doi:10.17746/1563-0110.2021.49.3.013-023

V.E. Medvedev[1] and I.V. Filatova[1, 2]
[1]Institute of Archaeology and Ethnography,
Siberian Branch, Russian Academy of Sciences,
Pr. Akademika Lavrentieva 17, Novosibirsk, 630090, Russia
E-mail: medvedev@archaeology.nsc.ru; inga-ph@mail.ru
[2]Amur State University for Humanities and Pedagogy,
Kirova 17, bldg. 2, Komsomolsk-on-Amur, 681000, Russia

Materials from Dwelling 2 on Suchu Island, the Lower Amur (1977 Season, Excavation III)

This article presents the final results of excavations at one of the largest Neolithic sites in northeastern Asia—a settlement on Suchu Island on the Amur. Most of the rich collection (3967 spec.), owned by IAET SB RAS (stone tools, ceramics, ornaments, and artistic and ritual artifacts), has not been described before. This publication focuses on the analysis of artifacts from dwelling 2 (excavation III, 1977). We describe the construction of this semi-underground dwelling, circular in plan view. The typological analysis of the lithics indicates a complex economy. Many of them (arrowheads, projectile points, inserts, knives, plummets) relate to hunting and fishing, and to processing carcasses (end-scrapers, scrapers, burins, combination tools), others are chopping tools. The distinctive feature of the lithics is that some are bifacial. The analysis of the ceramics suggests that they belong to the Late Neolithic Voznesenovskoye culture. The use of binocular microscopy allowed us to assess the technological and constructive properties of the ceramics, as well as their morphological, decorative, and functional features. Non-utilitarian artifacts shed light on the worldview of the Suchu people. The collection dates to the mid-second millennium BC.

Keywords: *Amur River, Suchu, Neolithic, culture, dwelling, artifacts, analysis.*

Introduction

In 1977, excavations at the settlement of Suchu (Ulchsky District of the Khabarovsk Territory)* were carried out at a dwelling located on the western elevated end of the island. The working area was chosen in the part of the site that was opposite to the excavation areas of previous years (Okladnikov, Medvedev, Filatova, 2015; Medvedev, Filatova, 2016, 2017, 2018, 2019, 2020).

The excavation, measuring 15 × 15 m, enclosed a dwelling depression with a depth of slightly over 1 m and a diameter of ca 15 m. The northern edge of the dwelling depression extended slightly to the sloping part of the island. The working area, oriented to the cardinal points, was marked out in a grid (1 × 1 m), which was designated from west to east with numbers (1′–1–16), and from south to north with letters (A–P). There were two reference baulks, intersected in the center along lines 9 and И. The

*The excavation team included employees of the Institute of History, Philology and Philosophy of the Siberian Branch of the USSR Academy of Sciences—A.P. Okladnikov (head of the North-Asian Complex Expedition), V.E. Medvedev (head of the team), O.S. Medvedeva, and A.K. Konopatsky; teacher V.N. Kopytko and five students of the Khabarovsk Pedagogical Institute, two students of the Far Eastern State University (Vladivostok), and the artist of the publishing house "Aurora" E.B. Bolshakov (Leningrad).

cultural layer, exposed from the sod to the virgin land on the floor of the dwelling, was subdivided into three arbitrary horizons (up to 60 cm deep, 60–150 cm, floor), for the convenience of find-recording on layer-by-layer plans (Fig. 1, *A–C*). Lithics, household ceramics, jewelry, and objects of art and cult were found in the dwelling. The total number of finds was 3967 specimens. It was the last excavation on Suchu in the 1970s.

Material and methods

The study materials include the archaeological collection (lithics, ceramics, jewelry, objects of art and cult) and field documentation (drawings, diaries, report) deposited at the Institute of Archaeology and Ethnography SB RAS. The methods used were stratigraphy and planigraphy (dwelling), morphotypology (lithics), binocular microscopy (ceramics), and cultural chronology (ceramics, objects of art and cult). The methodology of the analyses of stone tools and ceramics was based on the developments of Russian scientists (Derevianko, Markin, Vasiliev, 1994; Zhushchikhovskaya, 2004; Medvedev, Filatova, 2014; Molodin, Mylnikova, 2015).

Study results

Stratigraphy (Fig. 1, *E–G*) is determined according to the profiles of the baulks and walls.

Baulk profiles along lines 9 and И. Layer 1 is black sod 5–15 cm thick, in some areas up to 25–30 cm thick. Layer 2 is brownish and brownish-yellow loose sandy loam 18–20 cm thick. At the base of the layer (sq. 9/Б), there is a lens of carbonaceous earth. Layer 3 is light-yellow sandy loam up to 80 cm thick, interlain with thin curving stripes of brownish-yellow color. This layer is underlain with lenses of dark carbonaceous sandy loam (sq. 9/А, 9/Р). Layer 4 is dark gray sandy loam enriched with solitary small charcoal pieces and carbonaceous particles. Lenses of dark sandy loam were noted in the filling of the dwelling pit (sq. 3–5/И, 9/К, Л) and at the bottom of the layer (sq. 6–8/И, 9/Б). The virgin land is dense sand enriched with basalt gravel.

