

# 12 ICAANE

Proceedings of the 12<sup>th</sup> International Congress  
on the Archaeology of the Ancient Near East

## Volume 1

Environmental Archaeology

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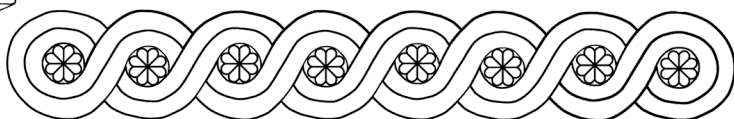
Modeling the past

Networked archaeology

Endangered cultural heritage



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# Stone Miniature Columns, Disks and Scepters from the Polity of Margush (Bronze Age Turkmenistan)

Nadezhda A. Dubova\*, Alexey V. Fribus\*\*, Nataliya N. Skakun\*\*,  
Sergey P. Grushin\*\*\*, Vera V. Terekhina\*\*, Anatoliy M. Yuminov°, Robert M. Sataev†\*,  
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## Abstract

Large stone items – so named “miniature columns” (MC), “disks” (SD) and “scepters” (“staffs”) (SS) – are significant markers of the Bactria-Margiana Archaeological Culture (BMAC). A certain amount of them occurs from the Kara Kum Desert and the ancient delta of the Murghab River, where four thousands years ago Margiana flourished. A full stocktaking of all Bronze Age findings in Margiana have been started in 2018. The described main part of the collection is in general fully representative, since it characterizes the overwhelming majority of such items stored in the museums of Turkmenistan and Russia. The main part of these items was found in graves and buildings, while several others are surface finds. Different types of SS and specific features of the MC and SC were described. The stone raw materials, from which these items were made, their technology of production, the variation of their processing as well as the variants of their shape are discussed in the paper.

## Introduction

Archaeological excavations in Margiana (south-eastern Kara Kum Desert, Turkmenistan) have been going on for over 60 years by Victor Sarianidi, Emil Masimov and other scholars. They provided a huge amount of artifacts, stored now in the museums of Turkmenistan (Masimov 2008) and opened to the scientific world a new Bronze Age center of oriental civilization, which can be identified with Mouru of Avesta, Margush country of the Behistun inscription of Darius I the Great and Margiana of Greek authors (Sarianidi 1981; 1986; 1990; 1993; 2002; 2005; 2008). Only a small part of gold, silver, bronze and other finds found at Margiana sites was described in publications. This was a reason to begin the preparation of the Catalog of all items found during the investigations in the ancient inner delta of the Murghab River. As a first step of this process, in 2018 the Margiana Archaeological Expedition started to compile such a catalog, thanks to the financial support of the Russian Foundation for Basic Research (project 18-09-40082) and the Agreement between Institute of Ethnology and Anthropology of Russian Academy of Sciences and the Ministry of Culture of Turkmenistan. The first objects, which are very specific for Bactria-Margiana Archaeological Culture (BMAC), of which Margiana is a core (Lyonnet and Dubova 2021), are large stone items – so named “miniature columns”(MC), “disks” (SD) and “scepters” (SS; either “wands”, “staffs”

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or “rods”). Features of all finds were described and photographed. These artifacts are stored in the State Museum of Turkmenistan, the Museum of Fine Arts of Turkmenistan (Ashgabat), the Mary Historical and Cultural Museum (Mary), the State Hermitage Museum, the Institute for the History of Material Culture of RAS (Saint-Peterburg, Russia), the Museum of Oriental Art (Moscow, Russia) and in the Historical and Cultural Park “Ancient Merv” (Bayramali, Turkmenistan) (Fig. 1).

The information about 157 MC, 20 SD and 62 SS and their fragments has now been collected and systematized, but it doesn't yet cover all items in these categories that have been found. They were found at different sites in the Murghab inner delta (Gonur, Togolok, Adji-Kui oases), as well as in the foothills of Kopet Dag (Altyn Depe and Ulug Depe). When our study began, several finds were part of the exhibition “Margiana. Ein Königreich der Bronzezeit in Turkmenistan” hosted in Germany (Wemhoff *et al.* 2018). The greatest part of all items was found at Gonur Depe (Table 1). The archaeological information about the sites mentioned in the text is quite available in many publications. A fairly complete bibliography of which is presented in the book published last year (Lyonnet and Dubova 2021).

