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A Multidisciplinary Study of Finds from Suchu Island (1973 Season, Excavation II, Dwelling 1)

We analyze new finds from a Neolithic dwelling 1 from excavation II at the Suchu Island, on the Amur River. We analyzed an assemblage of 3788 lithics and ceramics, along with field records housed at the Institute of Archaeology and Ethnography of SB RAS. The article continues the series of publications in this journal, outlining the findings at Suchu—one of the key Neolithic sites in Northeast Asia. Dwelling 1 is a 0.8-meter-deep round semi-underground structure dug into the sandy loam. In its center, there was a hearth, and walls lacked ledges. On the floor, numerous pits from posts that had supported the roof were found. The stratigraphic and horizontal position of finds was registered; artifacts were analyzed through morphological typology, petrographic and X-ray analysis, and microscopy. Our analysis reveals hunting, fishing, and butchering tools, those for processing stone, wood, and bone, those for plant processing, and digging tools. Various sedimentary and igneous rocks were used as raw material. In terms of cultural chronology, standard pottery was mostly attributed to the Lower Amur cultures (Malyshevo and Voznesenovskoye), while some was apparently manufactured by immigrants. Principal technological, constructive, morphological, decorative, and functional characteristics of each ceramic type were assessed. Unusual artistic and ritual items clustered in dwelling 1 of the Malyshevo type (late 5th to early 4th millennia BC) are suggestive of a domestic shrine.

Keywords: *Suchu, Neolithic, culture, dwelling, tools, analysis.*

Introduction

The article continues the series of publications in this journal, outlining the findings of the 1970s in the Lower Amur at Suchu—one of the most important Neolithic sites in Northeast Asia (Medvedev, Filatova: 2016, 2017, 2018, 2019). Excavations at Suchu started in 1972 at the southeastern end of the island. In 1973, work at excavation I continued (Medvedev, Filatova, 2016), and excavation II was initiated towards the southwest, at an apparent dwelling depression, 9 m in diameter. At the time of excavation, the southeastern part of the dwelling depression had been destroyed by a ravine (Okladnikov, 1973; Derevianko, Medvedev, 1996)*.

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Initially, excavation II consisted of a 9 × 9 m excavation area, including the eroded area (which lacked artifacts). In the course of research, southwestern (16 m^2) and northeastern (7.5 m^2) extensions were appended to the excavation. A grid system (1 × 1 m) was established, with long sides oriented along the SW-NE axis (labeled numerically from 1 to 12). The short sides coincided with the SE-NW axis (labeled alphabetically from A to J). To establish stratigraphy, two baulks were left along grid lines 5 and Г, while one additional baulk (at line 1) was preserved during the extension (stratigraphically similar to that of line 5). The profile from the topsoil to the virgin soil level at the dwelling floor was conventionally subdivided into three horizons for the sake of convenient recording of the finds on layer-by-layer plans (Fig. 1, *A–D*). In total, 3788 artifacts were recovered.

Material and methods

Materials for the study consist of the archaeological collection (lithics, ceramics, and art/ceremonial objects) and field records (drawings, partial field journals, and reports) housed in the Institute of Archaeology and Ethnography of SB RAS. Artifacts were studied using stratigraphy and spatial analysis (dwelling 1), petrographic analysis and morphological typology (lithics), X-ray analysis and microscopy (ceramics), and assessment of cultural chronology (ceramics, art/ceremonial objects). Petrographic analysis aimed at identifying rock types utilized an AXio Imager A2m polarized-light microscope, under the supervision of N.V. Berdnikov, the head of the Laboratory of Physical and Chemical Research Methods of the Institute of Tectonics and Geophysics of FEB RAS (Khabarovsk). Morphological-typological analysis of lithics was based on the methods proposed by Russian researchers (Derevianko, Markin, Vasilyev, 1994). Ceramics were analyzed using a MK-10 binocular microscope, while X-ray analysis was carried out using a Rigaku MiniFlex II X-ray diffractometer ($Cu_{K\alpha}$-radiation; Ni-filter; scan rate 2 grad/min; scan range 2θ: 6–90°) by I.A. Astapov, Senior Researcher at Institute of Tectonics and Geophysics of FEB RAS.

Study results

Stratigraphy (Fig. 1, *E*, *F*). Under a layer of sod (12 to 40 cm thick), the uppermost layer of pit fill consisted of a yellow loose sandy loam (30–35 cm). At the northeastern end of baulk along line Г (between units 9–11), the yellow sandy loam overlay the wall of dwelling 1 and extended down to the structure floor. The dwelling pit was filled mostly with dark dense sandy loam, at a thickness of 8 to 50 cm. At the southwestern end of baulk along line Г (between units 1–3), this layer was underlain by dark, nearly black, sandy loam soil admixed with small charcoal pieces. These possibly represented the remains of the collapsed roof. Between units 8 and 9 (at the bottom of the yellow sandy loam layer) and 4–6 (at the bottom of the dark sandy loam layer), excavators recovered lenses of burnt soil saturated with charcoal. In the latter case, the burnt soil represented the contents of the hearth. Sterile soil in the excavation area consisted of a sandy loam.

