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Avtodrom 2—a Late Neolithic (Artyn Culture) Site in the Baraba Forest-Steppe, Western Siberia*

The study addresses cultural and chronological attribution of Avtodrom 2—the largest and best-known Neolithic site in the forest-steppe zone of Western Siberia. The results are summarized of excavations made over eight field seasons (1998, 2004, 2007–2012) in its northeastern part, where dwellings with the Artyn type of pottery and numerous stone implements have been found. We describe ceramics, lithics, habitation and utility structures, and propose attributing them to the Late Neolithic Artyn culture distributed over the forest and forest-steppe parts of the middle Irtysh basin, in Baraba, and partly on the southern Vasyugan. On the basis of radiocarbon and thermo-luminescent analysis of the ceramics, the estimated dates fall within the middle and second half of the 5th millennium BC. The Artyn people maintained ties with those of the Bystrinka (Bystry Kulyogan) culture of the Middle Ob and those of the Kokui culture of the Irtysh and Ishim basins. Cultural affinities with people of the forest-steppe Upper Ob and of the northern Kulunda steppe are explored. The place of the Artyn culture among other Late Neolithic and Early Bronze Age cultures is assessed. This culture belonged to the Late Neolithic stage in the evolution of the autochthonous Ob-Irtysh community.

Keywords: *Avtodrom 2, Artyn culture, Late Neolithic, Middle Irtysh, Baraba forest-steppe, Ob-Irtysh watershed.*

Introduction

One of the problems of current interest in present-day Western Siberian archaeology is accumulation of knowledge about the Neolithic in the forest-steppe landscape zone. Despite the significant body of sources, there is still an ongoing debate about the cultural and chronological attribution of assemblages, as well as about periodization of the Neolithic in the Transurals. The situation is different with the state of knowledge of this period in the forest-steppe Baraba and Ob region. Thanks to the studies of V.I. Molodin, V.I. Matyushchenko, V.F. Gening, and later of V.A. Zakh and A.I. Petrov, a first and significant step in the study of the Neolithic in this region was made from the 1960s–1980s. Some theoretical principles and conclusions of this historiographic period have not lost their importance until now. Almost 30 years have passed since that time, during which active field

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research has not been conducted at the Neolithic sites. Accordingly, a qualitatively new body of sources needs to be accumulated for solving the problems of the Neolithic in Baraba. The large complex of the settlement of Avtodrom 2 constitutes a part of this body of sources. This article provides a description of the materials of the Artyn culture. In 1970, Gening and his students established the Artyn type of pottery on the basis of materials from the Artyn settlement in the Middle Irtysh basin (Gening et al., 1970), but until now this type has not been studied in sufficient detail.

History of research and description of the site

The settlement of Avtodrom 2 is located on the second terrace above the floodplain on the left bank of the Tartas River (the village of Vengerovo, Vengerovsky District, Novosibirsk Region). It was discovered in 1997 by A.I. Soloviev. The first excavations at this site were carried out in 1998 by the Western-Siberian branch of the North Asian Joint Expedition of the Institute of Archaeology and Ethnography (Siberian Branch of RAS) led by V.I. Molodin (Molodin, Novikov, 1998). From 2004 until the present day, systematic research at this settlement has been conducted by the Kuzbass archaeological expedition of Kemerovo State University and the Institute of Human Ecology at the Federal Research Center of Coal and Coal Chemistry (Siberian Branch of RAS) led by V.V. Bobrov. Over 55 ancient buildings have been identified at the site; they form the northeastern and the southwestern planigraphic groups (Fig. 1). Over 2000 m^2 have been uncovered. The remains of 14 dwellings of the southwestern group and 10 dwellings of the northeastern group have been excavated.

The stratigraphy of the settlement is a bedding of light-aeolian sandy loams, alternating with bands of clay loams of various thickness (Molodin et al., 2003; Bobrov, Marochkin, 2011b). One of such bands with a thickness of up to 0.15 m at a depth of 0.4–0.6 m is the native soil horizon. Materials of the early and late periods of the Bronze Age, the Early Iron Age, and the Late Middle Age have been discovered at this site, but the most representative assemblages are associated with the Neolithic.

It was established that the southwestern group of dwellings constituted a settlement of the Boborykino culture (Avtodrom 2/2) (Bobrov, Marochkin, Yurakova, 2012). Dwellings containing stone tools with Neolithic characteristics and a great amount of pottery fragments of the so-called Artyn type have been found in the northeastern part of the site (948 m^2 have been excavated). The analysis of these materials has made it possible to identify an independent culture of the Late Neolithic period (Bobrov, 2008; Bobrov, Marochkin, 2011a). Despite the fact that the Artyn assemblage of Avtodrom 2 has been actively used for clarifying the cultural and chronological pattern of development in the Neolithic Baraba (Bobrov, Marochkin, 2012), it has not received sufficient attention in the literature, and only preliminary reports have been published (Bobrov, Marochkin, 2008; Bobrov, Marochkin, Yurakova, 2010).

Description of the Artyn complex of the settlement

Excavations in the northeastern part of the site have yielded representative collections of stone tools, ceramic vessels and implements, as well as remains of structures embedded into the ground. No objects of organic material or bone remains have been discovered except for a few small calcified fragments. However, the data obtained make it possible to provide a description of the material culture of the Artyn population in sufficient detail.

Dwellings

The instrumental survey showed that the northeastern group included the remains of at least 30 structures, ten of which have been examined in the process of field research. The attribution of each of them to the Artyn cultural complex has been reliably confirmed in the context of pottery occurrence. All structures were rounded (No. 16, 18, 53, and 54) or amorphous (No. 1, 4, 5, 14, 15, and 55) half-dugouts, 0.05–0.40 m deep. The areas of these structures ranged from 8 to 40 m^2 (Table 1). The dwelling pits in all cases were filled with white sand identical to the cultural layer in the space between the dwellings. The walls of the half-dugouts were both sloping and almost vertical, varying within a single structure (Fig. 2). No signs of entry or remains of hearths and pole structures have been found. Only once were three pits discovered, the purpose of which remains unknown, inside small pit No. 54.

