig. 9, no. 1), other beads and pendants (fig. 9, nos. 2–16), and status objects

such as a cylindrical seal and a scepter (fig. 10 and fig. 8, no. 6). There are also stone weights of various shapes with a special type of handle and models of wheels.

*Bone objects.* There were forty bone articles with a variety of functions, including parts of looms, awls, piercers (fig. 8, no. 5) needles, and half-finished handles for knives and daggers. Seashells were used to make ornaments.

## The Semantics of the Art of Sarazm

The polychrome pottery painting is based on six types of ornament: crosses and half-crosses, saw-like and triangular lines, checkerboard cartouches, wavy arches in parallel lines, and net patterns. Painting motifs include the traditional crosses, rhombs, triangles, and close-set, parallel, wavy and straight lines that serve to divide the composition into sections. The paints were derived from local materials: the red, yellow, and even blue pieces of clay found in the excavations are easy to dissolve and use for paint. One pottery sherd from Sarazm depicts twelve small circles that may be astral-solar symbols. In this context, the gold, twelve-petalled rosette is of particular interest. This rosette is very similar in appearance to three represented on the head-dress of a noble lady from the tomb of Pu-abi in Ur,<sup>26</sup> although those examples have only the eight petals typical of Sumerian jewelry. Rosettes symbolizing the sun are known in Egyptian art as well,<sup>27</sup> and on a Mycenaean silver rhyton, the bull's head is depicted with a sun-like gold rosette.<sup>28</sup> One may conclude that the Sarazm agriculturalists knew of the twelve-month solar calendar. The level of artistic development in Sarazm is vividly reflected in the terra-cotta statuettes, in which one may see the origin of a new artistic trend, the creation of sculptural figures.

## The Culture of Sarazm

The religious concepts of the inhabitants of Sarazm may be understood from finds of disk-shaped and rectangular altars, both with deep holes in the center that were used for the lighting of a sacred fire, as well as from burial rites

and the inventory of objects interred with the dead. Their ideology is also reflected in terra-cotta statuettes depicting women and animals possessing magical powers.

That the Early Aeneolithic cultures of the southwestern regions of Central Asia, and the southern Turkmenistan cultural complex in particular, played a key role in the origins and formation of the Late Aeneolithic culture of Sarazm is well established. However, the role of the Zarafshan<sup>29</sup> and Hissar<sup>30</sup> Neolithic sites is also significant. The similarity between Sarazm and the cultural complex of southern Turkmenistan can be observed clearly in the layout of housing districts and in the monumental public buildings and disk-shaped altars. There is an undisputable similarity between material objects: the shapes and types of painted pottery, disk-shaped stone weights, plumb bobs, and looms often suggest these were produced at a single central site.

The Sarazm culture was based on the Gök-sür site in southern Turkmenistan. The rise of settlements in the eastern group of the "Anau culture" in the Miyana-Chaacha region during the Namazga I period is evidence for the eastward migration of the carriers of the Gök-sür culture, who moved east along the Tejen River and eventually founded the Gök-sür Aeneolithic settlement. Certain traits of Aeneolithic pottery of the Gök-sür type can be seen in the delta of the Murghab. These migrations continued even farther to the east, and some of the tribes evidently reached the upper Zarafshan. The similarity in the ecology of the Zarafshan uplands and the foothill zone of the Kopet-Dag played a role as well. One also finds archaeological materials from Sarazm that are evidence of links with the ancient agricultural centers of Mesopotamia, Iran, Baluchistan, and Afghanistan.

The basic reason for contacts between the tribes of these regions and the Zarafshan valley seems to have been Sarazm's position as one of the major metallurgical centers of Central Asia beginning in the third millennium B.C. Communication with distant regions in the Near East (Mesopotamia, Elam, Khorasan, Sistan, and Baluchistan) were carried out through intermediaries.<sup>31</sup> The underlying local culture, waves of migration from southern Turkmenistan, and close relations with many other regions all combined to form and develop the culture of Sarazm.