Dwelling 1 (Fig. 1, *D*, *F*). The rounded foundation pit was 8.8 m wide along the N-S axis and 9.5 m along the E-W axis. The total area of the structure was ca 70 m^2, while the dwelling floor was 55 m^2 in size. During construction, a pit was dug into virgin soil to a depth of ca 80 cm, while the greatest depth of the feature from the modern surface is 120 cm. The walls of the pit are rather steep, inclined at 60°. These walls are up to 80 cm high in the northern part of the dwelling, 70 cm high in the southern and eastern parts, and 65 cm in the western part of the dwelling. There are no ledges at the walls of the pit. The floor is comparatively even, slightly rising at the walls. In the dwelling center, a hearth was located, in the form of oval hollow 122 cm long and 15 cm deep, with uneven floor and sloping walls. There were 74 postholes identified in the excavation. The majority of these holes were located inside the dwelling, and only five (10, 11, 13, 72, and 73) beyond the dwelling. These small pits predominantly derive from the support posts that constituted the base of the dwelling's structure. Diameters of the pits vary from 11 to 44 cm; the depths are from 8 to 50 cm. The pits are either oval (41), or rounded (22) in morphology, usually with a cone-shaped, but sometimes cup-shaped, or (rarely) ledged bottom. Some pits were dug at an angle to the floor surface. Twelve pits (8, 15, 23, 35, 44, 45, 45', 49, 60–63) are apparently related to household structures: their diameters vary from 50 to 86 cm, and depths range from 19 to 65 cm. These are oval (7), round (3), and subtriangular (2) in shape; the bottom of almost all of these pits is ledged. All pits were filled with dark humic sandy loam.

Lithics. The analyzed lithic collection consists of 1335 lithics. Rocks of various types were used as raw material, which is supported by the results of petrographic analysis (Table 1). Small pebbles were mostly used, medium-size pebbles more rarely, and boulders of medium size and various colors were seldom used (Fig. 2).

Instruments (23 specimens or 1.7 % of the total number of lithics) include a hammerstone, nine grinding abrader-stones (two intact and seven fragmented), four burnishers, four grinding stones-anvils, a grinder, a grinder/burnisher, a grinder/polisher for wooden hafts, a

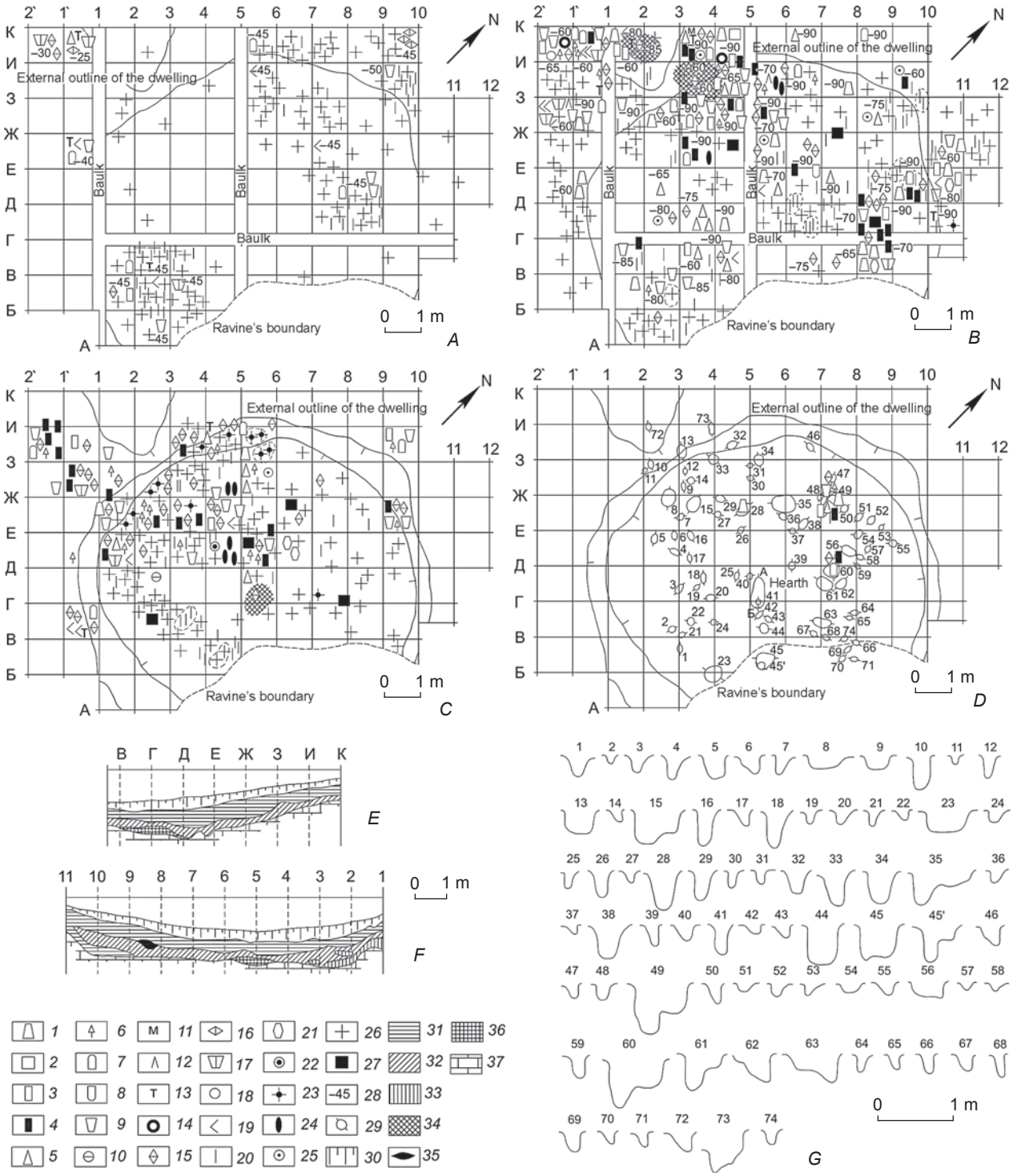

Fig. 1. Plans of excavation II (1973) at the levels of upper layer (*A*), structure fill (*B*) and floor (*C*) of dwelling 1, bedrock (*D*); baulk profiles along lines 5 (*E*) and Γ (*F*), pits (*G*).

