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## THE MATERIAL COMPLEX OF THE ADVANCED BRONZE AGE FROM THE SETTLEMENT OF THE IRMENSKAYA CULTURE OF THE LAST BRONZE AGE MILOVANOVO-3 FROM THE NOVOSIBIRSK REGION

**Alexandra L. Avtushkova**

*The Museum of Local History, Novosibirsk, Russia;  
alinanet913@gmail.com, <https://orcid.org/0000-0001-9070-1764>*

**Abstract.** In this article, based on the materials of the settlement of the Irmen culture of the late Bronze Age Milovanovo-3, a small material complex of the developed bronze period of the 1<sup>st</sup> half of the 2<sup>nd</sup> millennium BC, including fragments of ceramics and part of a stone product, presumably a vessel, is identified.

The purpose of this work is to confirm the identification of a complex of finds from the developed Bronze Age with reference to similar material sources in the archaeological cultures of Western Siberia and Central Asia, namely the sites of the Chemurchek type of China and Mongolia, as well as local cultures — Elunininskaya Samusskaya, Krotovskaya. The article draws attention to a rare find on the territory of the Novosibirsk region — a fragment of a stone vessel, which is the second largest in the region. Based on this find, analogies of which were found in Mongolia, neighboring Altai, Tuva, and on the basis of the ornament of another similar vessel from Krokhalievka-1, even in France, an assumption is made about the existence of cultural ties between the cultures of the southern area and their northern neighbors by finding two stone vessels. All these arguments make it possible to speak of the existence of sustained cultural ties between the cultures of the southern area and their northern neighbors.

**Keywords:** Novosibirsk region, Ordinsk district, archeological settlements, Irmenskaya culture, Milovanovo-3, the stone vessel, Early Bronze Age

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## ВЕЩЕСТВЕННЫЙ КОМПЛЕКС ПЕРИОДА РАЗВИТОЙ БРОНЗЫ ИЗ ПОСЕЛЕНИЯ ИРМЕНСКОЙ КУЛЬТУРЫ МИЛОВАНОВО-3

**Александра Леонидовна Автушкова**

*Новосибирский государственный краеведческий музей, Новосибирск, Россия;  
alinanet913@gmail.com, <https://orcid.org/0000-0001-9070-1764>*

**Резюме.** В статье на основе материалов поселения ирменской культуры позднебронзового века Милованово-3 выделен немногочисленный вещественный комплекс периода развитой бронзы 1-й половины II тыс. до н.э., включающий фрагменты керамики и часть каменного изделия, предположительно сосуда.

Цель работы: подтвердить выделение комплекса находок периода развитой бронзы с приведением аналогичных вещественных источников в археологических культурах Западной Сибири и Средней Азии, а именно памятников чемурчекского типа Китая и Монголии, а также местных культур — елунинской, самусьской, кротовской. В статье обращено внимание на находку на территории Новосибирской области — фрагмент каменного сосуда, являющуюся второй по численности в регионе. На основе данной находки, аналогии которой найдены в Монголии, соседнем Алтае, Туве, а по орнаменту другого такого же сосуда из Крохалевки-1 — даже во Франции, высказывается предположение о существовании связей между культурами южного ареала и их северных соседей.

**Ключевые слова:** Новосибирская область, Ордынский район, поселение, ирменская культура, Милованово-3, каменный сосуд, ранний бронзовый век

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## **I**ntroduction

The settlement of Milovanovo-3, located on the right coast of river Ob, territory of the Ordynsky district of the Novosibirsk region, 1,5 km from the village Milovanovo, was found by Novosibirsk archeological expedition of T.N. Troytskaya. In 1976 the Milovanovsky party of E.A. Sidorov of the Novosibirsk archeological expedition of the City Palace of Pioneers and Schoolchildren began excavations of this site (Troytskaya, Sobolev, Sidorov, 1977, pp. 247–248). Big dwelling and part of cinder heap have been excavated. Great material of Irmenskaya culture was collected, for example ceramic, mattocks from the jaws of cows, awls, arrowheads, stone mace and ochre.

