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# Sibirskoye I: A Late Irmen Site on the Irtysh Steppe

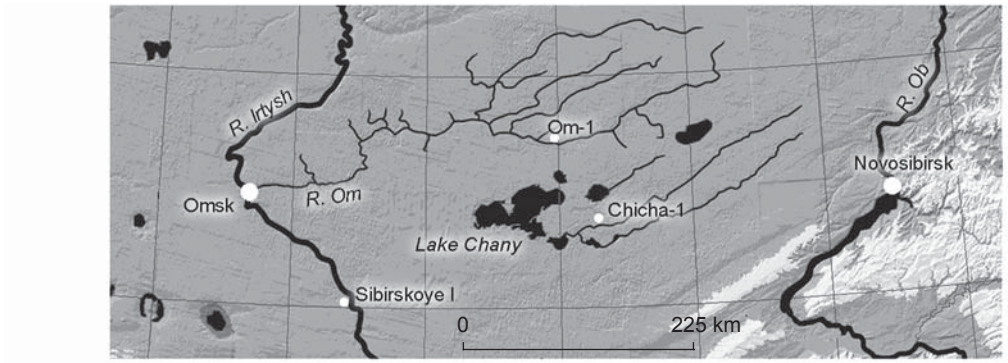
*This article describes the findings at Sibirskoye I, a Late Bronze to Early Iron Age site in the steppe part of the Irtysh basin. The history of its excavations is outlined. A detailed description of its ceramics, including sherd accumulations and fragments of 44 vessels, is provided. We analyze paste composition, provenance of clay, and temper. The principal raw material was high-quality western Siberian montmorillonite and hydromicaceous clay. The temper, preventing cracks and waste, consisted of grog, sand, and organic matter. Shaping techniques are described. On the basis of their proportions, groups of vessels are established, and their decoration is analyzed. Decorative motifs combine those typical of the Late Irmen pottery, and those denoting the Irmen and Krasnoozerska cultures. The Sibirskoye I ceramics are paralleled by those from Om-1 and Chicha-1. Certain categories of ware are imported. The planigraphy and the distribution of ceramics suggest that this was a ritual site. The ceramics and the site as a whole were attributed to the Late Irmen culture, dating to the transitional stage from the Late Bronze to the Early Iron Age. Sibirskoye I is the westernmost Irmen site—the first one discovered on the Irtysh. Judging from parallels with sites having a reliable chronology, we date it to 900–700/600 BC.*

Keywords: *Ritual site, Late Bronze-Early Iron Age transition, ceramics, Irtysh steppe.*

## Introduction

The Sibirskoye I site was discovered in the Novovarshavsky District of the Omsk Region, 1.4 km north-north-west of the Sibirskoye settlement (5.5 km south-east of the Bogdanovka village) (Fig. 1, *1*). This area belongs to the northern steppe sub-zone. The main waterway of the basin is the Irtysh River. The rock terrace of the Irtysh left bank is 2–6 km away from the present-day river-bed, where it forms a swamped floodplain full of watercourses, oxbows, and peatifying lakes of oxbow origin. Soils are mainly clayey and loamy (Bolshanik, Igenbaeva, 2006).

The site was discovered by V.T. Petrin in 1975, when it was named "Sibirskoye I settlement" (1975); in 1983, it was surveyed by S.V. Sotnikova. The scholars created approximate plans, carried out photo-recording, and collected surface finds. Petrin opened up a probe trench. Noteworthy among the artifacts collected by Sotnikova is a bronze knife (1983). The site was dated to the Middle-Late Bronze Age. According to the program of archaeological site certification in the Omsk Region, in

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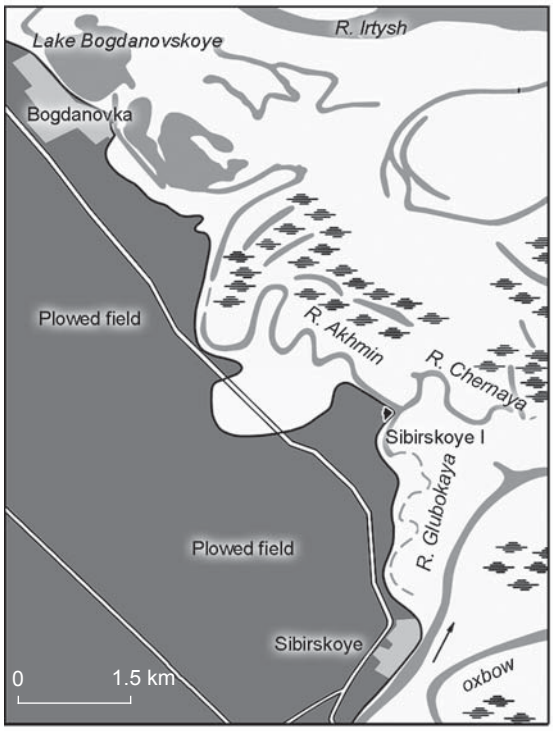


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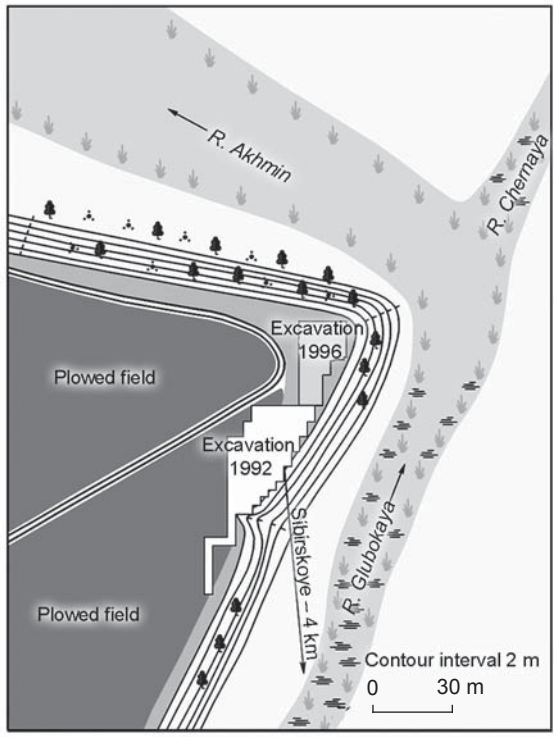


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*Fig. 1.* Location map of the Sibirskoye I site (*1*), terrain schematic map (*2*), plan of the site (*3*), view of the site from the west (*4*).