1 – adze; *2* – axe; *3* – knife; *4* – knife-like bladelet; *5* – arrow- or dart-head; *6* – borer; *7* – end-scraper; *8* – side-scraper; *9* – combination tool; *10* – sinker; *11* – hoe; 12 – burnisher; *13* – grindstone; *14* – mace; *15* – tool blank; *16* – tool fragment; *17* – core; *18* – hammerstone, pressure stone; *19* – core-like spall; *20* – flake; *21* – lithic artifact; *22* – perforated pebble; *23* – clay figurine; *24* – ceramic rod; *25* – spindle whorl; *26* – ceramics; *27* – vessel (in fragments); *28* – depth from the modern surface; *29* – pit; *30* – sod; *31* – yellow loose sandy loam; *32* – dark dense sandy loam; *33* – dark sandy loam with charcoal pieces; *34* – ocher-rich spot; *35* – burnt soil saturated with charcoal: *36* – carbonaceous layer; *37* – bedrock.

Table 1. **Results of petrographic analysis of the artifacts from dwelling 1**

Sample code	Field code	Square	Depth, layer	Rock
C-1	C-73-PII-58	3/Ж	90 cm	Volcanic glass, partially crystallized
C-2	C-73-PII-121	5/Ж	"	Basalt
C-3	C-73-PII-171	1/Ж	"	Jasper
C-4	C-73-PII-174	"	"	Unidentified (failure to do slice)
C-5	C-73-PII-205	5/Д	Floor	Basalt
C-6	C-73-PII-214	9/E	"	Volcanic glass, partially crystallized
C-7	C-73-PII-216	"	"	Obsidian
C-8	C-73-PII-217	"	"	Basalt
C-9	C-73-PII-222	"	"	Obsidian
C-10	C-73-PII-264	"	"	Aleuropelite
C-11	C-73-PII-282	"	"	Ignimbrite
C-12	C-73-PII-283	"	"	Aleurolite
C-13	C-73-PII-286	"	"	Volcanic glass with phenocrysts of plagioclase and biotite
C-14	C-73-PII-288	9/E	"	Jasper
C-15	C-73-PII-336	2/E	"	Basalt
C-16	C-73-PII-350	1'/B	"	Quartzite
C-17	C-73-PII-407	2'/Ж	"	Volcanic glass, partially crystallized
C-18	C-73-PII-410	"	"	Obsidian
C-19	C-73-PII-420	"	"	Sandstone
C-20	C-73-PII-500	1'/B	"	Volcanic glass
C-21	C-73-PII-501	"	"	Aleurolite
C-22	C-73-PII-520	"	"	Ignimbrite
C-23	C-73-PII-521	"	"	Obsidian
C-24	C-73-PII-563	2'/3	"	Microquartzite
C-25	C-73-PII-728	9/3	"	Jasper
C-26	C-73-PII-982	3/Ж	"	Basalt
C-27	C-73-PII-994	1/Д	"	Flint
C-28	C-73-PII-995	"	"	Chalcedony
C-29	C-73-PII-1111	4/3	"	Rhyolite
C-30	C-73-PII-2234	2/Ж	60 cm	Volcanic glass, partially crystallized

hammerstone/anvil, and a hammerstone/burnisher. These artifacts were found in the upper layer (5), in the structure fill (3), on the floor (1), in the pit (2) of the dwelling, and beyond it (12). The grinding abrader-stones show traces of tool burnishing or polishing, while the anvils have small holes and dents. The working ends of hammerstones show edge fractures, those of the burnishers are smoothed or polished.

Core-like forms (28 spec. or 2.1 % of the assemblage) include five cores and five microcores, a core blank, and 17 core-like fragments. These objects were found in the upper layer (6), in the structure fill (3), on the floor (3), in the pit (1) inside the dwelling, and beyond (15). The cores and microcores were of three types: wedge-shaped (two of each category), sub-prismatic (two of each category), and narrow-face cores (one of