The composition of the findings from the filling in the bottom of the pits in all cases shows a certain pattern: a large amount of pottery (including accumulations found *in situ*) and a relatively small amount of lithic objects (Table 1). Pooled analysis of the spatial distribution of lithic objects confirmed this pattern, showing the occurrence of 78 % of them in the space between the dwellings and only 22 % in the filling and on the bottom

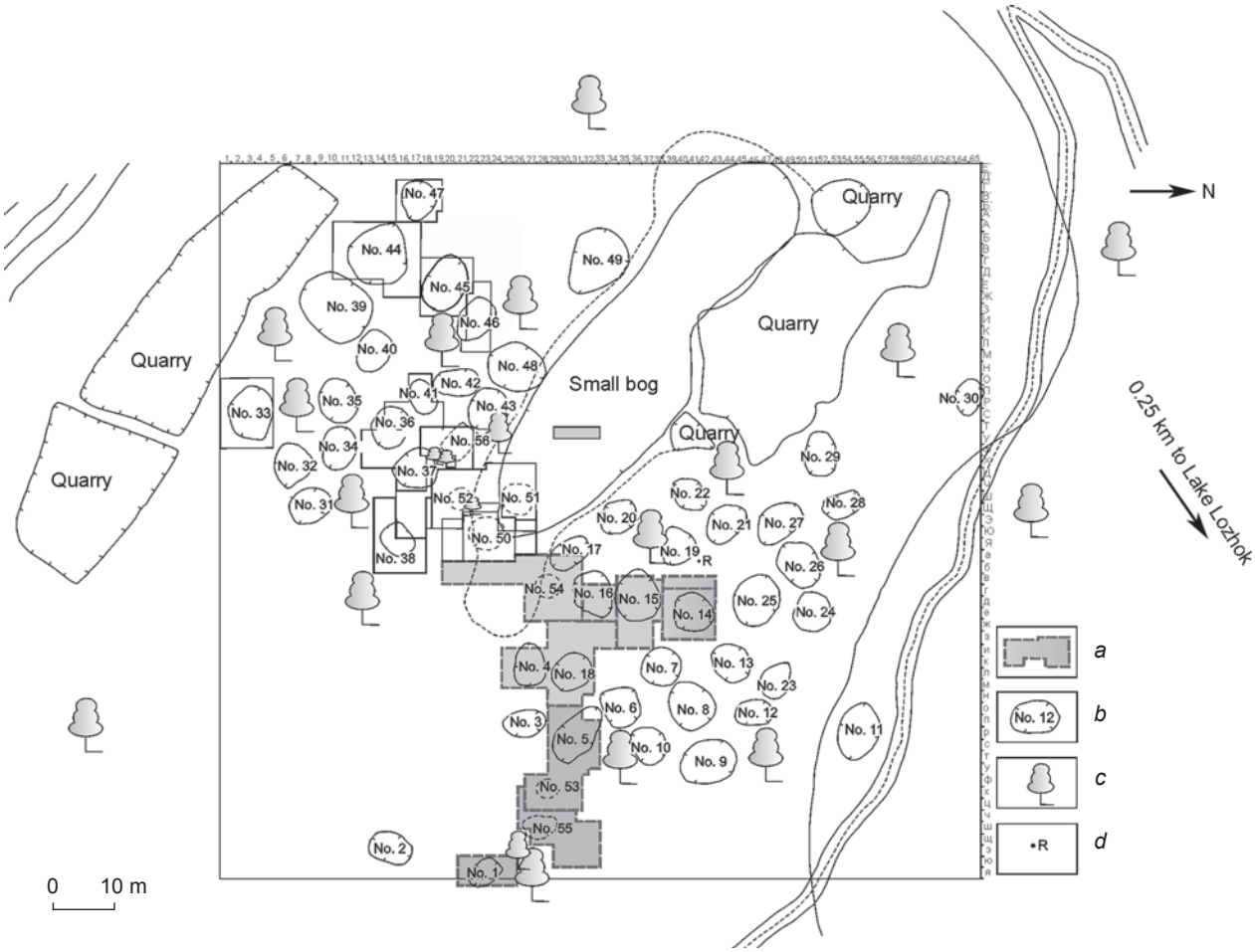

Fig. 1. Map of the Avtodrom 2 settlement.
a – excavations in the northeastern planigraphic group of dwellings, 1998, 2007–2012; *b* – dwelling depressions; *c* – large trees; *d* – datum point.

Table 1. **Description of dwellings of the north-eastern planigraphic group at the settlement of Avtodrom 2**

Number according to the settlement map	Excavation year	Shape of external outline	Walls	Size				Finds, number of items*	
				Depth, m	Length, m	Width, m	Area, m^2	Stone	Ceramics
14	1998	Amorphous	Gently sloping	0.40	6.0	6.0	36	22	600
16	2007	Rounded	"	0.30	4.0	3.5	12	33	≥500
4	2008	Amorphous	Vertical	0.24	7.6	6.8/3.1	40	50	≥500
18	2008	Rounded	Gently sloping	0.18	4.8	?	?	10	207
5	2009	Amorphous	"	0.15	5.4	5.2/2.4	19	56	591
53	2009	Rounded	Vertical	0.40	3.2	3.2	8	6	97
15	2010	Amorphous	Various	0.20	6.6	5.8	36	40	1120
54	2010	Rounded	Gently sloping	0.05	3.2	3.2	8	41	201
55	2011	Amorphous	Steep	0.30	4.4	4.1	19	11	216
1	2012	"	Gently sloping	0.15	6.0	6.0	36	8	192

*The total number of finds in the filling and in the bottom of the pits is given.

Fig. 2. Dwelling pit No. 55 (view from the northwest).

of the pits. An exception was dwelling No. 54 which revealed a concentration of waste resulting from stone production and cores inside and in the adjacent areas, and a broken Artyn vessel with 17 blanks-flakes located at the bottom of the pit.

During the first excavations at the site, dwelling No. 14 was identified as an "auxiliary" structure because of its relatively small size (36 m^2) and amorphous outline (Molodin et al., 1998). The data accumulated with time suggest that most of the investigated pits in the northeastern planigraphic group had similar amorphous outlines. Structure No. 14 was one of the largest in terms of enclosed area in this group. It is possible that precisely the area of the structure is the indicator indirectly reflecting the functional purpose of the building. We may propose that some of them, of a relatively large size, were used primarily as dwellings, while smaller buildings (No. 53 and 54) had a production and economic function.