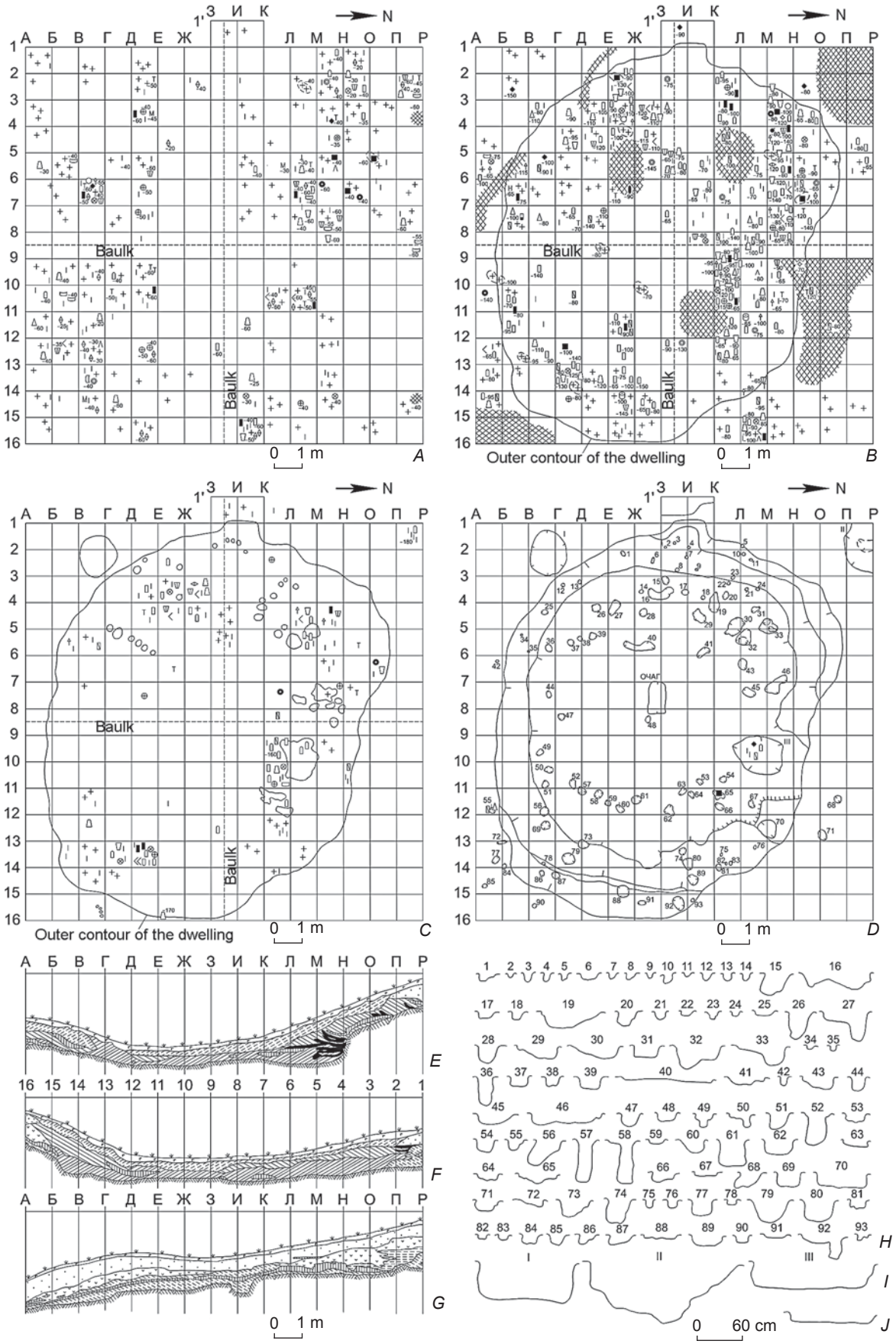
Wall profiles along lines P, 1, and 16. Layer 1 is loose, black sod 8 to 20 cm thick. Layer 2 is brown sandy loam 20–85 cm thick. Layer 3 is light gray sandy loam 25–40 cm thick. Layer 4 is light brown sandy loam up to 60 cm thick, with lenses of dark soil 8–40 cm thick (probably, the buried roof of the dwelling). The virgin land is sand with inclusions of basalt gravel.

Dwelling 2 (Fig. 1, *D*) has an elongated rounded foundation pit at the outer contour and another, almost rounded, at the floor outlines. The foundation is 13 m long along the N-S line, 14.5 m along the E-W line, and 12.4 m along NW-SE line. The floor diameter is ca 10 m. The depth of the pit varies: at the southern wall, it doesn't exceed 60–70 cm; at the eastern and western walls it is from 60 to 100 cm; at the northern wall (higher up the slope) 100–107 cm. The walls of the foundation pit are rather steep, with an angle of inclination from 60º to 70º.

Inside the dwelling, there are ledges—a kind of "couches". The first (lower) ledge, with an average height of 25–30 cm above floor level and width from 100 to 130 cm, runs along the foundation pit with relatively small breaks at the northern wall. The second ledge, rather a narrow "shelf", stretches in the eastern part of the dwelling. The third (top) ledge forms two strips. One of the strips, 100–150 cm wide and 9 m long is recorded in the eastern and southeastern parts of the pit; the other, 50–150 cm wide and almost 10 m long, in the northern, northwestern, and western parts. At the top of the western wall, there is a niche 90 cm wide and 120 cm long. The floor of the dwelling is relatively flat; a slight rise is noticeable in its western half. In the center of the dwelling, there was a hearth in a rectangular pit with rounded corners and a flat bottom 120 cm long, 60 cm wide, and up to 18 cm deep (Fig. 1, *J*). Therein, birch-bark pieces were found.

The excavation area revealed 96 pits, mainly within the dwelling, with only eleven pits (42, 55, 68, 71, 72, 77, 84, 85, 90, I, and II) outside the dwelling (Fig. 1, *D*). Most pits are rounded or oval in plan view; some of them are strongly elongated or eight-shaped. The pit diameters vary from 6–9 to 64–74 cm, on average 20–40 cm; depth from 6–10 to 59–62 cm, on average 30–40 cm (Fig. 1, *H*). The pit bottoms are often conical; less common