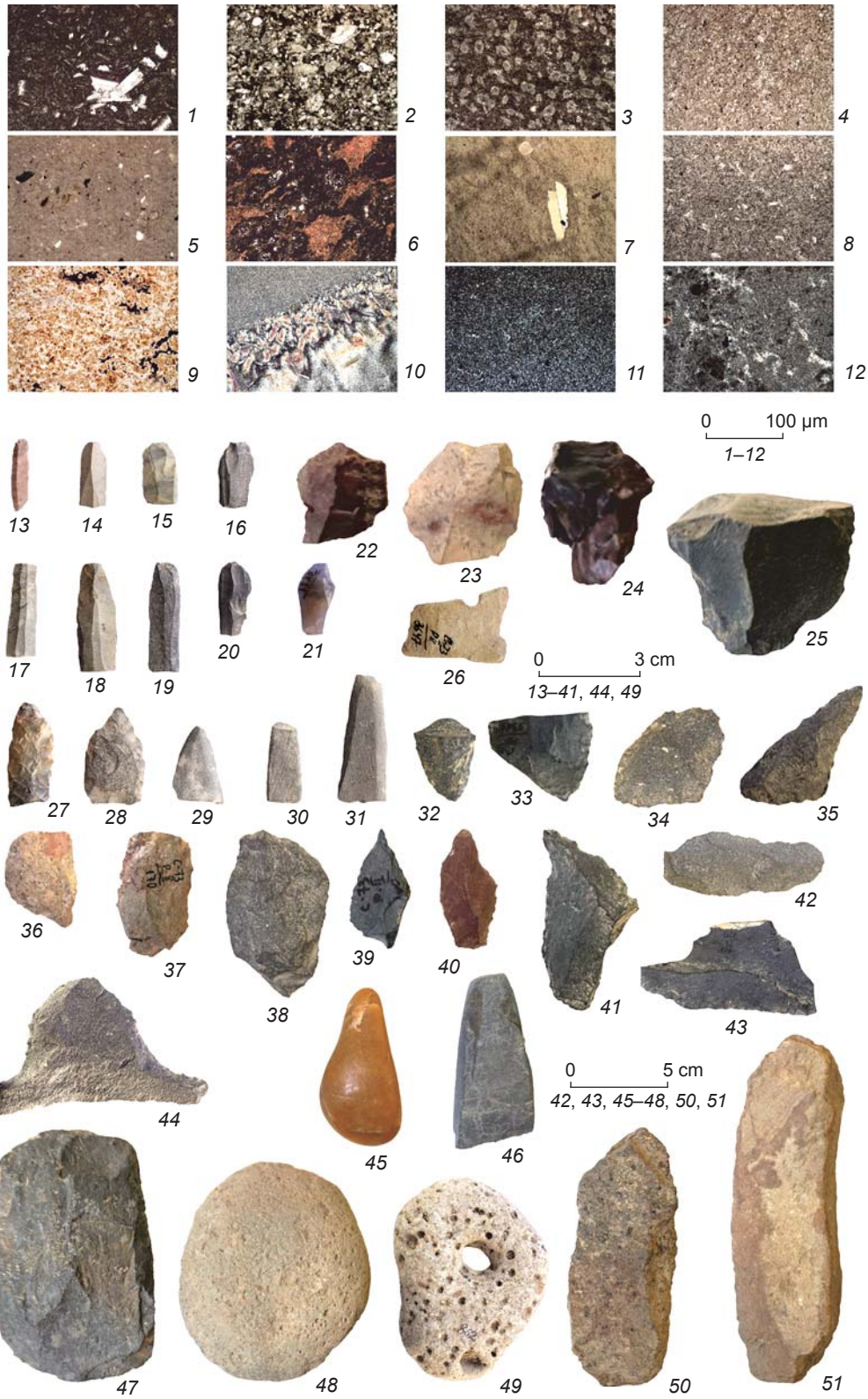

Fig. 2. Photos of slices (*1–12*) and stone artifacts (*13–51*).
1 – C-8 (sample code, see Table 1); *2* – C-19; *3* – C-9; *4* – C-21; *5* – C-12; *6* – C-22; *7* – C-13; *8* – C-30; *9* – C-14; *10* – C-28; *11* – C-24; *12* – C-27; *13–21* – knife-like blades; *22–25* – cores; *26* – grindstone; *27–31* – arrow-heads; *32*, *33* – fragments of dart-heads; *34*, *35*, *42*, *43* – knives; *36–38* – end-scrapers; *39–41* – borers; *44*, *51* – combination tools; *45* – burnisher; *46* – adze fragment; *47* – adze-scraper-like tool; *48* – hammerstone-anvil; *49* – perforated pebble; *50* – hoe.

each category). All the cores were single-platform, with sharpened (often) or backed (rarely) bases; striking platforms were predominantly straight. The core sizes ranged from 5.0 × 4.9 × 3.6 to 6.9 × 7.2 × 1.8 cm; those of microcores from 2.0 × 1.4 × 0.9 to 4.3 × 3.2 × 2.4 cm. Blank types were mainly small pebbles mostly of siliceous rocks.

The spall category from the assemblage (992 spec., 74.4 %) included flakes, blades, and debris. Flakes (440 spec., 32.98 % of the total number of lithics, and 44.4 % of the total number of spalls) were found in the upper layer (26), in the structure fill (165), on the floor (92), and in the pits (2) inside the dwelling, as well as outside the dwelling (155). Medium-sized specimens* dominate (27.4 %). Considering the length to width proportion, the elongated spalls are most numerous (26.6 %). Residual striking platforms are mostly straight (27.5 %), planar (10.5 %), and punctiform (10.4 %). Dorsal faceting of the flakes is predominantly longwise unidirectional (10.6 %). Blades (39 spec., 2.9 % of the total number of lithics, and 3.9 % of the total number of spalls) were found in the structure fill (17), on the floor (9), in the pits (2) inside the dwelling, and outside the dwelling (11). In total, 28 intact blades were found (71.8 %). The medium-sized (0.5 %) and small (0.8 %) blades dominate. The blades bear mainly straight (1.9 %) or planar (2 %) residual striking platforms. Faceting of dorsal surfaces is mostly lengthwise and unidirectional (2 %). The debris category (513 spec.) includes 18 fragmented pebbles, 204 spalls, and 291 shatters.

The tool kit includes 268 artifacts (96 intact, 34 fractured, 137 intact blanks, and one fragment), which is 20 % of the total number of lithics. The tools, fragments, and blanks were found in the upper layer (11), in the structure fill (116), on the floor (58), in the pits (9) in the dwelling, and beyond it (74).