The lack of evidence for entrances and clearly defined hearths in most buildings can be explained by the specific properties of soil in the cultural layer and the impact of sedentary moisture. The dwellings could have been light semi-overground structures erected over small pits and only slightly disturbing the soil strata beyond their borders. At the same time, we cannot speak of a temporary or seasonal summer nature of the settlement. Settlements with the Artyn pottery in the Ust-Tara archaeological microdistrict (the Middle Irtysh region) are represented by large single structures or small groups of structures with an embankment and ditch, which shows their similarity to the Neolithic dwellings from the north of Western Siberia (Ivashchenko, Tolpeko, 2006). However, sites with the same dwellings as those appearing at the settlement of Avtodrom 2 are also known. Thus, the remains of a small semi-overground dwelling with a shallow pit of amorphous outline have been found at the Artyn site.

Ceramics

Pottery. The Artyn ceramic assemblage from the settlement of Avtodrom 2 is the most representative compared to the collections originating from other sites. Excavations in the northeastern part of the settlement have yielded over 7000 fragments and 16 clusters *in situ*. Most of them were found at floor level in dwelling pits (dwellings No. 1, 4, 15, 16, and 54), and some on the "native soil" near dwellings No. 5 and 54. For the statistical description of variability in ornamental décor and morphology of the Artyn pottery from the settlement of Avtodrom 2, a representative sample of pottery materials was taken from the total number of finds. The sample included 473 large fragments (82 fragments of the rim, and 391 fragments of the body) from the collections of 2008–2011. All percentages are given according to this sample.

General morphology. All vessels have a simple shape with pointed or rounded bottom, straight (77 %) or weakly concave (23 %) profile of the rim. According to their size, they can be divided into two categories: large vessels (25–35 cm diameter of the mouth) which dominate, and small vessels (6–12 cm diameter of the mouth), represented only by 3 items. The thickness of the walls, depending on the size, ranges from 3–5 to 6–8 mm reaching 9–11 mm in the bottom area. The edge of the rim is straight (51 %) or has a wavy shape (49 %); the

rim is thinned. The so-called bulging (thickening on the inner side of the rim typical of the Transurals pottery assemblages) is completely absent here.

Technological features. The results of research into the Artyn pottery assemblage using natural-scientific methods will appear in a special study. We can visually note the following features. Most large vessels were made using the coiling technique, as is testified to by the separation of coils at their junction. Many junctions show unidirectional traces of organic fiber used for reinforcing the vessel (possibly, grass or wool). The same feature was observed by L.L. Kosinskaya in the pottery from the Artyn site (1982). The surface of the vessels was carefully smoothed and in some cases slightly polished. A large number of fragments show the use of such a technological method as tying the mouth of the vessel with a twisted cord. In the process of firing, it would burn out and leave a hollow trace, although we allow for other interpretations of the function of the method. Hollow traces of cords occur several times among the Artyn materials (Bobrov, Marochkin, Yurakova, 2010; Ivashchenko, Tolpeko, 2006). In addition to the already mentioned sites in the Upper Ob region, they appear in the assemblages of the Koshkino, Boborykino (Zakh, 2009: 170), and Andreyevskoye types. Thus, this method is not culturally specific, but the evidence of its use is so far limited to the chronological range of the Neolithic–the Early Metal Age.

Ornamentation. The outer surface of the vessels is decorated from the rim to the bottom; slanting or straight notches (up to 80 %) and zigzag patterns often decorate the edges of the rims (Fig. 3). On the inner

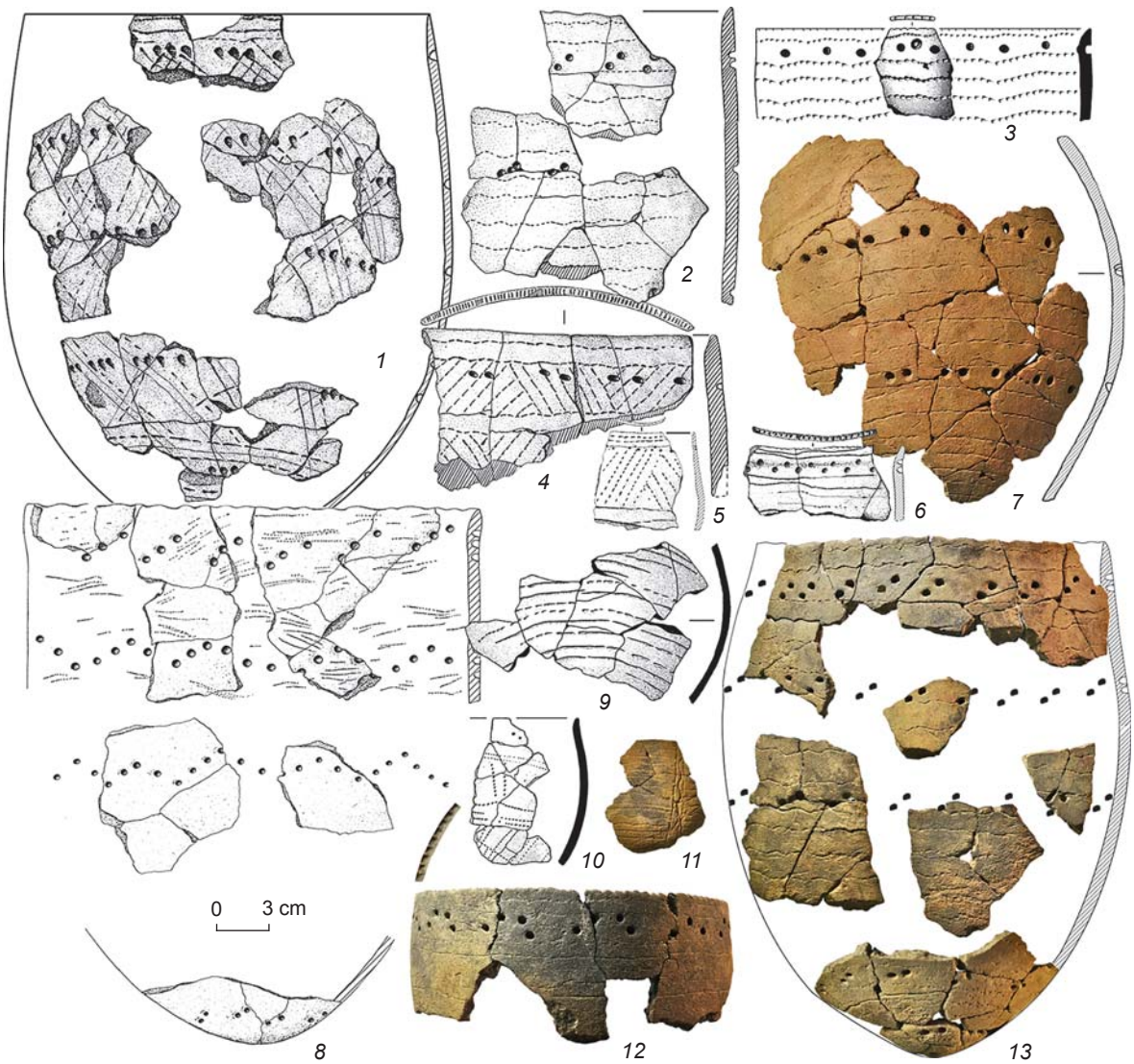

Fig. 3. Pottery complex of the Artyn culture.

surfaces, decoration has not been found. The presence of the ornamental decoration of the edge correlates with its shape: in most cases, décor is typical for straight edges, while wavy edges are decorated only in 27 % of the cases.