1991, A.Y. Trufanov conducted revision at the Sibirskoye I settlement (1991). He prepared a theodolitic plan (Fig. 1, *2*, *3*) and carried out rescue excavations of the Sibirskoye VI cemetery, discovered to the south of the settlement. In grave No. 1 at Sibirskoye VI, skeletons of three people buried during the Andronovo period (late 3rd millennium to early 2nd millennium BC) were found. Grave No. 2 was let into it not earlier than the 8th–7th centuries BC. In 1992, Trufanov finished the study of the cemetery, and in 1996, he conducted excavations of the Sibirskoye I site (1992, 1996).

The settlement is located on the edge of the first fluvial terrace of the Irtysh's left bank. Changing from a northeastern direction to a west-northwestern one, the terrace forms an acute-angled promontory at this place. Its height is 12 m. The terrace's slopes are well-turfed, overgrown with bushes and single birch-trees. A field road runs along the terrace edge; and near its foot, three oxbows merge together—the Glubokaya, Chernaya, and Akhmin watercourses (Fig. 1, *3*, *4*). Until recently, the main part of the promontory has been ploughed, while the remaining (poorly turfed) part has been exposed to the considerable wind erosion typical for the steppe areas of Western Siberia.

During the 1992 and 1996 excavations, an area of 1510 m$^2$ was uncovered. Within the promontory and to the south of it, a rather intricate complex of non-contemporaneous sites was found: the Sibirskoye I settlement (Fig. 2, *1*), whose cultural attribution remained unclear till the beginning of excavations in 1996; the Sibirskoye VI cemetery, preliminarily dated to the period from the Middle Bronze Age to the Early Iron Age; the burial complex "kurgan"* 1 belonging to the beginning of the Early Iron Age; and three in-line pits, which contained fragments of Alakul ceramics.

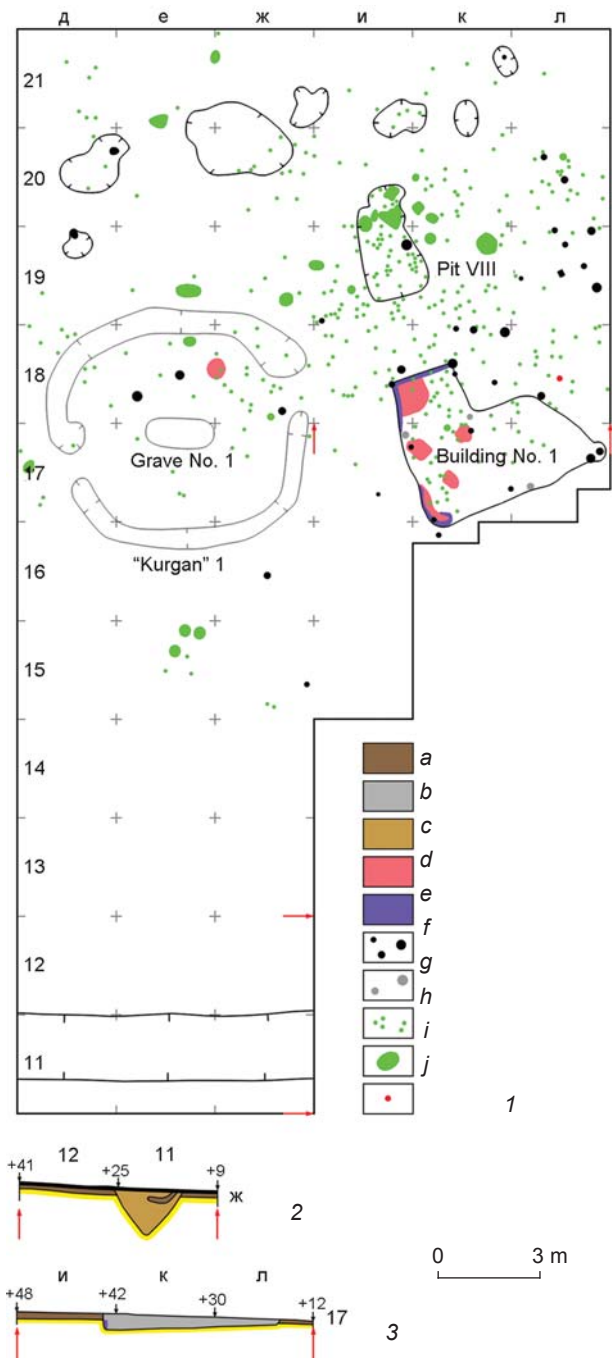


*Fig. 2.* Northern part of the Sibirskoye I excavation area. *1* – layout of the excavation area: *a* – gray-brown sandy loam; *b* – dark-gray sandy loam; *c* – gray-yellow sandy loam; *d* – charred earth; *e* – charcoal; *f* – pole pits; *g* – pole pits, not deepened into subsoil; *h* – pottery fragments; *i* – pottery accumulations; *j* – clay figurine; *2* – ditch section of the eastern wall (along the N-S line); *3* – section of building No. 1 along the W-E line.

## Settlement features

The Sibirskoye I settlement was excavated within an area of about 340 m$^2$. The planigraphy data suggest that the greater portion of the site has been studied (see Fig. 1, *2*). The study has revealed remains of deepened building No. 1, nine large pits of various dimensions and configurations, and 24 pole pits unrelated to the structure of building No. 1.

**Building No. 1** (see Fig. 2, 3). This was located in the northeastern corner of the excavation area. The foundation trench had a trapezoidal shape; its maximum dimensions were 2.85 × 5.80 m, the area is 17.5 m$^2$. The northwestern protrusion, being a continuation of the western wall of the excavation area, is interpreted as an exit. The exit is 1.9 × 2.4 m wide and about 1.7 m long. Taking into account the proposed exit, the maximum dimensions of the dwelling are 4.7 × 5.8 m.

*Despite the apparent signs of a kurgan (small ditches, a grave at the center of the burial space), the feature had no tumulus.