Projectiles (including dart- and arrow-heads) were found in the upper layer (1), in the structure fill (12), and on the floor (6) of the dwelling. Dart-sized projectile points (6 spec.: two intact, three fragmented, and one blank; 2.2 % of the total number of tools) are bifaces foliate in plan view and lens-shaped in cross-section. On the recovered specimens, flat surfaces are covered with flattening, invasive retouch. Arrowheads (13 spec.: eight intact and five fragmented; 5 %) are of three types: 1) bifaces of elongated subtriangular shape in plan view and lens-shaped in cross-section, with either a straight or notched base; 2) arrowheads made on flakes, with a small notch on the base; 3) those that have elongated subtrapezoid shape in plan view, and are rectangular in cross-section. The first two types show preparation of flat sides with flattening through flaking or invasive retouch. Edges were prepared with bifacial, sub-parallel, and parallel flat retouch. Arrowheads of the third type are ground along the flat sides, with the lateral edges sharpened. The sizes vary from 1.3 × 1.3 × 0.2 cm to 2.9 × 1.8 × 0.3 cm.

Cutting tools identified in the assemblage are categorized as knives (16 spec.; five intact, six fragmented, four intact blanks, and one blank fragment; 5.9 %). These were found in the upper layer (1), in the structure fill (6), on the floor (1), in the pit (1) of the dwelling, and beyond it (7). There are three types of knives in the assemblage: 1) bifaces, either foliate or elongated sub-oval in plan view; 2) knives produced on flakes, which are asymmetric and rhomboid in plan view; 3) cranked in plan view. The flat surfaces of all the cutting tools were flattened by flaking; the faces of bifaces and "fish" knives show additional working with the parallel semi-abrupt retouch; the edges were fashioned with the bifacial, semi-abrupt or flat retouch. The sizes range from 3.1 × 3.0 × 0.4 to 9.4 × 4.8 × 0.6 cm.

Chopping tools (axes and adzes) were recovered from the structure fill (13), the floor (2), in the pits (2) of the dwelling, and beyond it (8). Axes (2 spec., a fragment and a blank; 0.7 %) are sub-rectangular in plan view and sub-triangular in cross-section. These were prepared via removals of lengthwise notching or bifacial subparallel spalls. The blank size is 11.8 × 6.8 × 3.3 cm. Adzes (23 spec.; eight intact, 13 fragmented, and 2 blanks; 8.6 %) are of three types: 1) elongated sub-trapezoid in plan view; lens-shaped, sub-oval, sub-triangular or sub-trapezoid in cross-section; 2) sub-rectangular in plan view and sub-oval or sub-triangular in cross-section; 3) elongated sub-triangular in plan view and lens-shaped or sub-triangular in cross section. These artifacts were prepared by trimming, polishing, and grinding. The backs are pointed, rounded, or straight. The sizes of intact specimens range from 6.9 × 3.1 × 1.2 cm to 11.2 × 4.2 × 2.3 cm.

One adze-scraper-like tool (0.4 %) was found beyond the dwelling. The tool is asymmetrical, sub-rectangular in plan view and lens-shaped in cross-section, the size is 9.8 × 6.4 × 2.4 cm. The artifact shows signs of trimming. The back and the cutting edge have been sharpened.

End-scrapers and a side-scraper were recovered from the upper layer (6), in the structure fill (44), on the floor (23), in the pits (3) of the dwelling, and beyond it (32). End-scrapers (107 spec.: 21 intact, 86 blanks; 40 %) are the most numerous tool category. These include end-scrapers, flake scrapers, angle scrapers, beveled scrapers, double-end-scrapers, flake end-scrapers, beveled end-scrapers, double-end beveled scrapers, and those retouched over the longwise edges and ¾ of the perimeter. Working edges were additionally trimmed by parallel and steep, lengthwise semi-abrupt spall removals and by marginal (parallel or sub-parallel, mostly abrupt, but in some cases

*Here and below with regard to the industry of spalls.

semi-abrupt or flat) retouch. Artifact sizes range from 2.2 × 2.3 × 0.5 to 5.7 × 3.0 × 1.0 cm. Pebbles, flakes and spalls served as blanks. A single side-scraper (0.4 %) is of the simple convex variety, sub-oval in plan view and lens-shaped in cross-section. The working edge was trimmed with abrupt, steep retouch. The cutting edge is blunted and shows edge-fractures. The size is 8.3 × 4.0 × 2.0 cm.

Borers (28 spec.: 16 intact, 12 blanks; 10.4 %) were recovered from the structure fill(10), on the floor (9), in the pit (1) of the dwelling, and beyond it (8). We identified the following varieties: dihedral, dihedral shouldered, angle, double (including with tangs on opposite ends), and a Chaleux-type borer. These are mostly rhomboid, sub-triangular, or sub-rectangular in plan view and in cross-section. The sizes range from 1.9 × 1.2 × 0.2 to 4.5 × 4.8 × 0.9 cm.

Combination tools (62 spec.: 32 intact, 30 blanks; 23.1 %) were found in the upper layer (3), in the structure fill (26), on the floor (15), in the pits (2) of the dwelling, and beyond it (16). Five combinations of two types of tools were identified: these include a scraper-borer (16, with 25 blanks), knife-scraper (7, with one blank), knife-borer (5, with one blank), one borer-notched tool, one borer-point. We also found two objects combining three types of tools: a knife-scraper-borer and a burin-scraper-borer. The size range for each is similar to the relevant types of unifunctional tools found in the assemblage. Finally, one adze might have been used as a striking tool, a sawing tool-scraper, and a notched scraping tool.