Fig. 1. Plans of excavation III (1977) at the levels of the upper layer (*A*), filling (*B*), and floor (*C*) of dwelling 2, virgin land (*D*), baulk profiles along lines 9 (*E*) and И (*F*), walls along line 1 (*G*), profiles of postholes (*H*), household (*I*) and hearth (*J*) pits.
1 – adze; *2* – chisel; *3* – scraper-knife; *4* – knife; *5* – insert; *6* – burin; *7* – knife-like blade; *8* – arrowhead/projectile point; *9* – notched tool; *10* – borer; *11* – end-scraper; *12* – side-scraper; *13* – "nosed" tool; *14* – combination tool; *15* – plummet; *16* – mace; *17* – grinder; *18* – grinding stone; *19* – hoe; *20* – sharpener; *21* – anvil; *22* – polisher; *23* – shaft straightener; *24* – combination tool; *25* – hammerstone-pressure stone; *26* – tool blank; *27* – core; *28* – core-like flake; *29* – flake; *30* – flaked pebble; *31* – lithic artifact; *32* – bead; *33* – button; *34* – spindle whorl; *35* – clay figurine; *36* – ceramic rod; *37* – ceramics; *38* – vessel (collapsed); *39* – pendant; *40* – depth from modern surface; *41* – pit; *42* – spot; *43* – sod; *44* – light brown sandy loam; *45* – dark, almost black soil, saturated with carbonaceous mass; *46* – yellowish-dark sandy loam; *47* – dark sandy loam with fine charcoal pieces; *48* – ancient buried soil layer; *49* – light gray sandy loam; *50* – yellow loam; 51 – brownish yellow sand; *52* – light yellow sandy loam; *53* – brown sandy loam; *54* – virgin land.


А Б В Г Д Е Ж З И К Л М Н О П Р
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
N
Baulk
0 1 m
A
B
Outer contour of the dwelling
C
D
E
F
G
H
I
J
0 60 cm
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35
36 37 38 39 40 41 42 43 44
45 46 47 48 49 50 51 52 53
54 55 56 57 58 59 60 61 62 63
64 65 66 67 68 69 70
71 72 73 74 75 76 77 78 79 80 81
82 83 84 85 86 87 88 89 90 91 92 93
I II III
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54

are flat, cup-shaped, or stepped bottoms. The walls are steep or vertical, a few walls are sloping. Most of the pits were used as postholes. These were located mainly along the walls of the foundation pit. Three depressions (Fig. 1, *I*) are attributed to household or storage pits. Pit I adjoined the dwelling on the southwestern side. It is oval in shape, measuring 164 × 140 cm, and 50 cm deep (in virgin land). Pit II, 100 cm deep, was cleared in the northwestern corner of the excavation area, at a distance of 1.4 m from the dwelling. Its bottom is uneven and stepped. The pit was filled with dark, almost black soil, saturated with a carbonaceous mass; above and below it there were laminations of light brown sandy loam. Pit III is almost rounded, ca 150 cm in diameter. It was located in the northern part of the dwelling, in the place where the first ledge broke off. It was filled with dark soil, with an admixture of coal, containing solitary potsherds and flakes.

Dwelling 2, uncovered in excavation III in 1977, with a total area of 140 m^2; doesn't generally differ in its design features from other dwellings of the Voznesenovskoye culture that were later found on Suchu Island (Derevianko et al., 2003; Medvedev, 2005).

The stone inventory numbers 837 items. Various rocks were used, mainly small (5–10 cm) and large pebbles (10–15 cm); more rarely medium-sized (15–25 cm) and large boulders (25–35 cm**)**.

The toolkit (54 spec., 6.5 % of the lithic collection) includes 26 grinding stones (14 intact and 12 fragments), 4 polishers, 2 hammerstones, an anvil, a tool for sharpening blades, and a fragment of shaft-straightener, as well as combination tools: 13 grinding stone-anvils (7 intact and 6 fragmented), 3 grinder-anvils-hammerstones (1 intact and 2 fragmented), anvil-polisher, pressure stone-polisher, and a fragment of an anvil-hammerstone. These artifacts were found in the uppermost layer (n=20), in the filling (n=18), on the floor (n=14) of the dwelling, and outside (n=2) the dwelling. Working surfaces of abrasive stones show signs of tool grinding and straightening; anvils show use-wear signs in the form of small pits and dents. The working ends of the hammers are chipped and worn out; those of polishers are smoothed and polished. The blanks were usually sandstone tablets and siltstone pebbles of various shapes and sizes.

The category of core-like forms (34 spec., 4.1 % of the lithic collection) includes 22 micronuclei and 12 core fragments; these were found in the uppermost layer (n=13), in the filling (n=9), on the floor (n=9) of the dwelling, and outside (n=3) the dwelling. Microcores are narrow-faced (n=17), wedge-shaped (n=4), and one conic-shaped. Five narrow-faced cores have two platforms, the rest are single-platform. The bases are often sharpened, some are backed; the platforms are mainly natural and plain; some platforms show longitudinal rejuvenation and faceting. The narrow sides bear negative scars of flake removal, including lamellar flaking; the lateral sides bear scars of detachment of knife-like blades, flakes, and chips. The sizes of micronuclei are from 1.9 × 2.2 × 1.3 to 4.3 × 3.2 × 1.5 cm. Core-like fragments are narrow-faced (n=6), wedge-shaped (n=5), and one sub-prismatic. The vast majority are single-platform (n=9); some bear two (n=2) or three (n=1) platforms. Sizes of core-like fragments vary from 1.3 × 2.3 × 0.4 to 5.0 × 2.2 × 1.6 cm. Microcores were mainly fashioned on jasper, less often chalcedony or siliceous pebbles.

The industry of spalls (435 spec., 51.9 % of the lithic collection) is represented by flakes, blades, and by-products. Flakes (332 spec., 39.6 % of the lithic collection, 76.3 % of the spall industry) were found in the uppermost layer (n=111), in the filling (n=150), on the floor (n=55), in pits (n=4) of the dwelling, and outside (n=12) the dwelling. The majority of the spalls are medium-sized (66.7 %*). The most numerous are elongated spalls (50.6 %). Residual striking platforms are mainly straight (52.7 %) or convex (25 %), less often mid-convex (22.3 %). They are mainly punctiform (25.3 %), natural (22.7 %), or faceted (18.3 %), less often plain (15.0 %), with a longitudinal rejuvenation (11.7 %), or dihedral (6.3 %); few linear platforms were also recorded (0.7 %). Dorsal faceting of the flakes is predominantly irregular (23.0 %) or longitudinal unidirectional (22.7 %), less often orthogonal (15.7 %), bidirectional (15.3 %), radial (10.0 %), or dorsal-plain (9.7 %). The share of intact flakes retaining natural crust all over the surface is 8.3 %; those with partial natural crust 37.0 %.