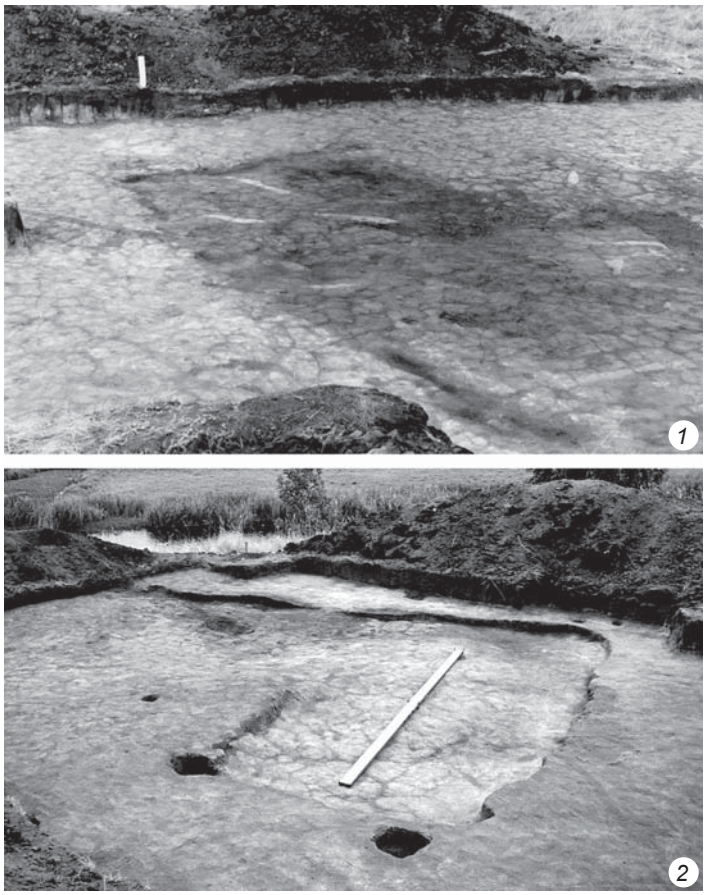

*Fig. 3.* Building No. 1.
*1* – before excavation of filling, view from the SW; *2* – trench of building No. 1 after excavation of filling, view from the NW.

The maximum trench depth ranged from 0.05 to 0.40 m; its maximum values were established at the western wall of the dwelling, and its minimum ones at the eastern wall. The trench was filled mainly with dark gray humus. Black coaly strips 0.1–0.2 m wide were recorded along the northwestern and southwestern corners (see Fig. 2, *2*). In the western half of the trench, orange spots of calcined soil up to 0.30–0.35 m thick were traced. Large coal stains occurred all over the place. The character of layer in the trench suggests that the building stopped functioning as a result of fire.

43 ceramic fragments, 11 animal bones, and 3 stones were found during excavation of the trench filling. These finds were concentrated in the western part, including at the exit.

**Pits in the territory of building No. 1.** After excavation of the filling and subsoil cleaning (see Fig. 2, *1*), 15 pole pits 0.10 to 0.28 m in diameter were studied in the building area and its immediate vicinity. Their depth ranged from 0.03 to 0.33 m, being 0.17 m on average. The pits were located at the corners and along the walls of the trench, while a pair of pits was generally located in a corner. The last feature suggests the frame-pillar structure of the building walls.

Eight pits forming a wavy chain were located in the northern part of the excavation area. Only one of them, almost undeepened into the subsoil, was located south of "kurgan" 1, thus marking the southern boundary of the settlement. Pit VIII, oriented along the SSE–NNW line and having dimensions of 1.9 × 3.5 m and a depth up to 0.12 m, has been discovered at the center of the site. Three pits in the northern part had sub-oval shapes, the others were amorphous. The minimum dimensions of the pits were 0.65 × 0.95 m, the maximum 2.3 × 3.4 to 3.5 m. All the pits were shallow: only two were over 0.10 m deep, the others were 0.05 m deep on average.

**Pits beyond building No. 1** (24 units). These were concentrated in the eastern part of the excavation area, near the edge of the terrace. Only two single pits were recorded in the southern part of the site. Four pole (?) pits, obviously traces of some structures, were within the area of large pits. Three small pits recorded in the area of "kurgan" 1 have, most probably, no relation to the burial complex. They contained pottery fragments (including accumulations), and were included in the overall planigraphy of the features and finds of the settlement. Undoubtedly, some features belonging to the Late Bronze Age were destroyed during construction of the burial complex; this is evidenced by ceramic items in the ditch filling of kurgan 1. The majority of pits have a round-in-plan shape, two of them are oval, and one has distinct rectangular contours. Their depth varied from 0.08 to 0.35 m. The depths of small pits within the large pits were considerably smaller (less than 0.10 m), while the average depth of the other 20 pits was more than 0.17 m.

The excavation area's stratigraphy is as follows: turf was virtually absent as a separate layer, owing to continuous wind erosion. The cultural layer at the site is represented by a dense grayish-brown loam, whose thickness was 0.2–0.3 m on average, but did not reach 0.15 m in certain areas. The underlying layer is a dense yellow loam (see Fig. 2, *2*, *3*).

## Ceramic assemblage of the site

The planigraphy of the ceramics has been determined according to the locations of individual finds. Beyond building No. 1, the maximum concentration of separate fragments has been recorded in the central and eastern parts of the excavation area. It coincides with localization of ceramic accumulations containing the majority of

vessels reconstructed in the course of artifacts' treatment and conservation. It must be emphasized that only the walls of vessels, often with the bottoms, were restored. The maximum concentration of accumulations was observed above pit VIII and nearby (see Fig. 2, *1*). Separate fragments were outside the accumulations.

The ceramic assemblage of Sibirskoye I contains 44 vessels*. Among these, 7 vessels have been reconstructed fully, 18 vessels partially (up to the maximum extension of the body); others were represented only by rims (some of them contained a part of shoulder) (Fig. 4–9). The ceramics were studied using binocular microscopy (Bobrinsky, 1978). The materials were divided into groups by the recipes of their paste. Five samples were subjected to petrographic analysis.

The pottery pastes of Sibirskoye I were based on loams with 13–18 % admixtures of silt and fine-aleuritic particles, predominantly quartzite. The clay part consists of mixed-layered formations, such as hydromica with admixture of montmorillonite or (singly) chlorite. The cement structure is aleuropelitic.

The following recipes for pastes have been identified: Clay + Grog; Clay + Grog + Sand; Clay + Grog + Sand + Organic matter (organic matter traces); Clay + Grog + Organic matter. Grog consists of dark-brown, brown, reddish-brown, or black sherds with wide-tabular, tabular, irregular, long-tapered shapes. The sherds are 0.2–2.2 mm in size; their content in samples is 3–18 %, mostly 12–15 %. In almost all examined samples, the presence of grog in grog was noted. In this case, the grog cement (clay base) composition is similar to that of the initial sample. The following recipes of grog-in-grog pastes are recorded: Clay + Grog + Sand, Clay + Sand.