Other tools (9 spec., 3.3 %) include a digging tool, two mace-head fragments, a sinker, a perforated pebble, and four fragments of unidentifiable tools. These were found in the structure fill (5), on the floor (2) inside the dwelling, and beyond it (2). The digging tool is elongated, sub-oval in plan view, made by trimming of a sandstone pebble (12.4 × 5.2 × 2.7 cm). The "ears" of the tool were fashioned by spall removals in the lateral sides of the tool's upper portion. A large fragment (8.4 × 7.3 × 3.8 cm) of a basalt mace is subrectangular in plan view and elongated sub-trapezoid in cross-section; it was prepared by trimming and grinding all over the surface. The sinker was made of a sandstone pebble by flaking the opposite sides in order to secure fixing.

Retouched flakes (24 spec., 1.8 % of the total number of lithics) were found in the upper layer (7), in the structure fill (6), on the floor of the dwelling (4), and beyond the dwelling pit (7). The intact specimens are mostly elongated in shape and medium-sized. Reworking of the tools was executed mostly through retouching and grinding.

In summary, the collection of the typologically distinct artifacts appears dominated by the tools related to hunting and game processing: end- and side-scrapers (8.1 %), combination tools (4.6 %), borers (2.1 %), projectiles (1.4 %) and cutting tools (1.2 %). The share of chopping tools (1.9 %) is also large.

Household ceramics (Fig. 3, Table 2). The ceramic collection contains 2415 items: vessels (8 intact), vessel fragments (2156), and other clay objects (251). Identified ceramics are mostly attributed to the Malyshevo, Voznesenovskoye, and Belkachi complex ceramics of the Neolithic period, as well as unidentifiable ceramics from the Lower Amur. However, we also identified a handful of Late Bronze to Early Iron Ages ceramic sherds.

The Malyshevo culture is represented by 1666 items: 1 intact vessel and three refit vessels, 39 upper and 3 lower vessel portions, 2 side-pieces, 162 rim fragments, 1119 walls, and 140 vessel bottoms. We also identified 16 spindle whorls (two intact, five fragments, six blanks, and three blank-fragments); 181 scrapers (one finished product, 179 blanks, and one fragment). These items were found in the upper layer (278), in the structure fill (780), on the floor (343), in the pits (14) of the dwelling, and beyond it (251). The collection includes 379 unornamented items, and 53 specimens were painted red. Microscopic analysis demonstrates that the paste of some specimens was tempered with grog, sand, grus, with minor admixtures of mollusk shells. The surfaces of ready vessels were rubbed, smoothed, burnished, covered with engobe, and painted red outside and inside. Vessels were shaped using the base, base-and-body, and body-and-base shaping methods, as well as coil-ring techniques. The assemblage includes items with and without necks, those with open and closed shapes, and vessels ranging from miniature to large in size. The rims of vessels are straight or folded out- or inward; with rounded, pointed, flattened, or beveled margins. Bottoms are flat, mostly without flanges. Few vessels were made using a wheel. Both embossed patterns and high relief were used, as well as flat decoration patterns. The most frequent technical and decorative elements are comb imprints (using two to eight but most often three spokes), and spoon-shaped imprints. There are also imprints of variously shaped toothed wheel images, finger and nail imprints, stamped designs (straight, layered, and wavy), incised lines and grooves, scratches, punctate designs, and others. Separate elements form simple (horizontal, vertical, and oblique lines, arches, etc.) and complex (angles, triangles, segments, nets, spiral, faces, and other) motifs and ornamental compositions. There are two groups of ceramics: those used for household purposes (cooking, eating, and food storage) and those used for ritual*. Household ceramics bear carbonized

*Based on their general characteristics, ritual ceramics are similar to the household objects; hence, they are included in this section.