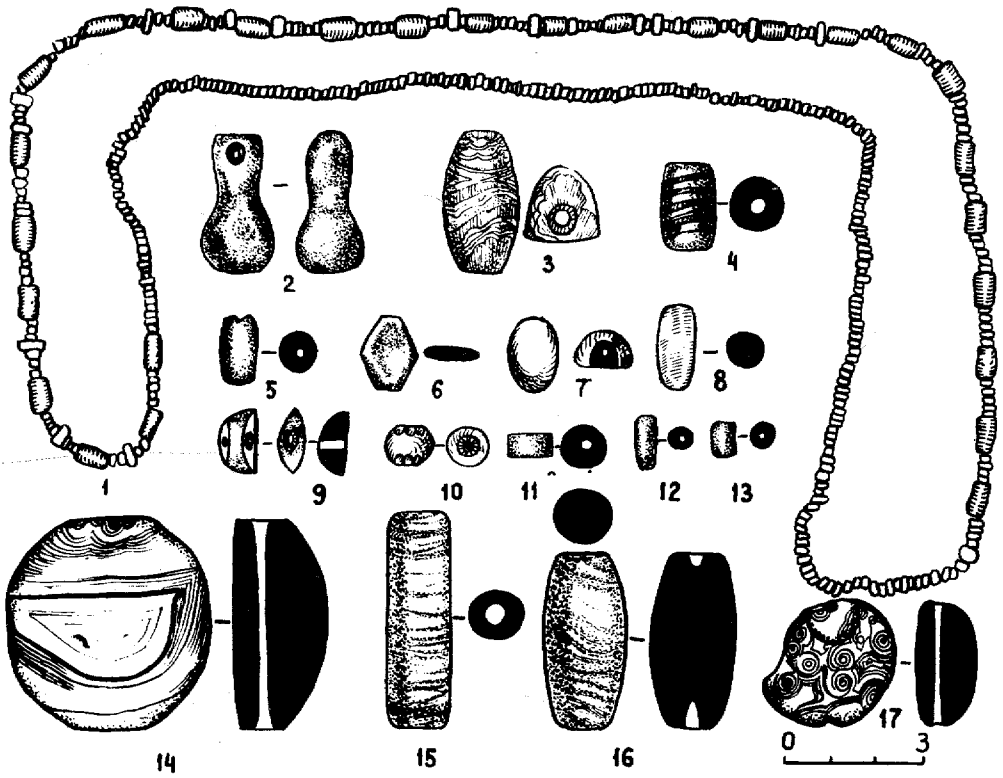


Fig. 9. Lazurite, turquoise, carnelian, onyx, and agate beads and pendants.

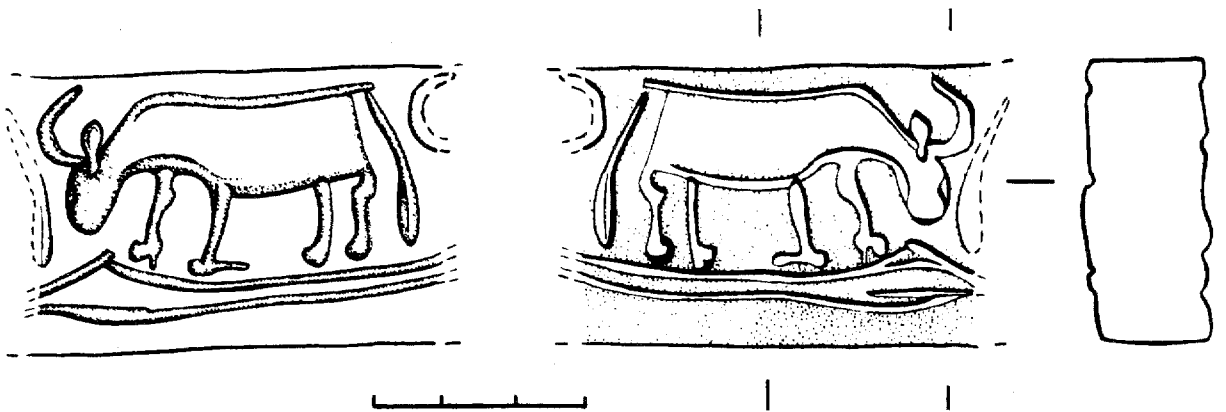


Fig. 10. Stone cylindrical seal depicting a cow.

## Notes

1. IA. G. Guliamov, "Arkheologicheskie raboty k zapadu ot Bukharskogo oazisa (predvaritel'nyĭ otchet o rabote za 1950–1953 gg.)" (Archaeological work west of the Bukhara oasis [preliminary report on the work carried out in 1950–1953]), *Tr IIA AN UzSSR*, no. 8 (1956), p. 157; IA. G. Guliamov, U. Islamov, and A. Askarov, *Pervobytnaia kul'tura i vozniknovenie oroshaemogo zemledel'ia v nizov'iax Zarafshana* (Tashkent, 1966).

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