Sand occupies 15–32 % of the microsection area (mainly 15–18 %). The sand grains are 0.05–0.6 mm in size (from very fine to large ones), i.e. they are unsorted and distributed over the microsection in a weak nest-like manner. The sand grains are semi-angular, angular, and semi-rounded. They are dominated by quartz; the number of feldspars is smaller; microquartzites and clay chloritized debris of the bulk of acid effusives are recorded more rarely; debris of mica, epidote, protobase are single**.

Thus it can be assumed that potters used rather high-quality western Siberian montmorillonite and hydromicaceous clay; the raw material was characterized by good moldability and plasticity; its content in the pottery pastes is 60–70 %. A mineral additive of 30–40 % allowed the items made of raw materials sensitive to drying and firing with manifestations of cracking (Gidroslyudisty mineral, (s.a.): 21) to be fired without cracks and waste. The quality of the paste was also improved by organic matter, recorded in 72 % of studies samples.

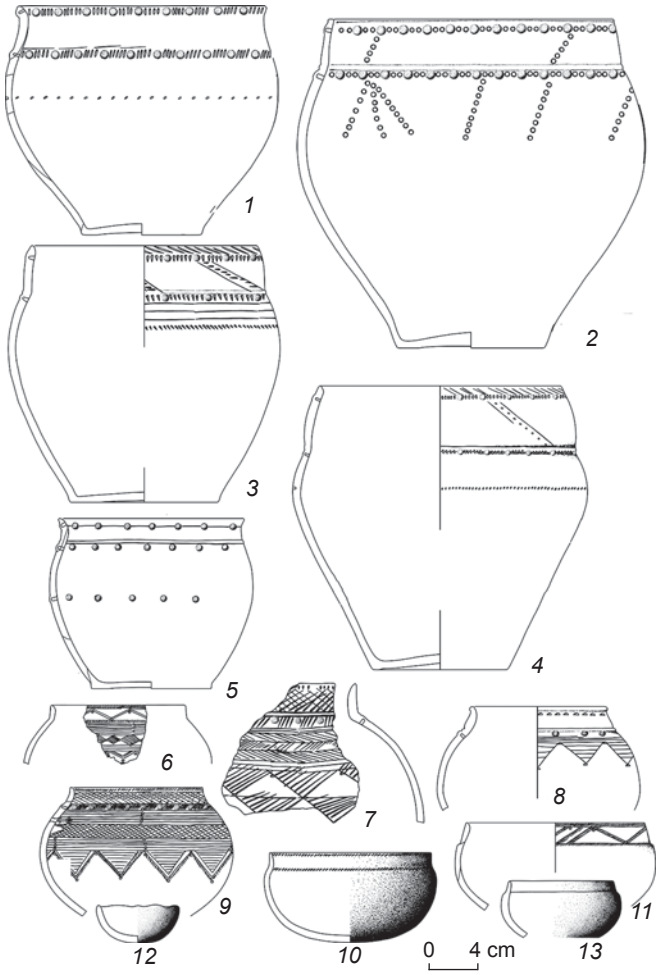


*Fig. 4*. Ceramics from Sibirskoye I.
*1–5* – group I, subgroup 1; *6–9* – group I, subgroup 2; *10–13* – group II.

Studying fractures of vessels has demonstrated that the vessels whose sherds were used as additives, were manufactured following the same traditions of paste formulation as the later ware, for the paste of which they served as raw materials. However, the paste of some items contains grog. It was based on the sherds of items whose paste was determined as not typical for this site (Clay + Sand). This suggests that in everyday life, "foreign" ware was used, whose fragments could serve for the creation of own new ware. Besides, the absence of ware with the Clay + Sand paste at the site means that the vessels manufactured by adding grog with such a recipe are not local (were imported).

*The number of vessels was determined according to the fragments that included the upper portion. Calculation using the body and bottom fragments may result in an increase of this factor, but the degree of its confidence will be lower.

**The petrographic determinations were made by petrographer I.Y. Vilkovskaya.

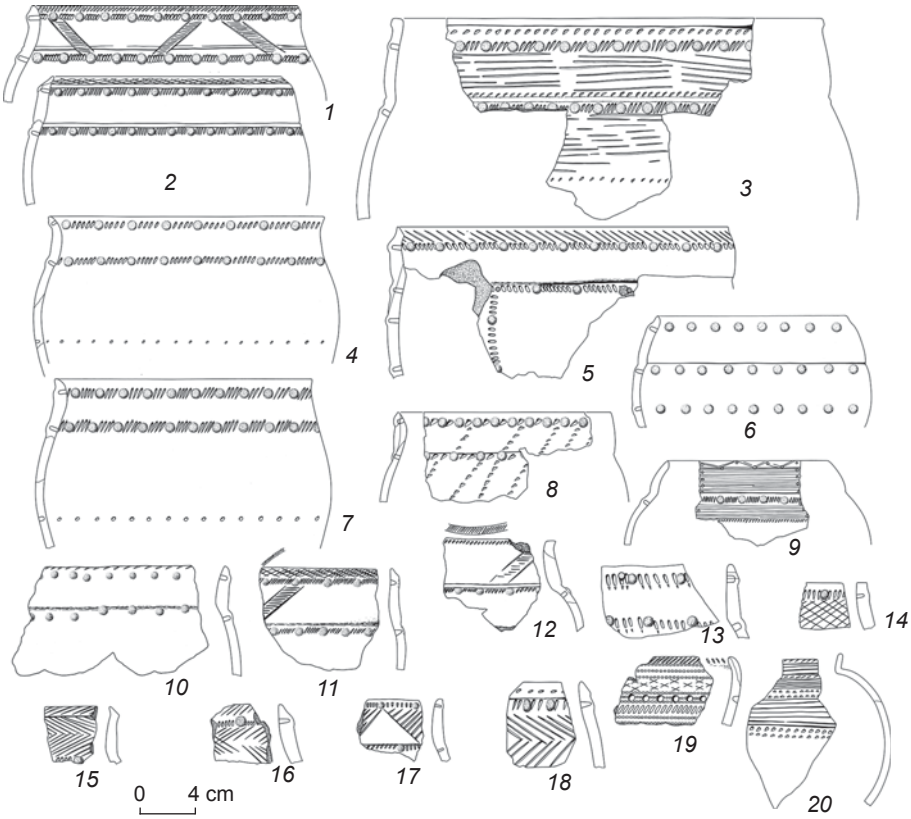


*Fig. 5.* Ceramics from Sibirskoye I. *1–8*, *10–19* – group I, subgroup 1; *9*, *20* – group I, subgroup 2.