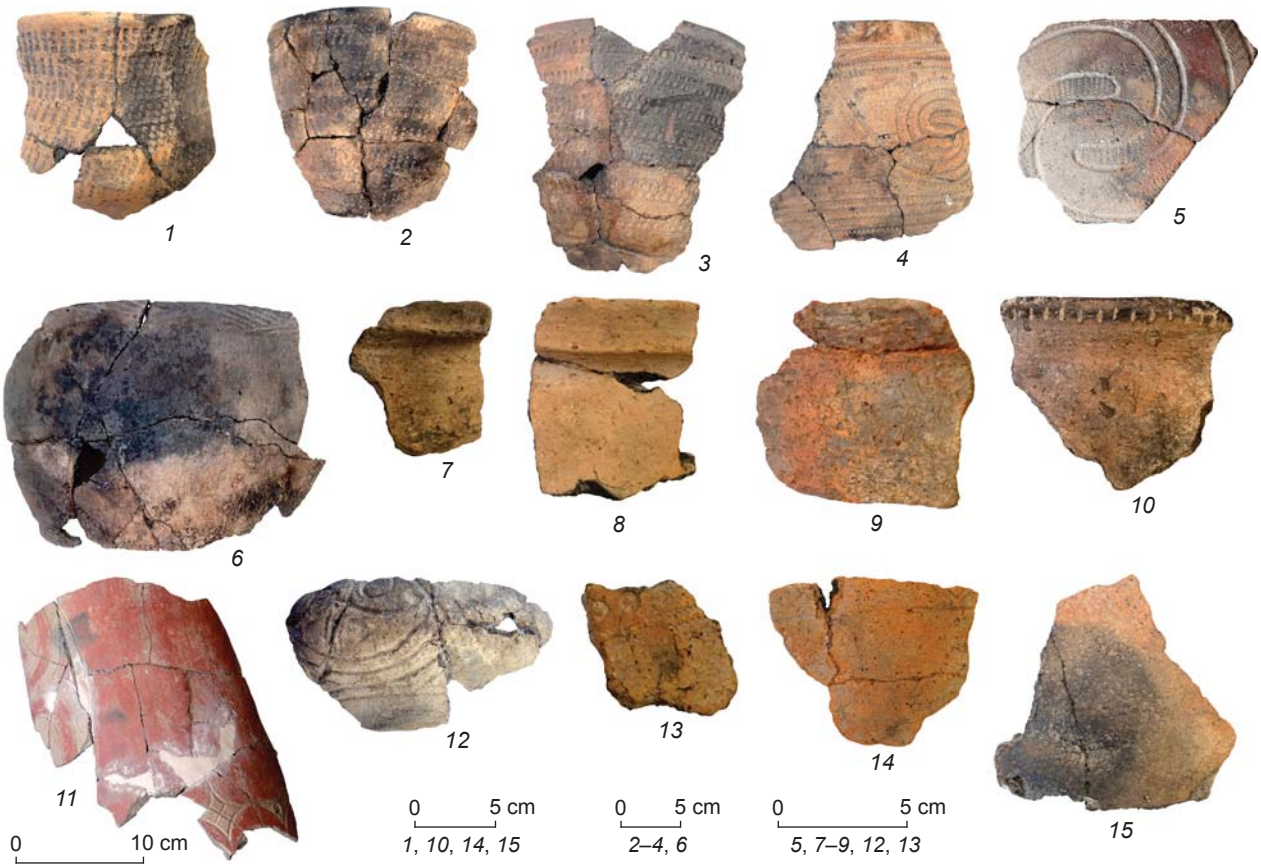

Fig. 3. Ceramics of Malyshevo (*1–5*) and Voznesenovskoye (*7–12*) cultures, Belkachi complex (*6*), with features of various cultural traditions (*13–15*).

deposits on the interior and/or exterior surfaces; while ritual ceramics are painted red (mostly on the interior surface). Scrapers and spindle whorls made from walls of broken vessel were recovered, as well as two specially manufactured spindle whorls, decorated with spiral and wave motifs. Malyshevo ceramics form a consistent, single cultural complex, showing a highly developed state of pottery production.

The Voznesenovskoye culture is represented by 162 items: 4 archaeologically intact vessels, five upper and two lower parts, 10 rims, 111 walls, and 14 bottoms; as well as 17 scraper blanks. These items have been found in the upper layer (16), in the structure fill (99), on the floor (32) of the dwelling, and beyond it (15). The larger portion of the ceramics (120) are undecorated. Binocular microscopic analysis demonstrates that the paste was tempered with freshwater mollusks (both shell and soft tissues) along with solitary grog particles. Prepared surfaces were usually rubbed and covered with engobe. One of the artifacts is painted red and likely served as a ritual vessel. The color of these potsherds is gray or dark gray on the inside and the breakage surfaces, and yellowish gray and grayish brown on the exterior, suggesting that ceramics were fired in the a reduction environment (650–700 °C). These vessels were built using the base-and-body shaping method and coil-ring technique. The vessels are predominantly large- and medium-sized, close-shaped, with necks. The rims are folded outward or direct (more rarely), with a pointed or rounded orifice. Bottoms of vessels in this category are flat. These artifacts can be classified into two groups based on their decorative features: 1) those with the body decorated with vertical comb, toothed wheel, and punctate designs; 2) those with a smooth body. In both groups, rims were formed through stamped impressions decorated with comb imprints or oval punctate designs. Two vessels are the exceptions. The first one, decorated with spiral motifs and "face" images, is similar to other vessels in terms of technology. However, in shape and ornamentation this object is parallel to the vessel from the shrine of the Voznesenovskoye culture, which was found at Suchu in 1993, in excavation 5 (Medvedev, 1994; 1996: 159–160, fig. 17, *18*; 2005: 54, fig. 24, *3*; Medvedev, Filatova, 2014: 81, fig. 54, *6*). The second vessel is exceptional in all its features. The ceramic paste does not contain any organic admixture; the surfaces are painted red and burnished to shine. The vessel bears "face images" composed of incised flutes, with the

Table 2. **Results of X-ray analysis of the Neolithic ceramics from dwelling 1**

Sample code	Field code	Square	Depth, layer	Portion of vessel	Composition of crystalline phase
			Malyshevo culture		
C-1	C-73-PII-1292	10/Г	90 cm	Wall	Quartz, plagioclase, orthoclase, illite
C-2	C-73-PII-1617	4/3	"	"	"
C-3	C-73-PII-1913	1/Б	85 cm	Rim	"
C-4	C-73-PII-2204	5/Д	70 cm	"	"
C-5	C-73-PII-243	3/Е	Floor	Bottom	"
			Belkachi complex		
C-6	C-73-PII-387	1/Ж	Floor	Wall	Quartz, plagioclase, orthoclase, illite
C-7	C-73-PII-479	1/В	"	Rim	"
C-8	C-73-PII-1136	4/3	"	Wall	"
C-9	C-73-PII-1274	10/Г	90 cm	Rim	"
C-10	C-73-PII-2153	1/Ж	60 cm	Wall	"
			Voznesenovskoye culture		
C-11	C-73-PII-677	7/Ж	Floor	Wall	Quartz, plagioclase, orthoclase, illite
C-12	C-73-PII-2057	9/Е	70 cm	"	"
C-13	C-73-PII-2887/2965	1/В	45 cm	"	"
C-16	C-73-PII-1230	7/3	90 cm	Rim	"
C-17	C-73-PII-1433	3/Г	"	Bottom	"
			Ceramics with foreign features		
C-22	C-73-PII-41	3/Ж	90 cm	Wall	Quartz, plagioclase, orthoclase
C-23	C-73-PII-838	4/Е	Floor	"	Quartz, plagioclase, orthoclase, illite
C-24	C-73-PII-1748	3/И	90 cm	"	"
C-25	C-73-PII-2881	6/Ж	45 cm	"	"
C-27	C-73-PII-3105	3/И	60 cm	"	Quartz, plagioclase, orthoclase, sillimanite