The ornamental composition consists of "linear" and pit motifs. First, the linear borders were made, and then the rows of pit impressions were made in free spaces or on top of the existing ornamental rows. The "linear" motifs vary with several parameters: shape (wavy/straight), geometric orientation (horizontal/vertical/slanting), and execution technique (retreating-pricked/incised). One of the specific markers of the Artyn pottery, which appears at other sites of the Artyn cultural space, is a frequent transition from one technique of movement by the ornamenting tool to the other, and their combination both within the same composition and while drawing an individual belt-line. For example, the retreating-pricked technique can be transformed into incising with less frequent detachment of the tool, and vice versa, pricking could be accompanied by a more or less expressed retreating (Bobrov, Marochkin, Yurakova, 2010). The ornamental décor on one partially reconstructed vessel consists of wavy motifs possibly made by a stick with cord coiling (Fig. 3, *8*).

The most common lines in the compositions were horizontal wavy lines (53 %) and straight lines (47 %). The vessels with such decoration form the basic profile of the assemblage (96–98 %). Vessels with decoration combining diagonal and horizontal placement of belts, for example, of "interpenetrating" triangles, are rare (3 %) (Fig. 3, *4*, *5*). Vessels with an ornamental composition which includes vertical lines along with horizontal lines occur in isolated cases and are usually distinguished by being of small size (Fig. 3, *10*, *11*). A vertical dividing belt with an inscribed "wave" forms a unique composition on one such vessel.

Pit imprints vary in shape (rounded / semilunar) and method of grouping. Organization of pits within the horizontal belts is extremely diverse: there are single pits forming a straight line, wavy line, or zigzag; two or three pits forming a diagonal line; or four pits in arched shapes. A simple zigzag ("wave") is dominant (Yurakova, 2013). Two methods of grouping are often combined on a single vessel marking its different morphological zones (the rim, the body).

Thus, the typological originality of pottery of the Artyn Neolithic culture from the settlement of Avtodrom 2 is defined by the following features:

– shape of the vessels: simple, with round and pointed bottoms, without clearly defined necks;

– distinctive technique of making the ornamentation with a rounded "stick": the "retreating-pricked-incised" technique with uneven pressure;

– virtual absence of comb stamp imprints;

– restricted set of ornamental elements and their stable combination: simple "linear" borders, rarely a combination of "interpenetrating" triangles, the mandatory presence of pit imprints;

– dominant role of wavy motifs, appearing on the edge of rims and in ornamental belts; and

– various methods of grouping pit impressions.

The described features of the pottery assemblage correlate with observations based on the materials from other sites of the Middle Irtysh region (Artyn, Ust-Tara IV, XXVIII, XXXIII, etc.) which belonged to the circle of the Artyn Late Neolithic culture (Ibid.). The statistical stability of morphological traits of the Artyn pottery, which indicate a specific cultural affiliation, was confirmed by the materials originating from "authentic" sites—the Artyn site and the settlements of Ust-Tara IV and XXXIII.

Ceramic abraders appear in two forms. The first form is represented by rectangular plates (2 objects) with the sizes of 45 × 15 × 10 and 40 × 35 × 9 mm. Traces of wear in the form of a longitudinal recess are visible on one of the lateral faces. The first tablet has a round hole for hanging (Fig. 4, *2*, *4*). Pear-shaped whetstones (2 objects) have the sizes of 69 × 18 × 13 and 44 × 10 × × 7 mm. Traces of wear are visible on both the narrow sides and one wide side. The first object has a hole in its narrow part for hanging (Fig. 4, *1*). One flat side of the second whetstone is destroyed; a retreating-pricked pattern in the form of an oblique grid has survived on the other side (Fig. 4, *3*).

Identical abraders of dense ceramic, both with ornamentation and without, have been found at several

Fig. 4. Ceramic abraders.

Neolithic settlements of the Ust-Tara archaeological microdistrict in the Middle Irtysh region (Ust-Tara IV, XXXIII) along with pottery of the Artyn type (Ivashchenko, Tolpeko, 2006), and at the site of Serebryanka-1 in the Ishim region (Zakh, 2006: Fig. 57, *1*). Similar objects occur in the Neolithic assemblages in the northern regions of Western Siberia (Poseleniye…, 2006: Fig. 42, *19*).

Stone tools

The study in the northeastern area of the settlement resulted in a representative collection of objects of lithic industry (products of lithic reduction, blanks and tools, utilitarian spalls). The following descriptions include both generalized typological and morphological characteristics of the main categories and the elements of basic statistics for the objects which form the series (the sample from the excavations of 2011): flakes (85 objects), blades (60 objects), and end-scrapers (33 objects). A valid association of the described lithic inventory with the Artyn pottery is confirmed by planigraphy and stratigraphy, including their combined occurrence on the floor of the dwellings.

Cores, products of lithic reduction, and tools made of them. *Cores* (Fig. 5) amount to 11 intact objects and 6 transverse spalls resulting from rejuvenation of the striking platforms. Six cores are single-platform and monofrontal, with height ranging from 21 to 40 mm and negative scars up to 12 mm wide (more frequently, 4–7 mm). Five objects approximately 35 × × 25 × 15 mm in size are of amorphous shape and were intended for flake removal.

Flakes are represented by 474 objects. Up to 87 % of them are random forms. No more than 12 % of objects show the signs of secondary treatment which consists of small continuous retouch along the edge, in 80 % of cases applied on the dorsal side.