*Fig. 6.* Bottoms of vessels from Sibirskoye I.

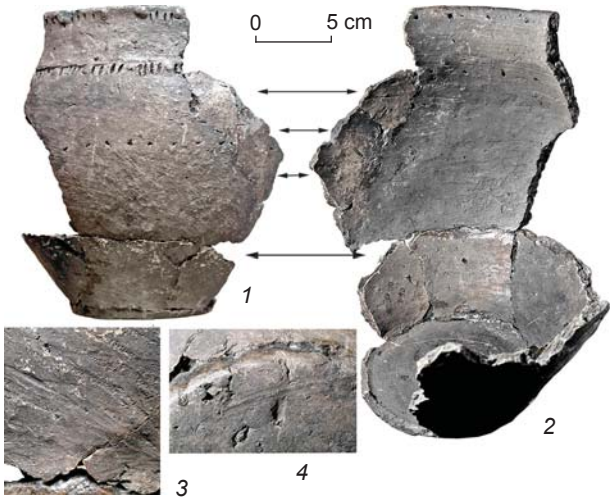


*Fig. 7.* Ceramics from Sibirskoye I.

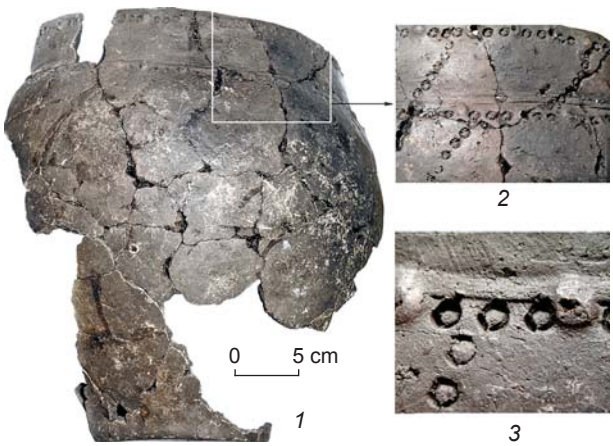


*Fig. 8.* Ceramics from Sibirskoye I.

The items were manufactured using the base-shaping method (see Fig. 6–8). A bottom-cake was either coiled or pressed out of one lump of clay. Two methods for connection of the bottom and the lower portion of a vessel were distinguished:

1) A band was placed on the bottom. The joint was luted in place from inside with a spatula having a rounded working-portion, or with the artisan's finger. Inside the vessel, along the bottom perimeter, a groove with a rounded bed 0.5–1.0 cm in diameter or an even smooth corner can be observed (see Fig. 6, *1*, *2*, *7–10*; 7, *2*, *4*);

2) A lower band was set against the bottom-cake (see Fig. 6, *3–6*). The vessels under consideration, unlike the items from other assemblages of that time (Mylnikova, 2015a, b; Chicha…, 2009; Papin, Shamshin, 2005), have different bending-angles between the body and the bottom.

The body of the vessel was manufactured using coiling technique. The bands 2.5–3.5 cm wide were connected to each other by overlapping (see Fig. 7, *1*, *2*; 8, *1*). The neck was created from one band, and was butted with the body. The necks of all recorded shapes were made using this method (see Fig. 4, 5).

An item was put into a certain shape already in the shaping process. The surface of the manufactured vessel was treated from both sides. Several methods of such treatment were identified: a) using a hard tool (a chip?, a wooden knife) that left long, narrow, horizontal grouped grooves on the surface (see Fig. 6, *7*, *8*; 7, 8); b) by artisan's hands—prints of dermal ridges are recorded on both surfaces of vessels; c) using a hard burnisher, whose traces are recorded in the form of long, unidirectional, most frequently horizontal, grooves 0.2–0.4 cm wide, with shallow beds (see Fig. 7, *1*). The final treatment of a vessel's outer surface was performed by hand (leather?) (see Fig. 9, *1*, *2*). Burnishing was generally applied to the rim cut from the outside, often to the inner surface of items (see Fig. 8, *1*, *2*), and more rarely to the bottom (see Fig. 6, *2*). If both surfaces of items were burnished (see Fig. 9, *3–6*), then only one burnishing technique was used. The outer surface of the bottom was treated using circular movements along the perimeter. At center of the

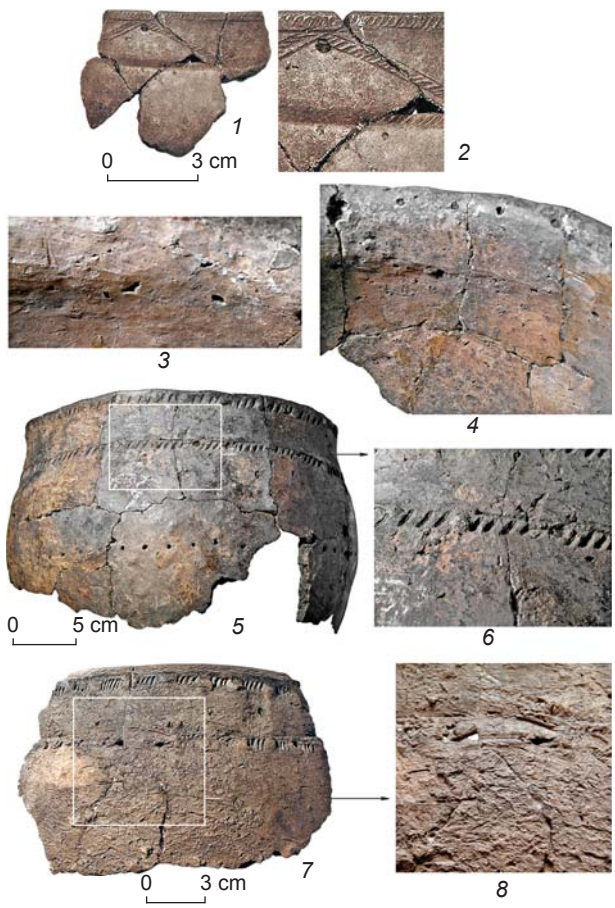


*Fig. 9.* Ceramics from Sibirskoye I.

bottom, only two-direction movements were carried out: right-left. In 16.6 % of vessels, the ornament was applied before burnishing: in some samples, "offset" of elements is recorded. Some vessels show an intentionally "aged", "shaggy" (the term was used by: (Gening, Stefanov, 1993; Chlenova, 1997)) surface, with irregularities, scores, undulations, or lumps of clay (see Fig. 9, *7*, *8*).