space between them filled with toothed comb imprints. This vessel is reminiscent of the painted ceramics from Voznesenovskoye and Takhta (Medvedev, 2005: 47, fig. 8, *1*, *3*, fig. 9; p. 58, fig. 31; p. 59, fig. 34). All ceramics, excluding those ornamented with spirals and "faces", are classified as household vessels. Beyond household vessels, the ceramic collection also includes end-scraper blanks of vessel walls. In general, the Voznesenovskoye ceramics can be described as a consistent, coherent cultural complex, representing a late stage pottery tradition.

The Belkachi complex consists of 557 items: an archaeologically reconstructed vessel, 15 upper vessel portions, one lateral vessel portion, 43 rim fragments, 459 wall fragments, and a near-bottom portion. Additionally, this material includes two spindle-whorl blanks and 35 scrapers made from vessel walls. These items were found in the upper layer (37), in the structure fill (204), on the floor (139) of the dwelling, and beyond the dwelling pit (177). All the ceramics are decorated. Using binocular microscopy, we established that a few specimens contained admixtures of grus and grog, as well as freshwater mollusks. The vessel surfaces were rubbed, smoothed, and covered with engobe. The firing environment was identified as oxidizing, using a temperature not higher than 800 °C, and a "smoking" technique. Vessels were shaped using the coil-ring method. They are open or closed, with slightly marked necks, small, medium, and large in size. Vessel bottoms are either round or round-pointed ("with a spur"). The rims are decorated with impressed designs, covered with toothed wheel or multi-toothed comb imprints. The walls show cord imprints with minor modifications. All the ceramics are identified as

household. The collection also includes spindle whorls and scrapers made of vessel wall fragments. Nearly ⅓ of the Belkachi ceramics were recovered outside the dwelling, and nearly one half of the total collection from within sq. Е–И/1'–2' and З–И/1'–2. This suggests a comparatively short presence of the associated group using this ceramic type at the island upon abandoning dwelling 1.

Finally, we recovered an upper portion of a vessel, two rims, and nine wall fragments showing certain similarity with the Neolithic ceramics from Sakhalin (Vasilevsky, 2008). These items were found in the upper layer (1), in the structure fill (8), on the floor (2) of the dwelling, and outside it (1).

Objects of art and cult. The collection consists of 38 items. These were found mainly at a small area close to the western wall on the floor (30) of the dwelling, and in the structure fill (8). Lithics include three labret fragments and a part of a phallic cone-shaped item with a feminine symbol. Clay items are a discoidal churinga, an anthropomorphic (female) figurine, six zoomorphic sculptural representations (one bear, five flying birds of the family Alcidae; their sizes are 3.2–4.0 cm), five ambiguous figurines (a head of a bear – small animal and four double-ended phalluses 2.8–4.0 cm long with the upper ends in the form of the seal heads), one figurine fragment, ten variously shaped miniature vessels, eight rods (one intact and seven fractured), and two wheel-stamps (Derevianko, Medvedev, 1996: 218–219; Medvedev, 2000: 58, fig. 4; p. 59, fig. 3, *2*; p. 62, fig. 6, *4–6*, *8–10*; p. 67, fig. 8, *3*; 2005, p. 55, fig. 28, *3*, *4*; p. 56). This large assemblage of objects with artistic or religious significance discovered in the dwelling suggest an important role for solar and animal worship, as well as fertility and ancestor cults. The cult objects suggest elements of totemism and magic in the ideology of inhabitants of this dwelling.

Conclusions

Spatial analysis of half-dugout dwelling 1 with a hearth in the center revealed its main construction features: a medium size, comparatively shallow foundation pit, and absence of ledges along the walls. A large number of postholes identified inside the dwelling can suggest structural rows: five stretched along the NW-SE axis, and three along the SW-NE axis. These are the pits from posts that had supported the dwelling's roof. Other hollows noted on the bottom of the foundation pit were likely used for food storage, household utensils, and other functional activities.

Lithics and household ceramic items clearly indicate that the ancient population of the island had complex subsistence strategies, dominated by hunting and fishing, as well as foraging. The large share of scrapers (40 %) (their morphotypes repeat in the ceramic collection) in the stone tool kit suggests a possible economic specialization of the inhabitants of dwelling 1; they were engaged either in scraper manufacturing (a "workshop"), or in mass processing of game. In terms of cultural and chronological attribution, the majority of the lithic artifacts belong to the Malyshevo cultural tradition, as supported by the Malyshevo ceramics associated with dwelling 1.

Analysis of the ceramics indicates a well-developed pottery-manufacturing tradition. These data also point to migration or cultural interactions with the northern mainland and eastern island territories, starting as early as the Middle Neolithic (late 5th to early 4th millennia BC). Numerous objects of artistic and religious significance reveal not only well-developed spiritual traditions, but also speak to Suchu's significance as a religious center in the 4th millennium BC. Judging by the number of such artifacts found in cluster in dwelling 1, we hypothesize that there was a domestic shrine in this house.

Newly analyzed data from dwelling 1, as well as lithics, ceramics and unique art and ceremonial objects found at the site, some of which have no parallels, provide the new insight into the Middle Neolithic period in the Amur basin and contiguous regions.

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