Site name	Miniature columns	Disks	Scepters (Staffs)
Gonur Depe	111 (70.7%) including 40 fragments	19 (95%) including 8 fragments	53 (84.1%) including 40 fragments
Gonur 20	1 (0.6%)		
Togolok 21	17 (10.8%) including 9 fragments		
Togolok 1	6 (3.8%) including 4 fragments		1 (1.6%) fragment
Togolok 24	1 (0.6%)		
Adji-Kui 1	9 (5.7%)		1 (1.6%) fragment
Adji-Kui 9	1 (0.6%) fragment		1 (1.6%) fragment
Adji-Kui oasis	1 (0.6%) fragment		
Ulug Depe	2 (1.3%)		
Altyn Depe	2 (1.3%)	1 (5%)	5 (7.9%) including 2 fragments
Murghab oasis from the surface	1 (0.6%)		
Location unknown	4 (2.5%) including 2 fragments		2 (3.2%) only fragments
Total	157 including 58 fragments	20 including 8 fragments	63 including 47 fragments

Table 1: Representation of large stone objects at different archaeological sites in Turkmenistan among the studied collection

E. Schmidt has repeatedly emphasized that MC is one of the characteristic features (even “guide specimen”) of the Hissar IIIC layer of Tepe Hissar. According to modern concepts,

taking into account the excavations by Robert Dyson in 1976 and the data of radiocarbon analysis, this layer is dated to the period 2170-1900 BC (Voigt and Dyson 1992: 173-174). V. I. Sarianidi not once underlined that Gonur Depe is a single-layer monument: the first inhabitants came to the ancient Murghab inner delta around 2300 (2500) BC and left the area of Gonur Depe around 1500 BC (Fontugne *et al.* 2021). The vast majority of SD and SS originates from the Gonur “Royal Necropolis” and has narrower dates, 2200-2000 BC (Dubova 2021: 363).

### “Miniature columns”

These artifacts are of particular interest because, despite many years of research, their functions and purpose remain not entirely clear. The first mentions of them are contained in the book of Aurel Stein, who published an image of a column from the excavations of Kulli Hill in Baluchistan (Stein 1931: 124, pl. XXIII). The classification and typology of stone objects close to a cylinder in shape with a more or less marked narrowing in the middle can be categorized as poorly developed (Boroffka and Sava 1998; Vidale 2017; Skakun and Terekhina in press). The question about the typology of miniature columns is not an aim of our communication and here we use simple classification: cylindrical, biconical, slightly profiled biconical, truncated-conical, slightly profiled truncated-conical, truncated-conical with the highlighted upper base (Fig. 2). The most widespread are variants of the biconical forms (around 70%), represented not only by miniature columns, but also by other categories of BMAC objects. Often stone vessels, bronze lamps and some other objects also have this form. Truncated-conical forms take second place (26.1%) and cylindrical forms are found only in 6% of cases. It should be emphasized that 13 out of 35 truncated-conical columns originate from Togolok oasis. MC varies considerably in height: from 97 to 390 mm. Moreover, it should be noted that small columns (from 97 to 214 mm) are rare. Their height, which is more than 330 mm, is more common. The most common sizes are from 240 to 330 mm. More often, the upper base of the “columns” has a diameter from 110 to 130 mm, and the lower one is from 120 to 160 mm. The main part of these items weighs from 4 to 10 kg.

One of the characteristic features of the “columns” is a groove which can have both oval and rectangular profiles. We have studied 99 MC: on 92 of them there was a groove on the upper base, on 93 MC it was on the lower base and only on 21 MC on the one side. 17 MC have grooves on both bases as well as on the side surface. Simultaneously, there are grooves together on the upper and lower bases of 76 MC. Only on 1 MC from Gonur Depe the groove is present exclusively on the side surface, and on 1 column from the Gonur “Royal Necropolis” these grooves are absent.

For the manufacture of MC and SD the ancient inhabitants of Margiana used mainly soft stones that are easy to grind and polish. MC were made of marbleized limestones (50% of all items), calcite onyx (17%), limestone breccias and polymictic siliceous-carbonate breccias (10%), as well as gypsum (10%) and soapstone (9%) (Table 1). For the manufacturing of 2 artifacts (one from Gonur “Royal Necropolis” and the second one from room 19 (14) of Togolok 1), a large-pebble (with pebbles up to 7 cm) of polymictic conglomerate was used.