In 1978 the excavation of settlement Milovanovo was continued. The pit-house with an area of about 200 sq. m and two dwellings in cinder heap have been excavated. Dwellings were dated early pre-irmensky period of habitation of settlement. In one of the dwellings were found remains of production of bronzes in form of a drops of molten bronze, fragments of casting forms for celts, adzes, awls (Sidorov, 1979, p. 271).

The excavations of 1979–1980 summed up the research work on the settlement. Two types of dwellings were identified, which were dated to the early and late periods of habitation of settlement: earliest dwellings — rectangles with long exit in form of corridor, latest — pits-houses with two fireplaces in the center (Sidorov, 1980, p. 231; Sidorov, 1981, p. 209).

So, the settlement Milovanovo is considered the most studied site of the Irmenskaya culture (Matveev, 1993; Sidorov, 1985, pp. 63–71; Sidorov, Novikova, 2004, p. 124; etc.). However, there are interesting objects that were left without the attention of researchers. The collection artifacts of settlement Milovanovo-3 was taken from the archaeology fund of the Novosibirsk State Museum of Local History for further study and introduced into the State Museum Catalog of the Russian Federation.

Among the artifacts of the Irmen culture, which constitute 90 percent of the all collection, there is a complex of artifacts that can be dating earlier than the all collection.

The objective of this research is to introduce into scientific circulation a complex of artifacts of the advanced Bronze Age from the settlement of Milovanovo-3.



Fig. 1. The settlement Milovanovo-3 on the map of Ordynsky District of Novosibirsk region

Рис. 1. Поселение Милованово-3 на карте Ордынского района Новосибирской области

### **Materials and Methods**

The Milovanovo-3 collection of artifacts consists of several complexes of artifacts removed from excavations of settlement during the period 1974–1979 by E.A. Sidorov. The investigated complex with the number NGKM-OF-16799 is 2130 units. The part of the material complex of the advanced Bronze Age are several fragments of ceramics and a fragment of a stone thing.

In this study, on the basis of the typological method, analogies to this material complex have been identified.

### **The Characteristic of Resources and Results of Research**

Ceramics are fragments of vessel walls. It is 0.5% of the whole complex. The mica was added in the ceramic mass. The vessel was fired with uneven temperature: the firing has uneven color: from gray to light brown. The ornament consists of impress of walking or retreating fine combed decoration, in one incident are lines of a large stamp. The ornament covered the all surface of the vessel, apparently.

Analogies to fragments with an ornament in the form of a walking and retreating comb were found in the ceramics of cultures of the pre-Andronovo age: Eluninskaya, Samusskaya and Krotovskaya cultures.

There are numerous discussions in the scientific community about the cultural affiliation and dating of the border zone of the Baraba forest-steppe and Northern Kulunda. Following S.P. Grushina, the monuments of the territory of the Upper Ob region, on which, in particular, the settlement of Milovanovo-3 is located, should be attributed to the Elunin culture (Grushin, 2001, p. 217–220; History of Altay, 2019, p. 124–129, Fig. 2.25.-1–7), the attributes of which are found in the confluence of arrival Caucasoid Indo-European tribes and the local Mongoloid population of the Late Neolithic (History of Altay, 2019, pp. 124–125). At least, the motifs of the walking comb coincide with ceramics from the Late Neolithic complex of settlement Tytkesken-2 (History of Altay, 2019, p. 66, fig. 1.49.-7, 9). According to S. Grushin, monuments of the territory of the Upper Ob region, on which the settlement of Milovanovo-3 is located, they should be attributed to the Eluninskaya culture (Grushin, 2001, pp. 217–220). According to V. Molodin and I. Durakov this region was influenced by different cultures of the advanced Bronze Age, including Samuskaya, Eluninskaya and Krotovskaya with similar ceramics (Molodin, Durakov, 2013, pp. 84–101). So, taking into account all points of view, the selected ceramic complex can be dated to the first half of the 2<sup>nd</sup> millennium BC.

Some fragments of ceramic with a comb ornament, that have very bad safety, cannot be right dated and attributed with any archaeological culture. But they belong to the cultures of the Bronze Age, but not to the Irmenskaya or later culture. Thus, the questions of dating and cultural affiliation of this complex remain open. Future research concretizes the cultural and chronological attachment of Bronze Age ceramics from the settlement of Milovanovo-3.