Blades (Fig. 6) are represented by 334 objects. Most of them (95 %) have survived in fragments. The intact objects include large blades up to 110 mm long and 20 mm wide with signs of so-called utilitarian retouching. Up to 32 % of blades were retouched. Dorsal retouching is predominant (47.4 %); ventral and alternative retouching amounts to 36.8 and 15.8 %, respectively. More frequently, retouching is applied along one edge (52.7 %), less frequently along two edges (42 %); sometimes one edge and the butt are retouched (5.3 %).

End-scrapers (Fig. 7) are represented by 187 objects. Most of them were made on flakes (78.8 %); a somewhat lesser amount was made on blades and laminar flakes (21.2 %). Sometimes transverse and vertical spalls from the cores were used as end-scrapers. The most frequent types include semi-circular or rounded end-scrapers with a steeply angled working edge and end-scrapers on blades. Other forms of objects (random, subsquare, fan-shaped) are rare; their working edges may vary according to the angle of inclination (from gentle to almost vertical).

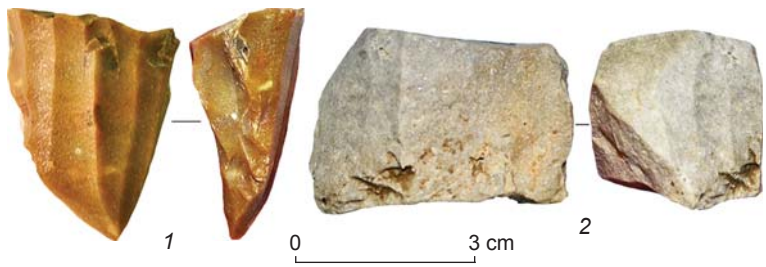

Fig. 5. Cores.

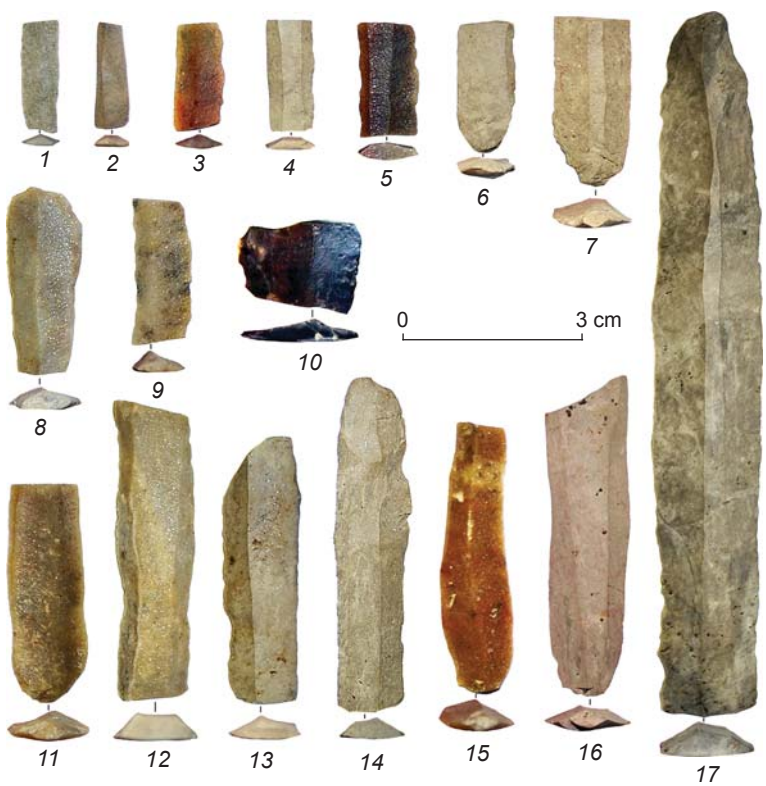

Fig. 6. Blades.

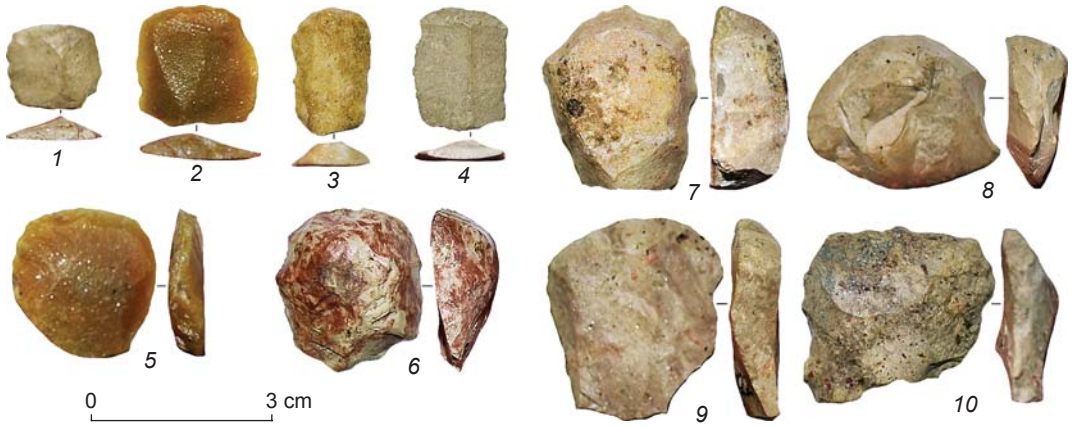

Fig. 7. End-scrapers.

Fig. 8. Piercing tools.

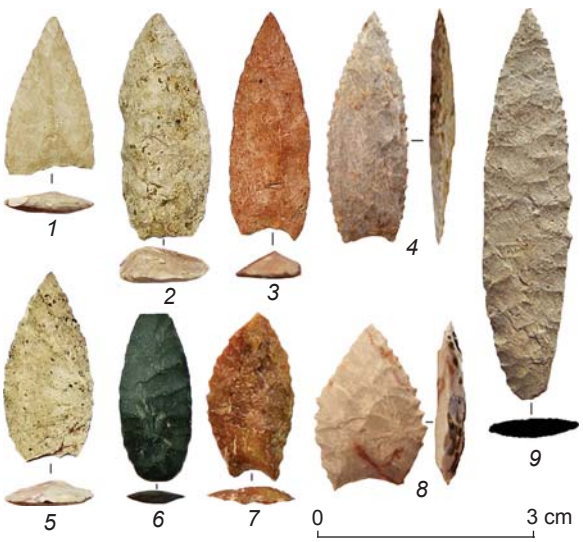

Fig. 9. Arrowheads.