Stone	"Miniature columns"		"Disks"	
	N	%	N	%
Gypsum	15	9.9		
Dolomite	1	0.7		
Limestone	76	50	8	40
Limestone conglomerate breccia	12	7.9	1	5
Marble onyx	26	17.1	10	50
Sandstone	2	1.3		
Polymictic breccia	3	2		
Polymictic conglomerat	2	1.3		
Talcochlorite	13	8.5	1	5
Other	2	1.3		
Total	152		20	

Table 2: Stones from which "miniature columns" and "stone disks" were made

33 complete MC and 1 fragment of them were investigated by traceologists. The use of soft minerals similar in hardness (not higher than 3 on the Moos scale) for MC, SD and SS, contributed to the use of the same techniques during their processing. Technical-morphological and experimental-traceological studies of the surfaces of these products made it possible to characterize the technology of their manufacture. These are sawing, tapping, picketing, cutting, grinding and polishing. At the same time, experimental work has shown the effectiveness of using stone tools in some cases, and metal tools in others. So stone ones were used for tapping, point impact treatment and grinding, the metal ones – for sawing and cutting stone (grains of metal oxide were found on the surface of two MC). It should be noted that the collection contains items with an unfinished processing cycle, as well as items that were broken, redesigned and damaged in antiquity.

Unfortunately the purpose of these artifacts remains unclear. Some peculiarities on the MC clearly show that the grooves on the columns' bases could be modified during the use of the artifacts. For example, on the column from room 224 of Area 1 in the Gonur Palace it is visible that the side walls of the grooves are cut off and heavily lapped. The grooves itself is smoothly widened and beveled to one side. On the item from room 297 at Area 10 at Gonur Depe traces of narrower grooves are clearly visible on the edge of the base to the left of the main axis of the groove, and are marked to the right (Fig. 3). Instead of narrow grooves, there are also bunches of thin scratches. In some cases inside the grooves specific parallel lines are visible near their walls. These lines can be evidence of friction of MC between long and narrow dense belts (or something similar). In addition to the described traces on the edges of the bases there are traces of intensive grinding and burnishing, also noted on stone disks

(Fig. 3g). These traces could be the result of repeated systematic friction of the belt (or rope, vein), “jumping out” from the main groove. The widening of the grooves (or V-shape) both on the upper and lower bases of the MC is a result of such an impact on the MC (or option for using them) both on the upper and lower base of the MC. These facts allow us to support the point of view of E. Schmidt that the MC were used in a horizontal (Schmidt 1937: 216, 218) or inclined position, and not like a vertical table or a small altar as it was suggested by E. Antonova (2020: 182). They hardly performed the function of weighing agents.

We do not have not enough information to make unambiguous conclusions about the use and purposes of MC. Additional information on traceology, including experimental ones as well as analysis of information on the rituals of the Ancient Near East and Central Asia are needed.

### Stone disks

5 flat stone artifacts with a round shape, as well as 10 MC, were found together at Tepe Hissar in two “clusters” or “hoards” on the so-called Treasure Hill, where they were combined with ceremonial weapons, vessels, silver and gold items, as well as other “prestigious” objects (Schmidt 1937: 216-219, figs. 96-99, 132, pl. LXI). As shown in Table 1, only 11 complete disks and 8 fragments of them are now known in Margiana and 1 complete SD from foothills of Kopeth Dagh at Altyn Depe. The presence and nature of the grooves on MC, as well as on SD, make it possible to say that, in a certain sense, the disk is the same column having a cylindrical shape, a light height, very large and identical diameters of both bases. Disks, especially some of them, have a concave lateral profile, which again resembles MC.

Typical BMAC SD in Margiana did not have additional details except grooves. SD with “handles” or “slotted handles” are known from other archaeological sites (Altyn Depe, Ulug Depe, Namazga Depe, Iranian Tepe Hissar, Tajik Farkhor). General approaches to the typology of disks and weights, as well as the concept of their possible evolution, are presented in a voluminous article by S. Winkelmann (1997). She thinks that all disks were ritual objects and used in some rituals.

The diameters of SD vary greatly (from 264 to 480 mm), as well as their thickness (from 21 to 84 mm) and weight (from 3.4 to 28.1 kg). 1 SD with the smallest parameters comes from shaft burial 3870, while 1 with the largest diameter and weight from tomb 3200. Both disks are made of marble onyx of beige color, and the burials are located in the “Royal Necropolis” at Gonur. The greatest height (thickness) is recorded on a disk found out of context in Area 12 at Gonur Depe. However, this disk weighs 11.6 kg with a diameter of 300 mm, which is primarily due to the porosity of the limestone of which it is made.