The ceramic collection of the site is not numerous and lacks full samples; however, it can be assumed that its major part consists of flat-bottomed vessels; all studied shapes are pot-like. The collection shows necks of two dimensional ranges: low and medium. The neck of each vessel at the majority of sites pertaining to the transitional stage from the Bronze to the Early Iron Age can be assigned to a specific type, since despite their visible resemblance they are individual: extending upwards (see Fig. 4, *1*, *5*; 5, *4*, *7*), straight, convex "Molchanovo"-type (see Fig. 4, *2–4*; 5, *3*, *5*, *8*, *9*), narrowing upwards (see Fig. 4, *4*; 5, *6*, *9*), and intricate (straight with a folded inward rim, whose outer edge forms a platform) (see Fig. 5, *5*, *7*, *8*, *10*, *11*, *15*, *16*). Sometimes, the shape of the neck was formed by pasting an additional clay batch inside the neck (in this case, the neck had a thickening in its central portion) or outside (the neck was separated from the body with a "small ledge") (see Fig. 5, *8*, *10*, *12*).

The vessels with pot-like shapes (apart from the flat bowl (see Fig. 4, *12*) excluded from further calculations) can be divided into two groups.

**Group I** (90.9 %). Vessels of large and medium size, with equal proportions (HI* 0.85–0.99) (calculations were made according to the method of V.F. Gening (1973)). According to the neck breadth index, all of them have broad necks. However, two subgroups are clearly distinguishable within this dimensional category (NBI 0.66–1.00).

*Subgroup 1* (85.0 %) (see Fig. 4, *1–5*; 5, *1–8*, *10–19*). This subgroup includes ware with an NBI in the interval of 0.78–0.94. In this collection, these are maximally broad-necked vessels. The NBI for the majority of vessels is within 0.82–0.86. Five pots contain a preserved flat bottom. According to the bottom width index, all vessels are wide-bottomed. The BWI of three vessels is within 0.45–0.52 (see Fig. 4, *1*, *2*, *4*), and the BWI of two others, with wider bottoms, is 0.39–0.40 (see Fig. 4, *3*, *5*). As noted above, the morphology of the necks is diverse. In most cases, the neck is distinctly separated from the shoulder, and is visually determined as high*. The rims also have variable shapes: pointed, rounded, or (more rarely) straight. The rim edge can be folded outward, skewed outward or inward, have a buildup on the outer side, etc.

The ware of this group is nonuniform in size. In terms of rim diameter, the items can be divided into three groups: the first 14.0–16.0, the second 17.5–21.0, and the third 25.0–33.0 cm. The indisputable predominance of the second dimensional group is noteworthy (about 70 %). The thickness of body walls depends weakly on the vessel's size, and reaches 6–8 mm. Meanwhile, the thickness of neck walls of many vessels exceeds the body wall thickness by 1–3 mm. Such items, on their necks folded outward, show a thickening in the lower portion, typical of the Late Irmen morphological tradition (see Fig. 4, *8*; 5, *7*, *8*, *10*, *12*).

*Subgroup 2* (15.0 %) (see Fig. 4, *6–9*; 5, *9*, *20*). Ware with NBI 0.65-0.70. These are items with noticeably narrowed necks, also rather variable in shape, including a shortened one (?). The shape of the bottom is unknown, but in one case it definitely tends towards a rounded one (see Fig. 4, *9*). The rim diameter for vessels of this subgroup is 11.5–12.0 cm, the thickness of body walls 5.0–6.0 mm.

In half the vessels of group I (with preserved necks), the inner side, at the transition from neck to shoulder, shows a rib, the presence of which is obviously independent of the vessel's degree of profiling (Fig. 4, *3*, *7*; 5, *3–6*, *9*, *12*, *13*). In the same selection, 36.7 % of pots have a small shaped fillet within this area on the outer side (see Fig. 4, *2*, *5*, *7*, *8*; 5, *1–5*, *12*).

**Group II** (9.1 %). Vessels with necks, squat (HI ~0.52), broad-necked, with a ledge at the transition from neck to shoulder (see Fig. 4, *11–13*). The general morphology of items belonging to this group implies the presence of a rounded or flattened bottom. The neck is either vertical or inclined inward. The rim diameter is 9.0–15.5 cm, the thickness of body walls 4.5–7.0 mm.

**The ornament** shows a combination of the Later Irmen ornamental motifs with the Irmen and Krasnoozerka ones. The degree of ornamentation on the ware is low. The vessels of group I, subgroup 1 have sparse ornamentation; even if it descends to the shoulder, it has the form of separate "lines". Ornamentation on the vessels of group I, subgroup 2 is denser; the patterns reach the zone of the maximum body width. In one vessel, it also descend lower

*HI – height index = H/D max.b; NHI – neck height index = NH/RD; NBI – neck breadth index = (RD + ND)/2 D max.b; NPI – neck profile index = 5(RD - ND)/NH; BHI – body height index = (SH + BsH)/D max.b; SHI – shoulder height index = SH/BsH; SCI – shoulder convexity index = (D max.b - ND)/2 SH; BWI – bottom width index = (D max.b - BsD)/2BsH (Gening, 1973). RD – rim diameter; ND – neck diameter; D max.b – maximum diameter of body; BsD – base diameter; H – height of vessel; NH – neck height; SH – shoulder height; BsH – base height.

*Of special interest are vessels where the outline of the inward inclined neck, irrespective of its shape, is approximate to the shoulder line. In this case, the shape of a vessel is similar to a closed jar-shape (see Fig. 5, *2*, *6*, *9*).

(see Fig. 4, *6*, *7*, *9*). Three items have an ornamented rim-cut (see Fig. 5, *11*, *12*).