Piercing tools (Fig. 8) are represented by 9 objects, including five intact pieces, three fragments (one fragment of a point, two fragments of the base), and a blank. These tools are made on trapezoidal blades 6–8 mm wide; the length of the ready tools reaches 68 mm. The point is up to 2/3 of the entire length and is usually formed by large continuous dorsal retouching on both side faces. In many instances the tools were polished (due to their use).

Combination tool. It is an end-scraper and a piercing tool made on a large laminar flake. Its gently sloping working edge was formed with several ventral removals; a pointed sharp protrusion was formed by large dorsal retouch on the opposite side. The length of the implement reaches 34 mm; the width of the scraper edge is 20 mm. The implement shows traces of wear.

Arrowheads (Fig. 9) are represented by 22 objects including two blanks. The vast majority of arrowheads were made on blades. They have a leaf-like shape, lenticular cross-section, and concave base. The surface on both sides is covered with undulated retouch on both sides; the edges are additionally retouched, which gives them a saw-like outlook. The dimensions are stable: a length of 16–24 mm and width of 12–14 mm in the middle part. One arrowhead is of willow-leaf shape; it is elongated (59 × 12 mm) and has a straight stem. One more leaf-shaped arrowhead and a blank have straight stems.

Bifacial points are represented by two large blanks.

Abraders and polished implements. *Abraders of fine-grained sandstone* (10 objects) are oblong elongated bars, rhomboid, trapezoidal or amorphous in cross-section. The surviving part of the largest object has a size of 50 × 36 × 21 mm; the surviving part of the smallest object measures 9 × 6 × 5 mm. All of the objects of this type typically show strong wear on lateral planes.

Polished axes-adzes include four intact objects, three large fragments, and two blanks. All are made of gray-green slate. The blanks are larger, measuring 26–35 mm in width and 40–70 mm in length; the future shape of the objects is formed by large removals. The prepared axes are of small size (approximately 50 mm in length), trapezoidal shape, and lenticular in cross-section. All facets of the objects were polished, in some cases, the side edges were treated with large retouch. In addition, 38 spalls from the axes' surfaces have been found.

A polished knife (Fig. 10) is represented by a fragment of a blade 17 mm wide. The blade is concave; it was formed by double-sided polishing. Numerous parallels to this tool are known from the assemblages of the Neolithic and the Early Bronze Age in Western Siberia; such knives are related to woodworking in their function (Kungurova, 1993).

Objects which are not a part of a series. A *hammerstone*. It is a conic implement in plan; its length is 108 mm, the size of the working surface is 51 × 42 mm.

Fragment of a perforated disk (Fig. 11). Initially the disk had a flattened shape and a hole 15 mm in diameter. Biconical drilling of another hole in the center of the fragment was not completed; apparently, attempts were made to reuse the disk after it was broken. A similar object was found in fully intact state at the settlement of Ust-Tara XXXIII—one of the sites of the Artyn type in the Middle Irtysh region, which indicates that this category of objects was typical for the Artyn assemblages. Perforated discs widely occurred from the Mesolithic to the Early Iron Age over the entire Eurasian area. In chronological and territorial terms, the closest parallels are the disks of the Botai culture (Zaibert, 2011: 238–239).

Iron-shaped abrader (Fig. 12). The object is a bar, triangular in cross-section, with a size of 69 × 51 × × 35 mm. At the bottom "base" plane it has two narrow longitudinal recesses 4–6 mm long and up to 4 mm deep; in the upper part it has two grooves 13–17 mm wide and 12 mm deep, which are perpendicular to this plane. An incised pattern of parallel wavy lines, which may contain semantic reference to the main ornamental motif of the Artyn pottery and thereby emphasize cultural identity with it, is located on three sides of the object. Such abraders were a specific category of objects found in many cultures of the Neolithic and the Early Bronze Age in Eurasia (Usacheva, 2006); two intact ceramic abraders and several fragments of similar objects have been found in Boborykino dwellings in the southwestern group at the settlement of Avtodrom 2 (Bobrov, Marochkin, Yurakova, 2012).

In general, the industry is characterized by the predominance of the splitting technique, but with a

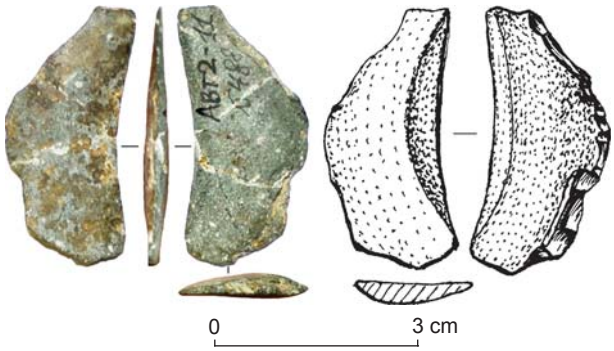

Fig. 10. Polished slate knife.

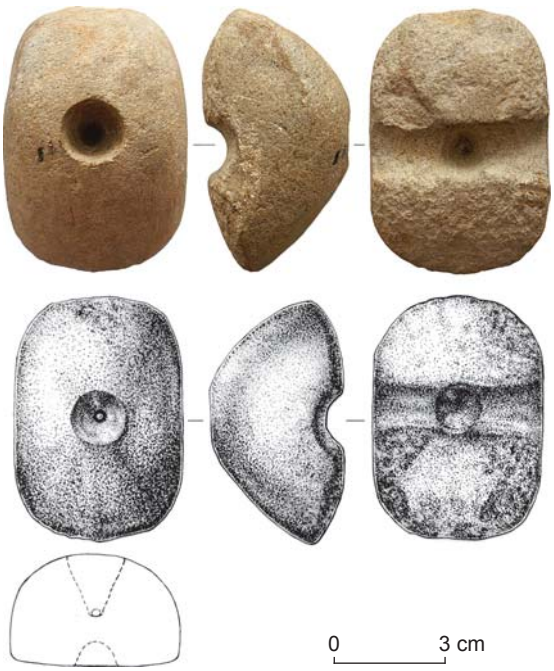

Fig. 11. A fragment of a perforated disc.

Fig. 12. A "pad".

stable tradition of using polishing for certain categories of implements (borers, axes, and knives). We may speak about the marked similarity, if not their being identical to the lithic series from the Neolithic assemblages of the Ust-Tara archaeological microdistrict (Ivashchenko, Tolpeko, 2006).