Blades (19 spec., 2.3 % of the lithic collection and 4.4 % of the industry of spalls) were found in the uppermost layer (n=8), in the filling (n=6), on the floor (n=4) of the dwelling, and outside (n=1) the dwelling. They are medium-sized (3.4 %) or small (0.9 %), mainly with the punctiform (73.7 %) residual striking platform. Dorsal faceting is mainly longitudinal unidirectional (42.1 %) or irregular (26.3 %). There are specimens (42.1 %) retaining natural surface.

By-products (84 spec., 10.0 % of the lithic collection and 19.3 % of the industry of spalls) include 17 knapped pebbles, 12 spalls, and 55 fragments; these were recovered from the uppermost layer (n=35), from the filling (n=25), on the floor (n=15), in the pit (n=1) of the dwelling, and outside (n=8) the dwelling.

The toolkit comprises 312 specimens (143 intact, 61 fragments, 105 blanks, and 3 fragments of blanks, which is 37.3 % of the lithic collection). The artifacts were found in the uppermost layer (n=82), in the filling (n=159), on the floor (n=47), in the pits (n=4) of the dwelling pit, and outside (n=20) the dwelling.

*Hereinafter (including blades) – percentage of the industry of spalls.

Projectile tools (projectile points and arrowheads) were found in the uppermost layer (n=1), in the filling (n=4), in the pit (n=3) of the dwelling, and outside (n=1) the dwelling. The blanks were mainly jasper and siliceous pebbles, more rarely flakes of the same rocks. Projectile points (2 spec.: an intact one and a blank fragment; 0.6 %) are bifaces with willow-leaf shape in plan view and lenticular in cross-section, with stemmed base. The flat surfaces were prepared by flattening flaking and flattening invasive retouch, the edges with subparallel and parallel semi-steep retouch. The dimensions of the intact product are 7.2 × 1.7 × 0.7 cm. Arrowheads (7 spec.: 4 intact, 3 fragments; 2.2 %) are bifaces elongated subtriangular in plan view, lenticular in cross-section, with notched base, and bifaces foliate in plan view, lenticular in cross-section, with stemmed base, as well as tools on flakes—subtriangular (with slightly concave or convex lateral sides) in plan view, flattened in cross section, with notched base. The bifaces are characterized by flat sides fashioned with flattening flaking and covering retouch, the edges were prepared by bilateral parallel flat or semi-steep retouch. The sides of the arrowheads on flakes were fashioned with parallel and subparallel flat retouch, the edges with fine marginal retouch. The dimensions range from 2.0 × 1.3 × 0.3 to 4.3 × 1.5 × 0.5 cm.

Cutting tools (knives and inserts) were found in the uppermost layer (n=16), in the filling (n=38), on the floor (n=9), in the pit (n=1) of the dwelling, and outside (n=3) the dwelling. Jasper and chalcedony, less often siliceous and silty pebbles and flakes, were used as blanks. Knives (34 spec.: 21 intact, 9 fragments, and 4 blanks; 10.9 %) are bifaces of leaf-shaped, elongated-suboval or subrectangular shape in plan view, and lenticular in cross-section ("meat knives"); and asymmetric cranked in plan view, and flattened-lenticular in cross-section ("fish knives"); as well as tools made on flakes or spalls, leaf-shaped, asymmetric rhomboid or cranked in plan view, lenticular or flattened sub-triangular in cross-section (Fig. 2, *20–24*). The flat sides of the bifaces were fashioned with flattening flaking; with covering, extended and invasive, parallel and subparallel, semi-steep or flat retouch; the edges with marginal, parallel and sub-parallel, invasive or distributed, semi-steep or flat bifacial retouch. The back is usually worked with bifacial spall removals. The edges and handle of the knives made on flakes bear signs of marginal, subparallel, contiguous retouch on the dorsal and ventral faces. The sizes of intact items range from 2.3 × 2.1 × 0.2 to 5.5 × 1.1 × 0.4 cm. Inserts (23 spec.: 16 intact, 6 fragments, and a blank; 7.4 %) are bifaces, rectangular in plan view and lenticular in cross section (Fig. 2, *7–19*). Their flat sides are worked with covering, extended, parallel and subparallel, flat or semi-steep retouch, the edges with fine, marginal, invasive, and subparallel flat retouch. Sizes range from 1.1 × 0.8 × 0.2 to 4.9 × 1.3 × 0.5 cm.

Chopping tools and woodworking tools (adzes, a chisel and a scraper-knife) were found in the uppermost layer (n=13), in the filling (n=17), on the floor (n=4) of the dwelling, and outside (n=3) the dwelling. Adzes (35 spec.: 12 intact, 22 fragments, and a blank; 11.2 %) are elongated subtrapezoidal in plan view and in cross-section, subrectangular in plan view, rectangular or lenticular in cross section, elongated subtriangular in plan view and lenticular in cross section (Fig. 2, *25–29*). These are fashioned with trimming, grinding, and sharpening. The backs are pointed or beveled. Asymmetrically sharpened working edges mostly show signs of wear; few tools do not show use-wear signs. The sizes of intact products vary from 5.2 × 3.4 × 1.2 to 19.0 × 6.1 × 4.1 cm. These tools were made on siltstone pebbles. The chisel (0.3 %) was made of a siltstone pebble (13.8 × 3.4 × × 2.2 cm), leaf-shaped in plan view and subrectangular in cross-section. There are dents on the dorsal and ventral surfaces; lateral edges show negative scars and indentations. All the surfaces are polished, the sides are sharpened. The back is asymmetrically narrowed and sharpened with stepped spall removals. The scraper-knife (0.3 %) is a bifacially flaked jasper pebble (4.2 × 2.2 × × 0.5 cm), semicircular in plan view and lenticular in cross-section, with a slightly concave working edge fashioned with subparallel semi-abrupt retouch.