*The ornamental traditions of the Irmen culture* are evidenced by cross-hatched geometrical figures on the ware of both groups: in 12 vessels of group I (30.0 %) and in one vessel of group II. Geometrical patterns cover the outer surface of the neck, and more rarely of the shoulder. The neck may be decorated with a net, a zigzag, or have no ornament (Fig. 4, *6–9*).

Necks are ornamented with inclined cross-hatched bands, running in parallel and/or forming a zigzag (see Fig. 4, *3*, *4*, *11*; 5, *1*, *11*, *12*); cross-hatched triangles with their tops downwards are recorded only on one vessel (see Fig. 5, *17*). Cross-hatched geometrical patterns descend to the body on one pot of group I (in the form of diagonal bands), and on four pots of subgroup 2 (in three cases, these are triangles with their tops downwards (see Fig. 4, *7–9*), and in one case they are rhombs (see Fig. 4, *6*)).

Netlike patterns typical of the Irmen ware (Molodin, 1985; Matveev, 1993) occur on eight vessels of group I (20.0 %). These generally occupy the entire neck surface (see Fig. 4, *7*, *9*; 5, *14*), and more rarely are located near the rim-cut (see Fig. 5, *2*, *11*), which should be interpreted as a Late Irmen variation.

Also noteworthy is the presence of so-called circlet imprints (made by a hollow bone?) on four vessels of subgroup 2 (see Fig. 4, *6*, *9*, *11*; 5, *9*), where they accentuate the corners of geometrical figures, and connect horizontal lines; and also on one vessel of subgroup 1 (see Fig. 4, *2*).

*The ornamental traditions of the Krasnoozerka culture* take the form of zones of horizontal smoothly-stamped imprints (see Fig. 5, *3*, *9*, *20*) on four vessels of group I (10.0 %). Such patterns are typical of the Late Krasnoozerka culture ware from the Inberen VI fortified settlement **(**the Irtysh basin**)** (Abramova, Stefanov, 1985: Fig. 7, *1*, *3*, *8*, *13*) and the Novotroitskoye I settlement **(**the Irtysh basin**)** (Trufanov, 1990: Fig. 35–37). The collection also contains a proper Krasnoozerka rim fragment with a cross-shaped ornament (see Fig. 5, *19*).

The major part of the ware is decorated in accordance with *the Late Irmen ornamental tradition*, special features of which were distinguished by M.P. Gryaznov for the Bolshaya Rechka stage of the Bolshaya Rechka culture (1956), and by V.I. Molodin for the Baraba sites (1979: 111): with a double row of punched nodes (along the neck and the rim edge), which were separated by smoothly-stamped "cut marks", ranging from two to eight in number (see Fig. 4, *1–4;* 5, *1–5*, *7*, *11***)**. Single rows of punched nodes with spacing (on the neck) have been reliably recorded only on six vessels (see Fig. 4, *7–9*; 5, *9*, *12*, *15*). In certain cases, comb imprints (see Fig. 5, *13*), single holes (see Fig. 5, *8*), pits, or paired circlet imprints (see Fig. 4, *2*) serve as separators. Notably, such ornamentation (pushed-out stamp decoration with spacing) is only encountered on ware of group I; it occurs on 67.5 % of vessels. Five vessels have only rows of punched nodes (see Fig. 4, *5*; 5, *6*, *10*), which is typical of the shaping of ware from the epoch preceding the Early Iron Age.

Elements of the Late Irmen ornamentation are short (more rarely, long) imprints made by an inclined, or upright, smooth stamp, which frame the rim edge. These have been traced on 50 % of the vessels (see Fig. 4, *3*, *4*, *6*, *7*, *9*, *11*; 5, *1*, *3*, *5*, *10*, *12*, *20*). Possibly, rare herringbone patterns should also be classified as Late Irmen features (see Fig. 4, *7*; 5, *16*, *18*).

When characterizing ornamentation, it is necessary to pay attention to an extremely rare use of the "comb" technique; this occurs only on one vessel (see Fig. 5, *13*); and to single cases of the decoration of a bottom with pits (Fig. 6, *9*, *10*).

The correspondence between the shapes and the ornamentation of items has been traced. Ornaments composed of two rows of punched nodes with spacing under the rim and above the neck (rarely, with one more row of punched nodes along the body) are typical for pot-shaped vessels with weakly profiled shoulders and necks of middle height.

The collection can be divided into two groups according to the style of ornamentation. One of these includes items with geometric netlike patterns made according to the Irmen tradition, and also showing elements of the Krasnoozerka traditions. This group can be referred to as ornamentally saturated. The other group of items does not contain such patterns, and so can be called extremely poor (see, e.g., Fig. 4, *1*, *5*, *10*, *13*; 5, *4*, *7*, *10*, *13*).

In general, in terms of cultural attribution, the ceramic collection is monolithic. It should be defined as the Late Irmen. Nearly direct analogs to certain vessels of the collection under study can be found in the Om-1 settlement complex (Mylnikova, Chemyakina, 2002) and the Late Irmen group of the Chicha-1 fortified site (Chicha…, 2001, 2004, 2009). Like other collections of the transitional stage from the Bronze to the Early Iron Age (Zimina, Mylnikova, 2006; Kaydalov, 2013; Kaydalov, Sechko, 2006; Kolontsov, Sofeikov, 1987; Molodin, 1985; Mylnikova, 2015b; Mylnikova, Papin, Shamshin, 2003; Mylnikova, Chemyakina, 2002; Papin, 2002a, b; 2003; Papin, Shamshin, 2005; Troitskaya, Mzhelskaya, 2008; Trufanov, 1990; Sherstobitova, 2008; Chicha…, 2004, 2009), the Sibirskoye I ceramic collection exhibits foreign cultural traits: for example, items bear traces of a specific "aged" treatment of the surface, typical of the Berlik group (Molodin, 2008b; Mylnikova, 2015a; Molodin, Mylnikova, Durakov et al., 2009; 2012), although no vessels belonging to the Berlik culture were found at the settlement. The Krasnoozerka features (including a convex neck), occurring on 27.5 % of the group I vessels, harmonize with the Late Irmen