All 12 complete SD have a groove on at least one surface. On all three (both horizontal and lateral surfaces), the groove is identified on only 7 objects. On one horizontal and lateral surface grooves are on two SD disks from rooms at Area 9 of Gonur Depe. On three SD from Gonur Depe (from burials 3870 and 3220 at “Royal Necropolis” and on those outside the premises and burials at Area 12), there are grooves on both horizontal surfaces, but they are absent on the lateral one.

One half of SD was made of light beige marble onyx and the second half was made of limestone and calcareous breccia (Table 2). Only in 1 disk, found on the territory of the Palace at Gonur, a bluish-gray talco-chlorite was used. Half of the limestone SD was black. Three of the other four SD were made of porous white limestone, and one was bright pink with white veins.

As traceological studies of four complete and one restored SD have shown, the technology for SD manufacture includes a number of the same methods of processing of raw materials as in the case of MC.

### Stone Scepters/Staffs

Almost all complete SS come from Gonur. The exception are 3 specimens from Altyn Depe in the foothills of the Kopet Dag. Only fragments of SS in secondary use were found at other sites (Table 1). These artifacts could be divided in some groups: spindle-shaped; with the end in the shape of a hoof; with beveled end and with macehead (Table 3, Fig. 2). At Altyn Depe one more type, very similar to the one described at Tepe Hissar, was identified: it has a thickening in the middle (Masson 1974: 6, figs. 3-5; Kircho and Alekshin 2005: 30-32, tables 42-48A).

Type of staff	Number / %	Length, mm			Weight, kg		
		Min	Max	Average	Min	Max	Average
With macehead	6 / 30	920	1260	1137.5(4)*	4.41	6.14	5.11(4)*
Spindle-shaped	4 / 20	520	1490	1140	5.16	10.85	8.64
With end in the form of a hoof	7 / 35	1210	1960	1526.7	10.41	15.4	12.21
With beveled end	3 / 15	1250	1250	1250(2)*	6.3	9.3	7.83(2)*
Total	20						

Table 3: Number of different types of staffs in the studied collection and their dimensions.

\* – Number of studied items

Spindle-shaped (SS) are scepters with a thickening in the middle part, maceheads or traces of their fastening are absent. Among them a separate subgroup of short SS with pointed ends can be evidenced. These staffs are known mainly from southern Turkmenistan, Tajikistan, and Bactria. SS with an end in the form of a hoof as a rule have a conical shape. One end of it has a small diameter and the body is increasing to the other end, which looks like a “hoof”. SS with a beveled ending are staffs similar in their basic parameters to the previous type. The diameter of such SS also decreases towards one of the ends. The second end is wide and cut, while the “hoof” was not formed. One more group includes SS with maceheads. Maceheads could be both stone and metal (bronze, lead). At Gonur Depe various types of maceheads found separately from the staffs are widely represented. However the present article includes only those items that are integrated with the SS. As a rule, the opposite ends of such objects have a smaller diameter and a pronounced end with a slightly widening base. As Table 3 shows, SS with a “hoof” ending prevail. Together with typologically close to this type SS with a beveled ending they will make up a half of the SS collection. It is worth recalling here, however, that a number of the best-preserved items have been on display in Germany for a long time, a fact which has not yet allowed them to be described and included in this publication.

The largest (long and heavy) are the hoof-ended SS. All other types are inferior to them, both in length and in diameter. The longest SS of this type (1960 mm) was found in tomb 3200, and the shortest (1210 mm) in tomb 3235 of the “Royal necropolis”. SS with maceheads have the smallest average length in our collection. The shortest scepter is one from Altyn Depe and it has a special thickening in the middle part.

For the manufacturing of SS bedding stones – mica shale (more than 50% of items), mudstones (highly compressed metamorphosed clays) of different composition (12%) – silicate and carbonate-silicate, as well as from silicified brown-red dolomite limestones (13%), white fine-porous limestone (8%) and dark gray limestone (4%) were used. Obviously, such bedded stones (especially layered, in the case of mica shales) are very convenient for making long staffs.

Traceologists studied 2 complete SS and 4 fragments. When specific data are absent, it is impossible to characterize the method of obtaining blanks for these rather long objects. The final stage of processing of the surfaces of SS by polishing leveled the traces of most of the previous operations. So a detailed description of the technology for making SS is difficult. However there are some zones polished not fine or not polished where details can be characterized. On the surface of the body of the completely preserved SS, there are areas with clearly distinguishable marks of point impact treatment. Grinding directed along the long axis of the object and circular under the macehead. For a strong fastening of the maceheads a special embossing was made on the upper end of the item. The lower end of the staff bears the remnants of traces of point impact treatment, cutting, grinding and polishing; deep circular cuts were recorded on several fragments of SS.