Also, when the collection artifacts from Milovanovo-3 was studied, a fragment of unknown stone thing was found. The stone thing is made of a whole piece of solid rock of dark brown color. The bottom has a flat basis with a small recess in the center. The flat basis is well polished. The center is slightly displaced to the edge of product. From the basis the walls of the product expand. Walls have the width 10 mm. The diameter of the basis 52 mm. The product is carefully polished. The inside surface of the thing is processed poorly. The thing was, broken apparently during the excavation of the settlement, because there are modern scratches on the bottom and chips of the stone crust.

The Museum of Local History has no similar things. When discussing the functionality of the thing there was a general impression that it could be a fragment of a stone vessel with slightly expanded walls. The search for analogies of this artifacts led to the fact that a similar thing was in the collections of the Institute of Archaeology and Ethnography SB RAS. A cylindrical stone vessel was found during the excavations of the settlement of the Samus culture Krokhelevka-1, located on the territory of the Kochenevsky district (Molodin, Glushkov, 1989, p. 44, p. 48, fig. 21–22). The stone vessel from Krokhelevka-1 has a cylindrical shape, a slightly convex basis, a rounded section of the rim, ornamented with a zigzag.

Probably, a stone vessel from the territory of the Novosibirsk region is the northernmost variant of finds of this type. To the south they are found in Uglov district of Altai region (the causal find from village Laptsev Log), in Tuva Republic (the monument Aymirlig), on in the mountains of Altai (Karakol barrow cemetery), in Mongolia (the valley of river Buyanta, the barrow cemetery Ulaan Hudag-I, tumuli №12; Sharsum-I, object №1; Halzan Uzzur-II, tumuli №1; Yagshiin Hodoo-II, tumuli №2) (Tishkin, Grushin, Muhbayar, 2013, pp. 117–129; Oldest Europeans..., 2015, p. 24, fig. 21.-2, p. 25, fig. 22, p. 26, fig. 25, p. 52, fig. 12.-3, pp. 96–98, fig.-79–83).



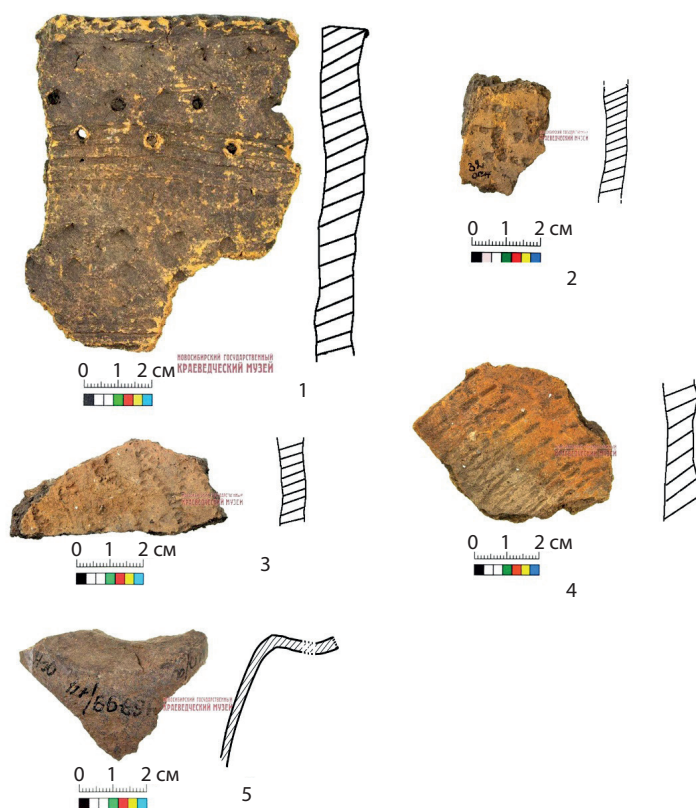


Fig. 2. Ceramics and fragment of stone thing from settlement Milovanovo-3

Рис. 2. Фрагменты керамики и часть каменного изделия из поселения Милованово-3

Published vessels have mainly closed canned form. Apparently this form is similar of our vessel (especially the vessel from the barrow cemetery Sharsum-1). Also, the vessel from Milovanovo combines with the vessels published above small diameter of basis — 52 mm and, apparently, little height: the vessel from Krokhalievka-1 has diameter of basis — 60 mm, the height — 78 mm; the vessel from Ulaan Hudag-I has diameter of basis — 85 mm and the height — 60 mm; the vessel from Sharsum-I has diameter of basis — 125 mm and the height — 50 mm.