Chronology of the Artyn culture and its place in the Late Neolithic of Western Siberia

Initially, the Artyn type of pottery was attributed to the Kokui stage of the Middle Irtysh Neolithic culture and dated to the 4th millennium BC (by association with the Kozlov stage of the Neolithic in the Transurals) (Gening et al., 1970: 15–17). Later, viewing the Artyn pottery within the concept of the Yekaterininskaya culture, A.I. Petrov attributed it to the Artyn Chalcolithic stage (the second half of the 3rd–early 2nd millennium BC) (1986: 6). This concept played a decisive role in the study of the Neolithic and the Early Metal Age in the Middle Irtysh region and Baraba at least until the end of the 1990s and influenced the initial attribution of dwelling No. 14 at the settlement of Avtodrom 2 (Molodin et al., 1998).

In the second half of the 2000s, V.V. Bobrov and the Omsk archaeologists substantiated the attribution of the settlements with the Artyn pottery to the Neolithic in association with the I Ust-Tara complex (Ivashchenko, Tolpeko, 2006) or the actual Artyn culture (Bobrov, 2008). According to the radiocarbon dating of materials from the settlement of Serebryanka-1, the I Ust-Tara complex (the Middle Irtysh region) dated to the second half of the 5th–first half of the 4th millennium BC (Ivashchenko, Tolpeko, 2006: 89–91). Using thermo-luminescence analysis, absolute dates for the Artyn pottery from the settlement of Avtodrom 2 had been originally determined as 6500 ± 190, 6400 ± 190, and 6600 ± 200 BP (Komarova, 2010), that is, in the mid-5th millennium BC. Later, in the Isotope Center of the Department of Geology and Geo-Ecology in Herzen State Pedagogical University of Russia (St. Petersburg), a series of new dates was obtained (Table 2).

The chronological range between the early and the later dates is over a thousand years. Nevertheless, we can distinguish two groups of dates obtained on the basis of samples from the layer and dwelling No. 4 (second half of the 6th–mid-5th millennium BC) and from dwellings No. 15 and 18 (second half of the 5th–early 4th millennium BC). We should mention that an identical range of dates has been discovered for certain cultures of the Neolithic and the Early Metal Age in Western Siberia, for example, for the Bystrinka culture (the Surgut region of the Ob) (Poseleniye…, 2006: 61) or the Ust-Tartas culture (the Baraba forest-steppe) (Marchenko, 2009). The need for further accumulation of dates is obvious, and at this stage of research it is advisable to use the average dates and to date the Artyn assemblage from the settlement of Avtodrom 2 and the Artyn culture as a whole to the mid–second half of the 5th millennium BC.

The main circle of sites with the Artyn pottery includes the settlement of Kokui I, Pakhomovskaya Pristan III, Bichili I, Borovlyanka II, Serebryanka-1, Ust-Tara XXVIII, Tukh-Sigat IV, Nizhnyaya Tunuska II, Stary Tartas-5, the Artyn site, Ust-Tara IV, Ust-Tara XXXIII, and Avtodrom 2. The latter four sites contain "authentic" assemblages. This makes it possible to detect the area of the culture, covering forest areas of the Irtysh region, the northwest region of the Baraba forest-steppe, and partially the Vasyugan region (Fig. 13). An interesting suggestion is that the Late Neolithic burial grounds of Protoka and Vengerovo-2A, where the accompanying inventory included pottery close to the Artyn ceramics in terms of morphology and ornamentation, could have belonged to that culture (Polosmak, Chikisheva, Balueva, 1989: Fig. 7, *b*; 9; Molodin et al., 2012: Fig. 2, *1*), but this requires substantiation and additional facts.

Molodin and other Novosibirsk scholars believe that the burial grounds of Protoka and Vengerovo-2A represent "the most eastern–southeastern version of the northern Neolithic province covering the territory of the

Table 2. **Results of the radiocarbon dating of Artyn pottery from the settlement of Avtodrom 2**

Specimen	Occurrence	Date	
		^{14}C, years BP	Calibrated (2σ), years BC
SPb_1276	Space between dwellings	5914 ± 150	5208–4485
SPb_1279	Dwelling No. 4, accumulation *in situ*	5795 ± 100	4857–4447
SPb_1281	Dwelling No. 18	5350 ± 100	4358–3971
SPb_1282	Dwelling No. 15, accumulation *in situ*	5342 ± 100	4353–3970

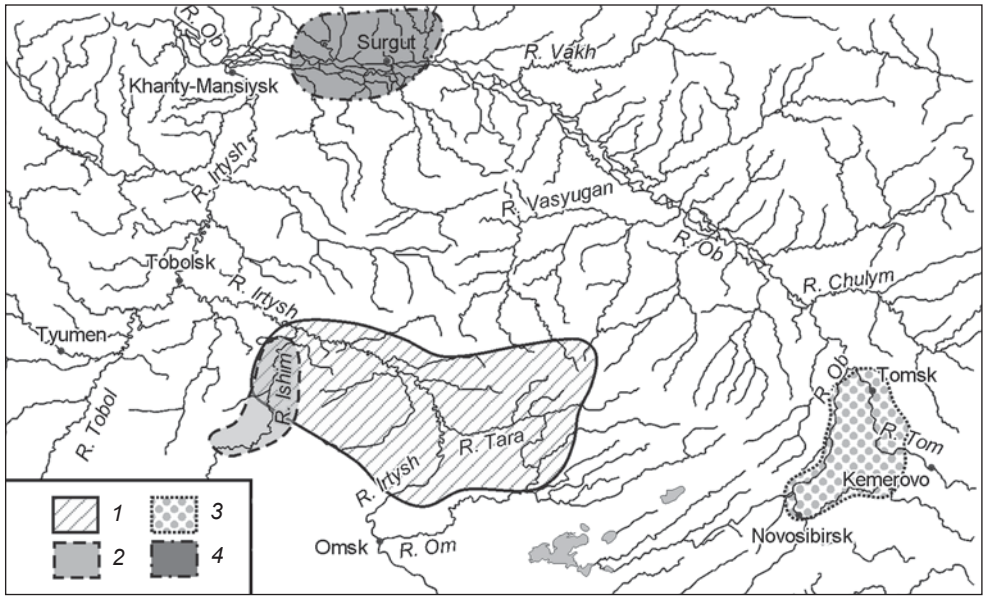

Fig. 13. Areas of the settlements of the Artyn culture (*1*) and the sites of contemporaneous cultural formations: the Kokui (*2*), Kiprino-Irba (*3*), Bystrinka sites (*4*).

taiga belt of Eurasia" (Molodin et al., 2014: 306). This conclusion is based on the similarity of pottery of the Bystrinka culture from the Surgut region of the Ob and the pottery from the Late Neolithic burial grounds of Baraba, as well as a common feature for the dwellings of the Bystrinka culture and the Baraba burial structures—encircling with a ditch (Molodin et al., 2012: 121; 2014: 303). Molodin and his colleagues allowed for "the presence of northern migrants in the local autochthonous environment of the forest-steppe (the Comb-Pit or the Artyn)" (Molodin et al., 2012: 121), but emphasized that the buried persons definitively belonged to the haplogroup A10, autochthonous for Western Siberia and in the Neolithic associated with the "northern Eurasian anthropological formation" (Molodin et al., 2014: 303).

