NEOLITHIC CULTURES OF THE RUSSIAN FAR EAST: TECHNOLOGICAL EVOLUTION AND CULTURAL SEQUENCE

ÚZAKDOĞU, RUSYA KESİMINİN NEOLİTİK KÜLTÜRLERİ: TEKNOLOJİK GELİŞİM VE KÜLTÜREL SÜREÇ

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Key words: Neolithic, neolithisation, Russian Far East, early pottery, stone industry, intensive salmon fishing, maritime adaptation.

Anahtar sözcükler: Neolitik, neolitik yaşam, Uzakdoğu Rusya’sı, ilk çanak çömlek, taş alet endüstrisi, yoğun somon balığı avcılığı, deniz kıyısına uyum.

Uzakdoğu’nun, Rusya kesiminin Neolitik yaşamına geçiş önemli özellikleri getirmektedir ve özgün bir model olarak tanımlanabilir. Bu model, Gö 10 000/13 000-3 000 tarihleri boyunca toplumun, tarıma ve besin üretimine geçmesini, teknolojik, sosyal ve inanç gelişimini kapsamaktadır. Su ürünlerini ağırlıklı bileşik bir avcı-toplayıcı ekonomiye dayalı Uzakdoğu’nun Rusya bölgesi Neolitik kültürleri orman, nehir, dağ, göl ve deniz kıyılarında oldukça yüksek bir seviyeye ulaşmışlardır; bunların beraberinde Çin, Kore, Japonya gibi çevresel bölgelerle de yoğun kültürel iletişim içine girmişlerdir. Bu arkeolojik veriler bölgeler arası karşılıklı ilişkilerin saptanması ve tüm Avrupa-Asya’nın neolitik sürecine ait kuramlar için son derece de değerlidir.

INTRODUCTION

Russian Far East is a huge territory which includes several big geographical regions – the Amur Region (Middle Amur and Lower Amur), the Maritime Region (Primorye) and Sakhalin Island (Fig. 1). First archaeological investigations started here about 100 years ago and today specialists have bright historical panorama of original cultures and traditions from the Upper Paleolithic sites to the early states of the Middle Ages. The Neolithic period, 13-3,000 BP1, is one of the most interesting and intriguing.

During more than 10,000 years the inhabitants of the region created and developed specific economical model highly adapted to the variety of natural landscapes –forests, mountains, lakes, river valleys, sea banks, plains etc.

In the Russian Far East archaeologists made discoveries which changed traditional points of view and the understanding of the Neolithic in its classic version (so called “Neolithic Revolution”). The arrival of agriculture was pret-

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1 All dates in the text are uncalibrated
ty late (about 5-4,500 BP) and the production of food was not the main strategy almost till the colonization of the Far East by Russian settlers during XIX-early XX centuries. Starting from the end of Pleistocene local cultures demonstrated high technological level and a number of innovations which reflected the dynamic evolution of economical and social structures of their society.

In a global scale it would be very interesting to compare the Fareastern paleoeconomical and cultural model with the models from Central and West Asia, so this overview of archaeological information may play role of this initial step to interregional correlation and scientific cooperation.

1. SHORT OVERVIEW OF CLIMATIC CONDITIONS DURING TERMINAL PLEISTOCENE – HOLOCENE.

During 18-11,000 BP the climate in the Russian Far East became much milder with the expansion of dark coniferous and mix coniferous-broadleaved forests. In frames of 13-11,000 BP time period most of the tundra and forest-tundra in the Maritime Region were replaced by birch-larch vegetation. The Holocene period was mostly warm with rising mean temperatures. The climatic periodisation is as follows: Preboreal period, 10 – 9,300 BP; Boreal period, 9,3 – 8,000 BP; Atlantic period, 8 – 5,000 BP; Subboreal period, 5 – 2,500 BP.

Boreal, Atlantic and Subboreal were warmer and had more comfortable conditions for the development of archaeological cultures in the Far East. In the Early Holocene – Preboreal and Boreal periods most of the territories on modern Russian Far East were covered by birch-larch forests in the northern parts and by mixed coniferous-broadleaved massive with thermophilous species in the southern parts. The best climatic conditions in the Russian Far East were during the Atlantic period – warm and humid. The vegetation included dark coniferous forests and mixed coniferous-broadleaved forests. The annual temperature was about 2-3 degree higher than today. During the same time the levels of Sea of Japan and the Okhotsk Sea was 1.5 – 4 m higher than the modern level (Kuzmin 2005: 268-269; Lutaenko et al. 2007).

2. ARCHAEOLOGICAL CULTURES OF THE AMUR REGION

2.1. Middle Amur Region

Archaeological investigations in the Middle Amur Region conducted during late 1960-early 1970s gave scholars unique information about two cultures with Final Pleistocene – Early Holocene dates: Gromatukha culture and Novopetrovka culture. (Fig. 2)

Gromatukha Culture: The culture was named after the principle site (Gromatukha) excavated in late 1960's and recently during early 2000's. There are also a dozen sites with similar materials in the Middle Amur Region known to the archaeologists and tested with small-scale units and trenches.