Adze-side-scraper-like tools (2 spec., 0.6 %) were found in the uppermost layer. They were made on siltstone pebbles (9.3 × 5.7 × 2.8 and 9.2 × 6.6 × 2.8 cm), sub-oval in plan view and lenticular in cross-section. The tools show signs of trimming. Their working edges have use-wear signs and indentations.

Scrapers, side-scrapers, and a core-side-scraper-like tool were found in the uppermost layer (n=21), in the filling (n=58), on the floor (n=19) of the dwelling, and outside (n=10) the dwelling. End-scrapers (97 spec.: 27 intact, 70 blanks; 31.1 %) vary in shape: end variety, beveled, lateral, angular; double-ended; end-lateral, end-angular, end-beveled; double-ended beveled, double-ended lateral; and angular lateral varieties. Their working edges were formed with transverse and stepped, parallel and subparallel, vertical, steep and semi-steep flaking, and with marginal, stepped, covering and invasive, parallel and subparallel, less often discontinuous retouch. The sizes of the intact tools range from 2.1 × 2.2 × 0.8 to 5.8 × 3.9 × 1.0 cm. These tools were fashioned on pebbles, flakes, or spalls (including lamellar), less often blades. The rocks used were mainly siliceous (jasper, flint, and chalcedony); siltstone, sandstone, granitoid, and quartzite. Side-scrapers (10 spec.: one intact tool and 9 blanks; 3.2 %) include the following types: simple transverse straight and convex, longitudinal convex, and longitudinal-transverse straight; these are suboval or subtrapezoidal in plan view, lenticular, subtriangular, or rectangular in

Fig. 2. Lithics.
1–4 – retouched flakes; *5*, *6* – retouched blades; *7–19* – inserts; *20–24* – knives; *25–29* – adzes; *30* – digging tool; *31* – grinder fragment.

cross-section. Their working edges are prepared with marginal, stepped, longitudinal or transverse, vertical and steep removals. The tools were made on siltstone, granitoid, and sandstone pebbles and tablets, often on whetstones fragments. The size of the intact tool is 9.3 × 5.7 × 2.8 cm. The core-side-scraper-like tool (0.3 %) is sub-oval in plan view and sub-triangular in cross-section. It was made on a siltstone pebble (6.5 × 4.5 × 2.1 cm). The ordinary longitudinal side-scraper with opposing blades shows signs of wear. The lateral sides were prepared by bifacial, marginal retouch.

Borers (16 spec.: 10 intact, 6 blanks; 5.1 %) were found in the uppermost layer (n=3), in the filling (n=9), on the floor (n=3) of the dwelling, and outside (n=1) the dwelling. They were made mainly on flakes and spalls of siliceous rocks and siltstone. There are median, angular, double median, and mid-angular, as well as triple mid-angular borers, mainly leaf-shaped and sub-triangular in plan view, sub-triangular, sub-trapezoidal, and lenticular in cross-section. The tips were fashioned mainly with bilateral, marginal, subparallel and parallel, semi-steep and flat retouch. Sizes range from 2.0 × 0.7 × 0.5 to 4.7 × 2.5 × 0.9 cm.

Combination tools (17 spec.: 11 intact, 6 blanks; 5.4 %) were recovered from the uppermost layer (n=4), filling (n=11), and from the floor (n=2) of the dwelling. There are combinations of two (scraper-borer, scraper-burin, scraper-notched tool, knife-borer) and three (knife-borer-notched tool, knife-insert-saw, scraper-notched tool-"nosed" tool, scraper-knife-burin, scraper-borer-burin) types of tools. Blanks were mainly jasper, chalcedony, and flint pebbles, flakes, and spalls.

Miscellaneous tools (37 spec.; 11.9 %) (8 grinding stones in fragments, 2 grinders, 4 digging tools, 8 mace pommels (1 intact, 5 fragments, 2 blank fragments), a notched tool, a plummet, and a "nosed" tool blank, as well as 7 blanks and 5 fragments of tools of indeterminate purpose) were found in the upper layer (n=20), in the filling (n=10), on the floor (n=5) of the dwelling, and outside (n=2) the dwelling. Fragments of grinding stones are sandstone tablets (sizes range from 3.8 × 2.9 × 2.6 to 13.0 × 9.5 × 2.7 cm) with broad smoothed sides, on which thin trace-like scars are observed. Grinder is a basalt pebble, rounded in plan view and lenticular in cross section (11.1 × 10.2 × 7.0 cm). Its entire surface was carefully leveled up. A fragment of the grinder is a sandstone slab, segment-shaped in plan view and sub-rectangular in cross-section (Fig. 2, *31*). Digging tools are made of granite and sandstone tablets (10.4 × 6.8 × × 1.7 cm), elongated, subrectangular or subtrapezoidal in plan view and flattened-subrectangular in cross-section. The blades bear traces of use-wear (Fig. 2, *30*). The basalt and granitoid mace pommels (sizes range from 8.3 × 5.3 × 5.2 to 15.0 × 7.8 × 7.0 cm) are subovoid or semicircular in plan view, subovoid in cross-section, with smoothed and polished surfaces and biconical holes. The notched tool is fashioned on a flint flake (4.4 × 3.7 × 0.4 cm); it is diamond-shaped in plan view and flattened sub-triangular in cross-section. The notch was made by stepped retouch on the edge opposite of the striking platform.

Retouched flakes (24 spec.: 7.7 % of the lithic collection) were found in the uppermost layer (n=11), in the filling (n=9), and on the floor (n=4) of the dwelling. Intact specimens are mostly elongated (3.4 %*), medium-sized (4.6 %) items made of jasper, chalcedony, and flint, less often of siltstone (Fig. 2, *1–4*). In most cases, fine, marginal, discontinuous, parallel or stepped retouch is located on the longitudinal or distal edge of the piece.

