

## Metallic mirrors from the sites of Bronze Age of the upper stream of Ob river (Western Siberia)

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**Abstract.** The article concerns the main aspects of studying of metal mirrors from archaeological sites of Bronze Age, investigated in the territory of the upper stream of Ob river (Western Siberia). The limited quantity of such items defined the need of their complex research assuming application both of traditional approaches of humanitarian researches, and methods of natural sciences. Judging by available data, metal mirrors in the period of late Bronze age were very valuable products and were socially significant indicator of a funeral ceremony of the ancient population of the upper stream of Ob river.

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**Keywords:** metal mirrors, upper stream of Ob river, late Bronze Age, complex analysis, funeral ceremony

### Introduction

Metallic mirrors are the important finds for archeology of Northern Asia. The main part of such items was found in complexes of nomads of the early Iron Age and the Middle Ages. A significant amount of works is devoted to various aspects of their studying [1; 2; 3; 4; 5]. The special attention was paid to consideration of the Chinese items [6; 7; 8; 9; 10]. The mirrors of Bronze age are investigated much worse. At the same time, need of their all-round consideration is obvious. The analysis of this group of finds allows to designate not only the traditional questions connected with specification of dating of archaeological objects, definition of ethnocultural contacts and reconstruction of some sides of outlook of ancient societies, but also promotes the solution of debatable problems of emergence and initial distribution of tradition of manufacturing of mirrors, and also their uses in funeral ceremony. Important stage of work for research of mirrors of Bronze Age is systematization of data about such items from sites of Northern Asia. In this short article main results of studying of this category of finds by an example of items from archaeological complexes of late Bronze Age of the upper stream of Ob river (Western Siberia) are presented.

### Materials and methods

The analysis of metal mirrors from archaeological sites of the upper stream of Ob river was based on application of methods and the approaches which are traditionally applying in archaeological researches. Dating of considered finds assumed attraction of analogies from complexes in adjacent territories, and also studying of other items found in the burial. Definition of traditions of use of metal mirrors in ritual practice of the ancient population was based on features of their arrangement in the grave, and also specifics of their

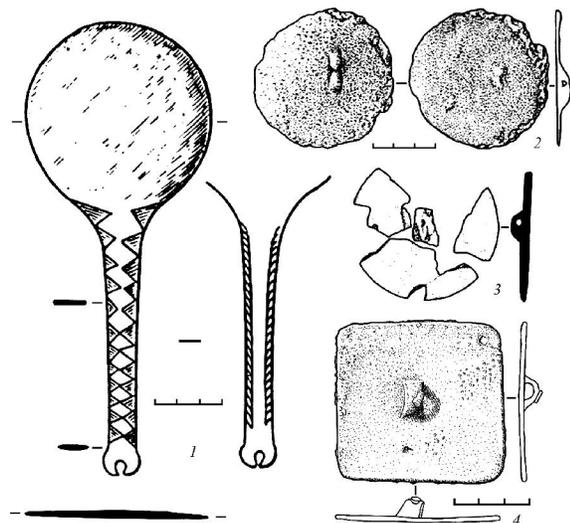
distribution. Additional data on mirrors of Bronze Age were received during application of a method of the X-ray fluorescent analysis that allowed to define structure of an alloy of one of finds.

### Results and discussion

Metallic mirrors from the sites of Bronze Age are not numerous. On the territory of the upper stream of Ob river only four such items were found (fig. 1). One of such finds was fixed during works on the burial ground Chekanovsky Log-7 located in upper courses of river Aley, in the Tretyakovsky area of Altai region. The mirror is a strongly broken disk in the diameter of 9 cm, with the handle loop on a reverse side (fig. 1.-3) [11, fig. 1.-4], and occurs, apparently, from the destroyed burial. Some similar finds are revealed in complexes of late Bronze Age of Kazakhstan and Central Asia [12, p. 67-69; 13, p. 120; 14, p. 64, fig. 4.-2], however the widest analogies to similar products are known in sites of Arzhan-Mayemir time [5, fig. 6].

The similar metallic mirror is revealed in the territory of the Rublevsky archaeological area located in the southern Kulunda, in an ancient hollow of the lake with the same name, on border of Mikhaylovsky and Uglovsky districts of Altai region. The find was made during works of Kulundinsky archaeological expedition on the settlement Rublevo-VI including materials of late Bronze Age [15, fig. 1.-4]. The item is a rough disk in the diameter about 7 cm, with the central handle loop (fig. 1.-2). Other metallic mirror is discovered during works on the burial ground Rublevo-VIII located nearby. The product is of a square form, with the central handle loop on a reverse side (fig. 1.-4) is fixed in the burial #55 of this necropolis including various accompanying inventory [16, p. 81, fig. 7.-1]. The mirror was nearby the head of the dead woman. Analogies to this find are known

in the sites of late Bronze Age investigated in the territory of Kazakhstan [13, fig. 90; 17, fig. 33].