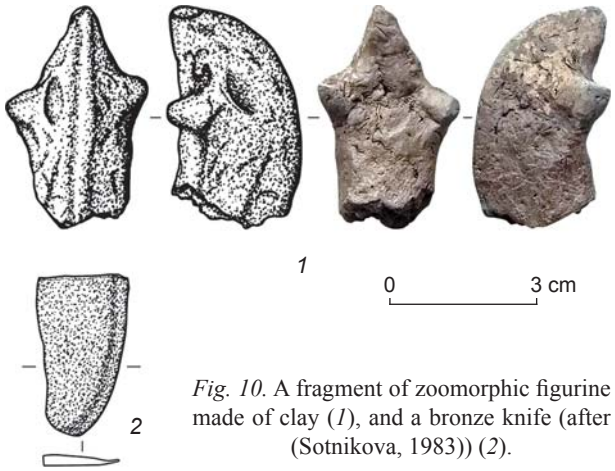


*Fig. 10.* A fragment of zoomorphic figurine made of clay (*1*), and a bronze knife (after (Sotnikova, 1983)) (*2*).

morphological specifics and ornamentation. This special feature (i.e. the inclusion of some foreign cultural elements in their own compositions), typical of the Late Irmen culture, was recorded in ceramics from other complexes; for example, Chicha-1, Om-1, Linevo-1, Myknikovo (Mylnikova, 2015b; Mylnikova, Papin, Shamshin, 2003; Mylnikova, Chemyakina, 2002; Papin, 2002a, b; 2003; Papin, Shamshin, 2005; Chicha…, 2004, 2009).

It is important to note that 0.9 m to the NE of building No. 1, a fragment of a zoomorphic clay figurine was found* (Fig. 10, *1*), typical of the Late Irmen settlement complexes of Baraba (Molodin, Chemyakina, Partsinger et al., 2003: Fig. 2).

The bronze knife found by S.V. Sotnikova in 1983 (Fig. 10, *2*) is classified as a wide-edge knife with a tapered nose. Similar items are known at Chicha-1 (Molodin, Partsinger, Efremova et al., 2003: Fig. 2, *4–6*) and Novotroitskoye I (Trufanov, 1990: Fig. 66).

## Conclusion

In the beginning of the 21st century, the study of sites of the transitional stage from the Bronze to the Early Iron Age in the forest-steppe zone of Western Siberia is marked by an increase of the source base, and by considerable achievements in solving the Late Bronze Age issues. The data on each new site studied contribute to the correct understanding of the period's history. The results of analyses of ceramic assemblages hold a prominent place in the evidence base. To a large extent, exactly the observations on the character of the ceramics distribution in the excavation area of the Sibirskoye I site, in combination with other results of studies, gave A.Y. Trufanov, the leader of the excavations, the idea that identification of the site as a settlement needed correction.

The Late Irmen site of Sibirskoye I, with only one building (having a small area, slightly deepened, and without a hearth), 55 finds in the trench filling, and an almost complete absence of cultural layer beyond its limits, can be considered completely studied. Initially, the small thickness of the cultural layer was explained by wind erosion, which is typical for steppe areas and stems from black storms caused by the plowing of virgin lands. However, the removal of a layer by the wind has had no influence on the number of finds therein; they are few, with the exception of accumulations*. The planigraphy of the revealed features is also unusual. Small pits beyond building No. 1, as well as large pits in the northern part of the site, are located randomly. All the above allows the site to be interpreted as a ritual place, generally similar to the sites known in the northern Irtysh basin (Trufanov, 1983; Potemkina, Korochkova, Stefanov, 1995). In view of this, it is important to note that specialized ritual sites, as became clear recently, are typical of the Irmen culture, too. They have been revealed in the Baraba area (Molodin, Efremova, 2015; Efremova, Molodin, 2018) and in the Barnaul region of the Ob (Papin, 2000; Papin, Fedoruk, 2017). At Sopka-2, a ritual complex of the Irmen culture (Baraba forest-steppe) was located in the area of a cemetery. There were systematic pole pits at a round-shaped ground occupied by the complex. Ceramic vessels were found within the complex (Efremova, Molodin, 2018; Molodin, Efremova, 2015: 71). At the Maly Gonbinsky Kordon-1 site, in the Barnaul region of the Ob, near ritual structure 1/3, a burial ground was also situated, whose ceramic complex (Papin, 2000) is similar to finds from Sibirskoye I. There is a known Late Bronze ritual complex belonging to the Pakhomovo culture at Tartas-1; its ceramics are identical to the materials from the settlement under study (Efremova, Molodin, 2018; Efremova et al., 2017; Molodin, Nagler, Hansen et al., 2012; Molodin, Kobeleva, Nagler et al., 2013; Molodin, Durakov, Kobeleva et al., 2014; Selin, 2018). The Chicha-1 fortified site, according to Molodin, appeared in the Irmen period, like the sanctuary (Molodin, 2008a: 163; Molodin, Partsinger, 2009: 72).

So far, Late Irmen sites have been known in Baraba, Kulunda, and the forest-steppe Ob region. Nowadays, Sibirskoye I is the westernmost Irmen site and the first one discovered on the Irtysh. Development of the Irmen culture at its late stage in the forest-steppe Irtysh basin, as well as in other regions, depended on interaction with people of foreign cultural traditions (Molodin, Mylnikova, 2011; Mylnikova, 2015a, b; Trufanov, 1988). The southernmost site of the Irmen culture "Rozanovskoye" variant—the Achair V fortified site—is located

*The second figurine is represented by a very small fragment.

*The osteological material of the site has not been determined. It is scarce and loosely distributed. In the accumulations, mandibles of large herbivores occur.

55 km upstream of the Irtysh from the Om River mouth (Polevodov, 1995). The distance between it and the Sibirskoye I settlement is about 90 km. No Late Bronze Age sites are known in this area; and it is not clear so far, where the boundary between these two closely related cultural formations passed.

The date of the Sibirskoye I site can be determined approximately, by analogy with well-excavated and dated Late Irmen complexes, among which Chicha-1 holds a central position. The proposed chronology of the Late Irmen complexes found at this site (Molodin, 2008a; Molodin, Partsinger, 2009; Schneeweiss et al., 2018) suggests that the Sibirskoye I ritual site existed in the 9th to 8th (7th) centuries BC. The settlement itself functioned within this period, obviously for a rather short time.

In terms of culture, the materials from Sibirskoye I are closest to those from Om-1 (Mylnikova, 2015a; Mylnikova, Chemyakina, 2002: Fig. 27–31). This closeness is evident at the level of production technology (recipes for pastes, methods of manufacture, surface treatment), morphology, and ornamentation of vessels. The materials from Chicha-1 also contain similar ware (Chicha , 2009), though it is not so noticeable against the background of morphological and ornamental variability of the items.

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