Retouched blades (spec. 5, 1.6 % of lithic collection) were found in the uppermost layer (n=1), in the filling (n=3), and on the floor (n=1) of the dwelling. These are medium-sized (0.5 %) and small (0.7 %) items made of jasper; few siltstone items were also recorded (Fig. 2, *5*, *6*). Residual striking platforms are plain (40 %), punctiform (40 %), and faceted (10 %). Faceting of the dorsal surface is longitudinal unidirectional (40 %), bidirectional (20 %), radial (20 %), and irregular (20 %).

The main techniques of secondary working were retouching, grinding, polishing, and sharpening. The main types of retouch used were: marginal (59.2 %)**, steep (5.4 %), semi-steep (8.5 %), and flat (9.2 %); parallel (40.8 %) and sub-parallel (17.7 %), covering (13.8 %) and invasive (3.8 %), stepped (9.2 %) and continuous (3.1 %), discontinuous (19.2 %) and sharpening (6.2 %); bifacial (11.5 %), contiguous (6.2 %) and alternate (4.6 %); small- (32.3 %), medium- (3.1 %) and large-faceted (5.4 %).

The set of typologically clear items is dominated by the tools associated with capture and processing of hunting and fishing products: knives and inserts (6.8 %), projectile points and arrowheads (1.1 %), mace pommels and plummets (1.1 %); end-scrapers and side-scrapers (12.8 %), combination tools (2.0 %), and borers (1.9 %). In addition, there are quite a large number of chopping tools and wood-working tools (adzes, chisels, and scraper; 4.4 %), as well as digging tools (0.5 %) and tools for grain processing (grinding stones and grinders; 1.2 %). These data taken together testify to the complex nature of the economy of the inhabitants of the dwelling. The main activities were hunting, fishing, and gathering.

The lithic tool collection also includes two disc-shaped spindle whorls made of siltstone and fine-grained

*Hereinafter (including blades), in the industry of spalls.

**Hereinafter, of the total number of retouched items (n=226) in the collection.

sandstone through grinding. One of these was found in the uppermost layer, the other in the filling of the dwelling (Fig. 3, *8*).

Household ceramics include 3110 specimens. The overwhelming majority (3028) is attributable to the Voznesenovskoye culture (Fig. 4). These are clay vessels (3) and their parts (244 upper, 22 lower, an upper and a lower of a single item, 8 side pieces, 165 rim fragments, 2451 walls, and 126 bottoms), and spindle whorls (three intact and five fragments), of which one shows a carved linear pattern. Slightly more than a third of the samples (1,326 specimens, 43.8 %) do not bear ornamentation. The Voznesenovskoye ceramics were found in the uppermost layer (n=1035), in the filling (n=1295), on the floor (n=215), in the pits (n=56) of the dwelling, and outside (n=427) the dwelling.

Examination with a binocular microscope showed the presence of freshwater mollusk (shells and body) in the paste; in some samples, additives of sand (22), grus (31), and chamotte (4) were also recorded. The inorganic additives suggest experiments with the paste composition aimed at improving the properties of ceramic products.

Vessels were predominantly formed by the bottom-to-body coiling technique. The rim coils are 1.0–1.5 cm wide, the body coils are 5–7 cm wide, and the bottom ones are 3–4 cm wide. The inner and outer surfaces were rubbed, smoothed, polished (rarely), and covered with engobe. There are mainly medium and large closed vessels with well-profiled necks. The diameter of the rim (mouth) of medium-sized vessels is in the range from 10 to 15 cm, that of large vessels from 20 to 30 cm; the body diameters are 15–20 and 20–30 cm, respectively; bottoms from 5–10 to 15 cm. The medium-sized items are from 10 to 15 cm high, large ones from 20 to 30 cm. The rims are 0.8–1.0 cm thick; walls 0.5–0.8 cm; bottoms 0.8–1.2 cm thick. There are also three miniature vessels, ranging in height from 2.3 to 6.7 cm. The rims are most often bent outward, straight rims are less common; the mouth edge is sharpened or rounded. The bottoms are flat.

The vessels are ornamented with vertical and horizontal zigzags; horizontal, vertical or oblique lines; angles, triangles, a grid of comb imprints, cogged wheels, and pricks. The motif of arcs and circles made with carved lines and grooves was also recorded. The bodies of some vessels are plain. The rims were formed with appliqué coils, decorated with comb imprints, pricks and incisions on top. The rims with cannelures were also noted.

Firing was carried out with the use of redox baking mode (650–700 °C). This is evidenced by the color of the sherds: light gray, yellowish-gray, yellow-brown, gray-brown, light and dark orange on the outside; and light brown and brown, gray and dark gray on the inside and in fractures. Fragments and intact vessels are often covered with soot and carbon deposits.

In general, the Voznesenovskoye ceramics form a consistent complex, correlated with the late stage of the culture's development.

The collection also contains 82 vessels from other cultural traditions: the Mariinskoye of the Early Neolithic

Fig. 3. Clay (*1–7*, *9*) and lithic (*8*) artifacts.
1–6, 9 – small vessels; *7* – ring fragment; *8* – spindle whorl.