**Fig. 1. Metallic mirrors from the sites of Bronze Age of the upper stream of Ob river:**

1 – Kamyshenka; 2 – Rublevo-VI; 3 – Chekanovskiy Log-VII; 4 – Rublevo -VIII [3, fig. 4].

A peculiar metallic mirror is fixed in a barrow #67 of a burial ground Kamyshenka located in the Ust-Pristansky district of Altai region. Excavation on this necropolis was carried out by the Altai expedition of Institute of archeology of Academy of Sciences of the USSR [18, p. 233]. The mirror with a roundish disk and the long ornamented handle was in girl's burial (fig. 1.-1). Numerous ornaments from bronze, a cornelian, lazurite and gold were also found here. Analogies to a considered item in the territory of Siberia aren't known. Similar mirrors gained a distribution in the period of late Bronze Age in archaeological complexes of Middle Asia [19, p. 21].

All presented metallic mirrors occur from sites of the late Bronze Age. To the point analogies in synchronous objects in nearby territories are not only available, but also the dating materials which were in considered complexes. In scientific literature there are mentions of finds of metallic mirrors in sites of steppe and forest-steppe regions of the upper stream of Ob river of earlier time [20, p. 16, fig. III.-3; 2, p. 64; 21, fig. 88], but, judging by available information, they represent large metal plates with a loop [5, p. 89]. The similar items, reminding early mirrors by appearance, are found in monuments of Karasuk, Irmen and other archaeological cultures of late Bronze Age. Sometimes they are called as "mirrors", but those researchers who note a difference between those categories of subjects [22, p. 56] are right. Such finds differ in parameters, form, quality,

manufacturing techniques, the location in a grave and some other indicators. For example we will give the characteristic of thing found on a burial ground-5 of a site Small Gonbiysky Kordon-I [23, p. 64, fig. 5.-1]. A large metallic plate placed nearby the right forearm of died person, is fixed in a grave of Irmen culture. It is necessary to specify that the considered item was studied by X-ray spectrometer on department of archeology, ethnography and a museology of the Altay State University. The following results were received:

1) loop: Cu – 99,47%; Fe – 0,46%; Pb – 0,07%;

2) site of a surface of edge of a disk without oxides: Cu – 99,06%; Fe – 0,56%; Pb – 0,21%; Ni – 0,11%; Co – 0,06%.

These indicators show a copper product with a set of natural (ore) impurity. Probably, further comparative research of composition of metal and also other indicators of metallic mirrors and large metal plates will allow to consider the difference of data of groups of finds more objective.

The most part of metallic mirrors of late Bronze Age in the upper stream of Ob river are fixed in burials and that allows to consider some questions connected with definition of a place of this group of finds in ceremonial practice of the ancient population. The arrangement of items in a grave, due to various reasons, often remained unknown. The characteristic situation is fixed in the site Rublevo-VIII where the metallic mirror was nearby of the head of dead woman. The explanation of such tradition can be connected with direct utilitarian function of a mirror, which was located near the head for the buried could "look" in [24, p. 95, 98]. Other explanation should be looked for available the certain notions connected with this part of a body. The special relation to the head of the person arose in the ancient time [25, p. 40] and had various manifestations. For example, practice of an arrangement of metallic mirrors around the head of the buried person was widely adopted in ceremonial practice of various societies in a wide territorial and chronological framework [5, p. 111–115].

## Conclusion

It is possible to argue that metallic mirrors in late Bronze Age were rather valuable items and were socially significant indicator of a funeral ceremony of the ancient population in the upper stream of Ob river. To it testifies not only a rarity of similar finds, but also that in known burials with mirrors the "rich" accompanying inventory including "prestigious" categories of things was found. Probable, metallic mirrors in the late Bronze Age were an indicator of the high status of women. It confirms as available

materials of female burials of the upper stream of Ob river, and distribution of similar tradition in extensive territories of Northern Asia during the subsequent time.

Further complex research of metallic mirrors from sites of Bronze Age, both by means of traditional archaeological methods, and with application of methods of natural sciences, will allow to solve the questions put in this article and to designate a place of that category of items in material and spiritual culture of the ancient population.

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