The Margiana Archaeological Expedition collected quite detailed information on the main characteristics of large stone products, which are summarized in a special edition (Dubova *et al.* 2021), part of which we have presented in this article. Currently, we are conducting research to determine the sources of raw materials for the manufacture of the objects and to clarify the possible ways and forms of using MC, SD and SS. We are analyzing the archaeological context of these objects, as well as their diachronic and synchronic distribution over the sites of the Ancient East.

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Fig. 1: BMAC “Miniature columns”, “scepters” and “disks” inside tomb 3870 in the “Royal Necropolis” of Gonur Depe (to the left) and on display in the State Museum of the Cultural Center of Turkmenistan, Ashgabad (to the right). Photos by N. Dubova



Fig. 2: Typological variants of "miniature columns" (a-g) and "scepters"/"staffs" (h-k). a) biconical (Gonur Depe Palace, 1998 excavations); b) slightly profiled biconical (Gonur 20, Area 2, 2009 excavations, tomb 15); c) cylindrical (Murghab oasis, from the surface, collection of 1987–1998); d) slightly profiled truncated-conical (Area 8 of Gonur Depe, 2004 excavations); e) cylindrical (Murghab oasis, from the surface, collection of 1987–1998); f) slightly profiled truncated-conical (Large Gonur Necropolis, tomb 1500); g) truncated-conical with the highlighted upper base (f) – Area 16 of Gonur Depe, tomb 3622; g) Altyn Depe, tomb 223b in Area 7, "sanctuary"; h) "staff" with the end in shape of a hoof (Gonur "Royal Necropolis", tomb 3900); i) spindle-shaped "staff" (Gonur "Royal Necropolis", tomb 3870); j) "staff" with macehead (Large Gonur Necropolis, tomb 500); k) "staff" thickened in the middle (Altyn Depe, tomb 223b in Area 7, "sanctuary"). © Margiana Archaeological Expedition

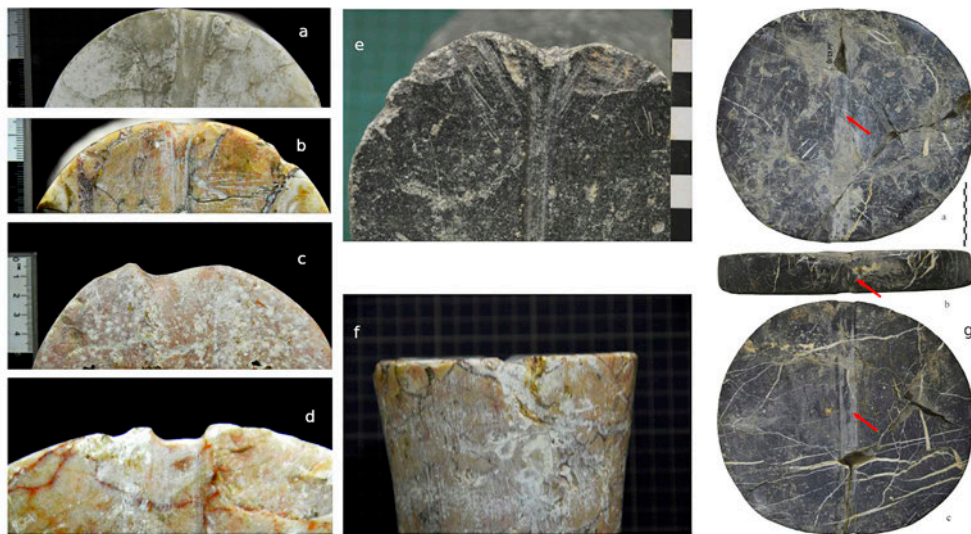


Fig. 3: Traces of manufacturing and/or using on the bases of “miniature columns” (a-f) and “disk” (g). a) Togolok 1, room 21; b) South Gonur (Temenos), room 337; c) Area 1 of Gonur Palace, room 224; d) Area 10 of Gonur Depe, room 297; e) Togolok 21, room 16; f) South Gonur (Temenos), room 337; g) Large Gonur Necropolis, tomb 1500. © Margiana Archaeological Expedition