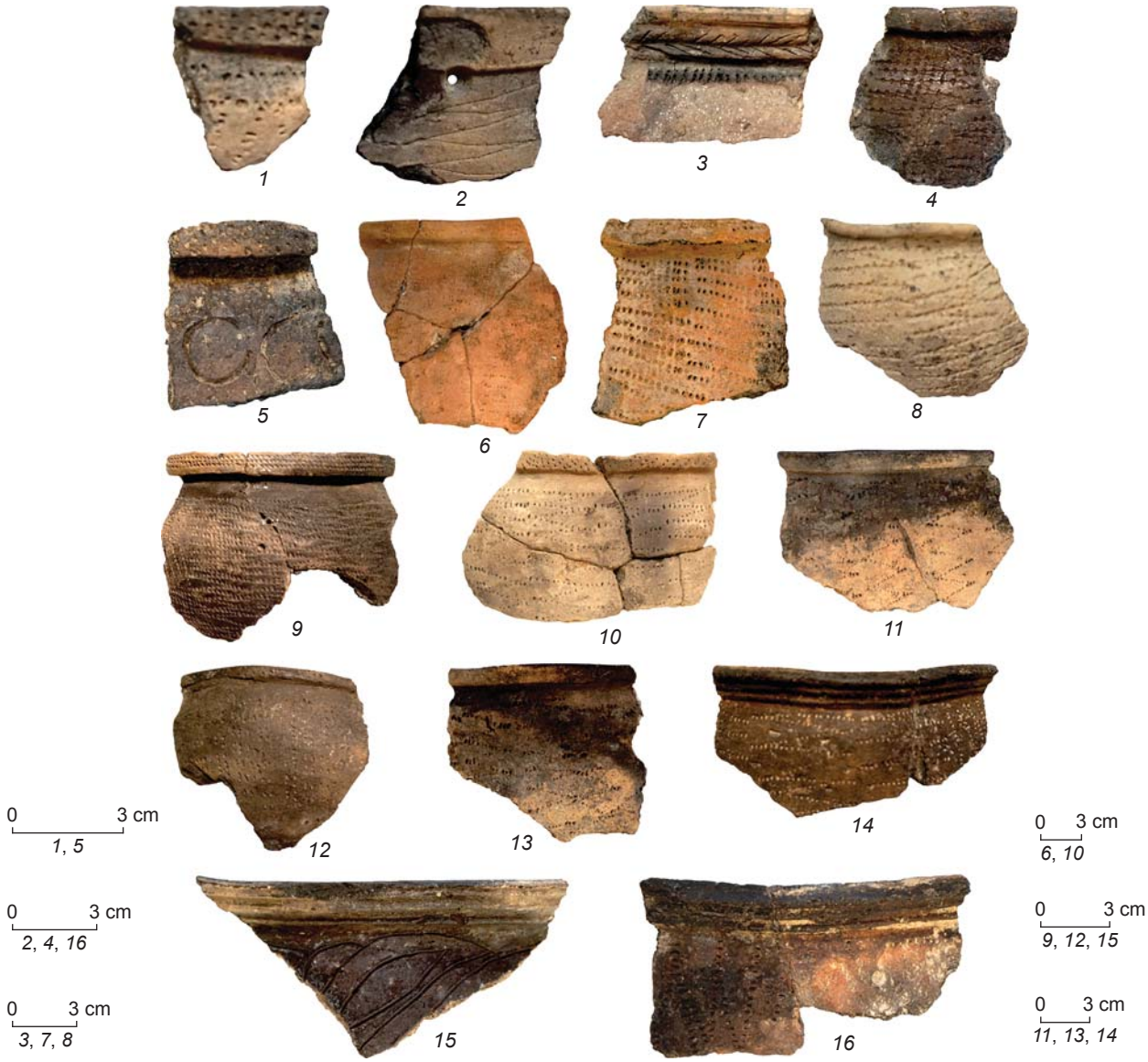


Fig. 4. Voznesenovskoye ceramics.

(2 rim fragments) (Medvedev, 2008), the Kondon (10 walls and 2 bottoms), and the Malyshevo (7 rims, 46 walls, 3 lower parts, and 5 bottoms) cultures (Medvedev, 2006, 2017), the Belkachi cultural type of the Middle Neolithic (fragment of the vessel wall), the Sedykh Late Neolithic culture of Sakhalin Island (2 fragments), and the Poltse culture of the Early Iron Age (4 fragments). These were found in the uppermost layer (n=22), in the filling (n=30), on the floor (n=12) of the dwelling, and outside (n=18) the dwelling.

After disposal of ceramic vessels, their fragments could have been used for various purposes. The ceramic collection contains scrapers (n=22), a polishing scraper, blanks for scrapers (n=1137) and their fragments (n=2), and blanks for spindle whorls (n=4). Most of these (94.6 %) belong to the Voznesenovskoye culture. End-scrapers, beveled scrapers, and flake scrapers; beveled end-scrapers, flake end-scrapers, beveled flake scrapers; double-beveled, double-ended, and double-ended beveled varieties were identified. The working edges of the scrapers show use-wear signs.

Personal ornaments, objects of art and cult make up a group of 20 specimens: clay items—eight fragments of sculptures, a fragment of a rod, a part of a ringlet, eight small vessels; stone items—a figurine of a seal (presumably), a button and two beads, and a fragment of a pendant made of mother-of-pearl. These items were found in the uppermost layer (n=7), in the filling (n=9), in the utility pit III (n=1) of the dwelling, and outside (n=3) the dwelling.

Of the eight fragments of clay sculptures, only one fragment was definitely identified as the lower part

of a female figurine, sub-trapezoidal in plan view and subtriangular in cross section. One of its wide surfaces is plain; the opposite side shows a grid of incised lines. A part of a ceramic rod is sub-rectangular in plan view and in cross-section; its dimensions are 3.2 × 3.4 × × 1.65 cm. A little less than half of a ring, with a diameter of 3.0 cm and a thickness of 0.7 cm, was found (see Fig. 3, *7*). The cult objects include five almost intact miniature flat-bottomed vessels, with an average height of 2.0–3.0 cm (see Fig. 3, *1–4*, *6*), a vessel with a slightly protruding handle (see Fig. 3, *9*), and two items with paired containers, one of which is practically intact (see Fig. 3, *5*), and the other has preserved only one container. The first item shows a round hole in the crosspiece, 0.4 cm in diameter, made before firing. This unique find could be classified as scales.