Probably the technology of production of the vessel from Milovanovo-3 is not different from other similar vessels (Tishkin, Grushin, Muhbayar, 2013, pp. 117–129). In this case, the thing is made from a small boulder with techniques of sawing, picketing and drilling. On the interior surface have tracks, that left by a tool with a narrow blade.

According to A. Kovalev, the forms of the stone vessels are similar to the ceramic vessels of Brittany, Languedoc and Quercy at the border of the 4<sup>th</sup>–3<sup>rd</sup> millennium BC, mainly of the Ferrière culture (Oldest Europeans..., 2014, p. 6). A. Tishkin discriminated two zones of distribution of stone vessels: the northern zone of cultures of the “pre-Andronovo” bronze — Eluninskaya, Okunev and Samus, and the southern zone, which includes Xinjiang and Western Mongolia with monuments of early bronze of the Chemurchek type (Tishkin, Grushin, Muh-

bayar, 2013, p. 117–129). A. Kovalev outlined the connection between the Chemurchek sites and the Eluninskaya culture. The Eluninskaya culture, according to some researchers, influenced the formation of the Krotovskaya culture (Oldest Europeans..., 2014, p. 7).



Fig. 3. Stone vessels from territory of West Siberia and Mongolia:

- 1–3 – fragments of stone vessel from tumulus №12 of barrow cemetery Ulaan Hudag-I (Oldest Europeans..., 2015, p. 25, fig. 22; p. 26, fig. 25);  
 4 – reconstruction of stone vessel from tumulus №12 of barrow cemetery Ulaan Hudag-I (Oldest Europeans..., 2015, p. 24, fig. 21);  
 5 – stone vessel from settlement Krokhalavka-1 (Molodin, Glushkov, 1989, p. 48, fig. 21);  
 6 – stone vessel from tumulus Yagshiin Hodoo-II (Oldest Europeans..., 2015, p. 257, fig. 30)

Рис. 3. Каменные сосуды с территории Западной Сибири и Монголии:

- 1–3 – фрагменты каменного сосуда из кургана №12 памятника Улаан худаг-1 (Древнейшие европейцы..., 2015, с. 25, рис. 22; с. 26, рис. 25);  
 4 – реконструкция каменного сосуда из кургана №12 памятника Улаан худаг-1 (Древнейшие европейцы..., 2015, с. 24, рис. 21);  
 5 – каменный сосуд из поселения Крохалевка-1 (Молодин, Глушков, 1989, с. 48, рис. 21);  
 6 – каменный сосуд из кургана Ягшийн ходоо-2 (Древнейшие европейцы..., 2015, с. 257, рис. 30)

### Conclusion

The result of this research is a complex of ceramics of the first half of the II millennium BC, which was identified in the composition of the found material. Probably, the Irmen settlement was created on the previous layer of an earlier station. The vessel could have got here as a result of cultural exchange between local habitants and Eluninskaya strangers from the territory of the Altai plain, or it was made here with using the technology of the Chemurchek traditions.

Future research of the stone vessel will allow to determine its functional characteristic and supplement the present information about the social relations between the cultures of the developed Bronze of Siberia.

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#### INFORMATION ABOUT THE AUTHOR / ИНФОРМАЦИЯ ОБ АВТОРЕ

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**Alexandra L. Avtushkova**, Research Associate, Service of Main Curator of the Funds, Museum of Local History, Novosibirsk, Russia.

**Автушкова Александра Леонидовна**, старший научный сотрудник службы главного хранителя фондов Новосибирского государственного краеведческого музея, Новосибирск, Россия.

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