Kosinskaya defined the circle of parallels in the northern Bystrinka assemblages that in her opinion were a part of the Ural-Western Siberian cultural community of the Neolithic (Poseleniye…, 2006: 64). Her position is close to the concept of the Novosibirsk archaeologists. In addition to the assemblages containing pottery with pointed bottoms from the taiga zone of Western Siberia and the forest Transurals, she identified sites of the Kokui type in the Lower Ishim region, materials of the Ust-Tara microdistrict, and the Zavyalovo sites of the Upper Ob region; in terms of morphology, she pointed to similarities even with the Neolithic pottery from the Altai Mountains (Ibid.: 63). However Kosinskaya considered it necessary to look for the origins of the Bystrinka pottery tradition in the southern forest and the forest steppe Ob-Irtysh region (Ibid.: 64).

In our opinion, according to a number of features, the materials from the Artyn settlements are similar to the Bystrinka materials. The parallels include single large dwellings with embankments and ditches (the Ust-Tara archaeological microdistrict), ornamented ceramic abraders, specific features of pottery tradition, manifested (according to the effective definition of Kosinskaya) in rims without bulging, simple wavy patterns, compositions of grouped pits, and lack of geometric ornamentation (Ibid.: 63). However, the range of specific features of the forest-steppe settlements can also be identified sufficiently well, including the presence of light half-dugouts, the predominance of the splitting technique in lithic industry over polishing, and the domination of the retreating-pricked-incised ornament on the pottery. Given the relative synchronicity of the Bystrinka and the Artyn assemblages in the early–mid-5th millennium BC, we may assume both their emergence on the basis of one or several common substrates, and the contacts of individual human groups at the stage of existence of independent cultures.

The problem of correlating the Artyn sites with the populations which V.A. Zakh associated with the Kokui culture identified by him (2006; 2009: 195), deserves special attention. Zakh defined the pottery tradition of the Kokui culture as the "retreating-pricked-comb" tradition, and considered it, along with the Yekaterininskaya culture, to be "the core of emergence of the Comb-Pit community within the Ishim-Irtysh region" (2009: 196). Defining the eastern border of the area of the Kokui culture, Zakh attributed

Avtodrom 2 and the sites of the Ust-Tara microdistrict to this zone. His arguments were based on materials from the settlement of Serebryanka-1, which contained pottery with the "mixed" type of ornamental décor. However, extrapolation of these observations to a wide range of sites requires critical evaluation. Such pottery was found at the settlements of the Ishim region, including Kokui-1 (dwelling II), Serebryanka-1, Borovlyanka-1, and Tyulyashov Bor-2 (Ibid.). Despite some ornamental and morphological similarity of the Artyn and the Kokui pottery, the latter is distinguished by closed jars, a specific shape of the rim ("earlets"), a denser manner of making pricked patterns, and a larger share of comb stamp imprints. In general, we may speak about more sophisticated ornamental compositions which were similar to the "comb" pottery of the Late Neolithic in the Transurals. There are some differences in house building technique: the pits of the Kokui dwellings are of rectangular shape; they have exit-corridors and sometimes two chambers (Ibid.). For further discussion of the problem we propose for the time being to distinguish between the Artyn and the Kokui sites.

Finally, we should mention very close parallels to the Artyn pottery in the materials from the settlements located far to the south and east of the Barabinsk-Irtysh core of the culture. In the Upper Ob region, these are the assemblages from Rodnikovoye, Krokhalevka-4 and -32, and Ordynskoye-1, dated by Zakh to the same chronological period as the Irba sites (2003: Fig. 42). Relatively recently, similar pottery was found in the Kulunda forest-steppe at the settlement of Novoilyinka III dated to the Chalcolithic (Kiryushin, 2015: Fig. 2, 3). K.Y. Kiryushin observed a certain similarity of the Novoilyinka pottery with the materials from the burial ground of Vengerovo-2A, while also pointing to a number of differences including the role of pits in the ornamental composition (Ibid.: 37). Unfortunately, numerous settlement assemblages with a great number of similarities, including the sites mentioned in this article, were left out of the scope of his research. It is possible that these findings reflect possible areas of cultural relations of the Artyn population.

Conclusions

Despite insufficient exploration of the Neolithic in Western Siberia, the results of research over the last two decades have brought the understanding of historical and cultural processes in the Early Holocene to a new level. Thus, we may now speak about a sophisticated, multidimensional process of cultural genesis unfolding already in the Advanced and Late Neolithic, when several communities with the dominance of specific pottery traditions were formed in Western Siberia. The accumulation of empirical material continuously leads to identification of new types of sites and new cultures, often without clear typological distinctions, within these communities (Poseleniye…, 2006: 59). Yet, in the case of the Artyn antiquities, we have sufficient criteria to determine their cultural identity: they consist of a territorial grouping of sites with a typologically uniform set of features in pottery production, lithic industry, and dwelling construction.

The emergence and existence of the Artyn culture seems to have depended not only on the internal processes of development, but also on active interaction with other communities, which is manifested in numerous instances of the typological similarity of individual elements. The subjects of this interaction could have been both the Neolithic human groups and the first groups of the Early Metal Period (the carriers of the Ust-Tartas traditions and the cultures with the Comb-Pit pottery). Their habitation areas and chronologies partly overlap, which indicates their possible coexistence and fits the logic of Molodin's concept of the migrational origin of the local communities in the Early Metal Age (Molodin, 1977; 2001). In this case, the Artyn culture should be regarded as the Late Neolithic stage of the autochthonous Ob-Irtysh cultural community and its local, Irtysh-Baraba variant (Bobrov, Marochkin, 2012: 71).

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