The relatively few non-utilitarian items, including miniature vessels, apparently associated with certain rituals, reflect the features of the spiritual and intellectual sphere of the inhabitants of this dwelling, and in general, the bearers of the Voznesenovskoye culture.

Conclusions

The analysis of the spatial distribution of dwelling 2 indicates the main features of its design: large dimensions (ca 15 m in diameter), a rather deep foundation pit, the presence of ledges-"benches", "shelves" and niches in the pit walls, a circular arrangement of postholes in the floor of the dwelling. Externally, the dwelling had a shape that most likely resembled a truncated pyramid.

The lithic collection includes tools associated with hunting, fishing, and processing of the game, as well as with digging works and processing plant fruits; this suggests that the inhabitants of the dwelling were engaged in a complex economy, in which the main activities were hunting, fishing, and gathering—traditional economic activities in the Amur Neolithic. A distinctive feature of the lithic collection is a significant number of bifacial tools.

The results of the analysis of the ceramics indicate their cultural and chronological affiliation to the late stage of development of the Neolithic Voznesenovskoye culture, as well as the influence of the traditions of population of the northern mainland and eastern island regions, starting from the Middle Neolithic (late 5th to early 4th millennium BC) and up to the terminal stages of the culture's existence. Notably, binocular microscopy has shown the likelihood of experiments with pastes to improve the quality of ceramics.

Personal ornaments, objects of art and cult, although relatively few in number, nevertheless represent certain aspects of the spiritual and intellectual life of the inhabitants of the dwelling and the bearers of the Voznesenovskoye culture in general.

This publication concludes our series of papers describing the excavations of Neolithic settlements on Suchu Island in the 1970s. We believe that the presented results of the study of dwelling 2 in excavation III, its lithic collection, ceramics, personal ornaments, and objects of art and cult noticeably supplement scientific knowledge about the Late Neolithic of the Lower Amur Region and contiguous territories. The derived data suggest the age of the dwelling as mid-2nd millennium BC.

Acknowledgements

The authors are grateful to all the participants in the excavations on Suchu Island in 1977; our special thanks go to O.S. Medvedeva for photographs and assistance in preparing the material for publication.

References

Derevianko A.P., Chuo You Zhuon, Medvedev V.E., Shin Chang Su, Huon Hion Wu, Kramintsev V.A., Medvedeva O.S., Filatova I.V. 2003
Neoliticheskiye poseleniya v nizovyakh Amura: (Otchet o polevykh issledovaniyakh na ostrove Suchu v 1999 i 2002 gg.):. Seoul: Gos. Issled. Inst. kulturnogo naslediya Respubliki Koreya. (In Russian and Korean).

Derevianko A.P., Markin S.V., Vasiliev S.A. 1994
Paleolitovedeniye: Vvedeniye i osnovy. Novosibirsk: Nauka.

Medvedev V.E. 2005
Neoliticheskiye kultury Nizhnego Priamurya. In Rossiyskiy Dalniy Vostok v drevnosti i srednevekovye: Otkrytia, problemy, gipotezy. Vladivostok: Dalnauka, pp. 234–267.

Medvedev V.E. 2006
O kulturogeneze v epokhu neolita v Nizhnem Priamurye. In *Sovremennye problemy arkheologii Rossii*, vol. I. Novosibirsk: Izd. IAET SO RAN, pp. 288–291.

Medvedev V.E. 2008
Mariinskaya kultura i ee mesto v neolite Dalnego Vostoka. In *Trudy II (XVIII) Vserossiyskogo arkheologicheskogo syezda v Suzdale*, vol. I. Moscow: IA RAN, pp. 244–248.

Medvedev V.E. 2017
Ob osobennostyakh razvitiya srednego i pozdnego neolita na yuge Dalnego Vostoka (Nizhneye Priamurye). In *Trudy V (XXI) Vserossiyskogo arkheologicheskogo syezda v Barnaule-Belokurikhe*, vol. I. Barnaul: Izd. Alt. Gos. Univ., pp. 155–158.

Medvedev V.E., Filatova I.V. 2014
Keramika epokhi neolita nizhnego Priamurya (ornamentalnyi aspekt). Novosibirsk: Izd. IAET SO RAN.

Medvedev V.E., Filatova I.V. 2016
Tentative findings from excavations on Suchu Island, Amur (1973 season, excavation I). *Archaeology, Ethnology and Anthropology of Eurasia*, vol. 44 (4): 24–37.

Medvedev V.E., Filatova I.V. 2017
A comprehensive study of Neolithic stone tools from dwelling D on Suchu Island, the Lower Amur (1974, excavation area I). *Archaeology, Ethnology and Anthropology of Eurasia*, vol. 45 (3): 17–28.

Medvedev V.E., Filatova I.V. 2018
A study of finds from excavation I at Suchu Island, the Lower Amur (the 1974 field season). *Archaeology, Ethnology and Anthropology of Eurasia*, vol. 46 (4): 124–128.

Medvedev V.E., Filatova I.V. 2019
Archaeological findings on Suchu Island (excavation area I, 1975). *Archaeology, Ethnology and Anthropology of Eurasia*, vol. 47 (4): 30–42.

Medvedev V.E., Filatova I.V. 2020
A multidisciplinary study of finds from Suchu Island (1973 season, excavation II, dwelling 1). *Archaeology, Ethnology and Anthropology of Eurasia*, vol. 48 (2): 3–13.

Molodin V.I., Mylnikova L.N. 2015
Teoria i praktika issledovaniya drevnei keramiki: Traditsionnye i noveishiye metody. *Samarsky nauchny vestnik*, No. 3: 122–127.

Okladnikov A.P., Medvedev V.E., Filatova I.V. 2015
The first systematic excavations on Suchu Island and radiocarbon dates of the site. *Archaeology, Ethnology and Anthropology of Eurasia*, vol. 43 (3): 50–63.

Zhushchikhovskaya I.S. 2004
Ocherki istorii drevnego goncharstva Dalnego Vostoka Rossii. Vladivostok: Dalnauka.

Received June 7, 2021.