The site is multilevel and represents the evolution of culture during several thousand years. In the lowest horizon lithic industry is characterized by typical Final Paleolithic assemblage – edge-shaped microcores, transversal burins, bifacial knives, points, end scrapers and gravers. There are many large wood-working tools – axes, adzes and chisels.

Unfortunately archaeologists have no evidences of any dwellings or dwelling constructions on the site. There are several concentrations of debitage and preforms which may be interpreted as working-places of flintknappers and several concentrations of charcoal (possible hearths). This supports the suggestion that people of Gromatukha culture were mobile foragers with seasonal focuses on fishing (salmon fish) and temporary camps with light surface dwelling constructions.
Detailed stratigraphical observation and analysis of the distribution of the archaeological materials done after the excavation attributed the limited number of primitive pottery sherds with this level. Thus, the Gromatukha site demonstrates one of the earliest examples of pottery-making not only in the Russian Far East but throughout the World (Fig. 3). Additional fragments of pottery were found during the recent excavations, confirming these conclusions. Pottery was invented and used by forest hunters and river fishers in the very end of the Pleistocene (13,000 BP) and its use until 3-2,000 BP was not connected with any food production economy. Moreover, the Gromatukha culture gave technological impulse to the appearance of early pottery in the nearby regions – Upper Amur and Lower Amur within 12,5-11,000 BP time frames. So far, archaeologists are not ready to give the exact answer if it was the result of migrations of groups from the Middle Amur or the result of direct contacts and technological exchange. In any case, the fact of pottery-making at the Pleistocene-Holocene transition is absolutely clear.

Gromatukha site has been dated by C$^{14}$ by the charcoal samples from the lower horizon (12340±60 - AA-36079; 9895±50 – AA-36447) and also by the organic remains in the pottery sherds (13310±110 – AA-20940; 13240±85 – AA-20939; 11320±150 – SNU02-002). Based on these dates most of the specialists prefer to put the existence of the early Gromatukha culture between 13 and 9,000 BP.

**Novopetrovka Culture:** This culture is one of the most interesting among the Neolithic cultures in the Russian Far East. As minimum as three sites (Novopetrovka-I-III) with the remains of subterranean dwellings were located and studied by archaeologists in late 1960s' and early 2000s' near the Novopetrovka village on Dunaika river (Amur tributary) close to the Russian-Chinese border (Derevianko, 1970; 2005) (Fig. 4-5).

All the dwellings are of rectangular configuration (usually not bigger than 7 x 6 m) with the sets of visible post-holes around the walls and fire-place in the middle. One more typical feature for most of the dwellings is the set of small depressions with stone tools and preforms, and empty ones which could be used for food storage. The Novopetrovka sites were small villages, apparently the sedentary or semi-sedentary settlements of hunters and fishers.

Lithic industry of the Novopetrovka culture is of special interest. It's absolutely different from the industry known for Gromatukha culture. People of Novopetrovka culture were making their tools (arrow and dart points, knives, drills and burins) on long prismatic blades (5-15 cm). The industry was based on the exploitation of big prismatic cores (up to 20 cm) by pressure method. Very fine raw material (flint, flinty tuff, chert, jasper) and special devices to fix cores were used widely by local craftsmen. The total number of broken and unbroken blades with retouch or burination is about several thousand. Retouch covers margins of blades both from ventral and dorsal sides but facial technique (uni- or bi-) is exceptionally rare; there are almost no real bifaces, no bifacial preforms or tools. The historical roots of Novopetrovka culture (prismatic cores and blades) may tentatively be traced to areas to the south in Chinese territory on the series of sites with eroded cultural levels.

Few fragments of pottery with the presence of shells in the paste were found on the sites. So, pottery making was known to Novopetrovka people and it appears that they did not take this technology from Gromatukha people but used their own technology.

Just one carbon data is known for Novopetrovka culture. It was done by the charcoal from the inner part of a pottery fragment - 9740±60 (AA-38109). There are also three dates extracted from the organic in the pottery paste: 12720±130 (AA-38103), 10400±70 (AA-20938), and 9765±70 (AA-20937). So, on the current stage of our knowledge about Novopetrovka
and initial pottery with the age of 12,000 BP was known only in Japan (Fukui Cave Site). In 1980 one more big set of shreds was found in a compact feature with typical stone tools and charcoal at Gasya site (Fig. 3-3). The reconstructed vessel is about 25-26 cm in height with the diameter in bottom part of 14-15 cm and in the middle section about 24-25 cm. The whole surface of the vessel was decorated with vertical lines (grooves). Lots of crushed organics (grass) served as filler. The firing temperature couldn’t be higher than 350° Celsius scale (Derevianko, Medvedev, 1995).

According to very careful observations done during the work at the Gasya and Khummi sites, archaeologists concluded that there were at least two types of dwelling constructions in Osipovka culture: (1) small-scale (3.5 x 4.5 m) surface shelters with rounded walls for temporary use and; (2) semi-subterranean rectangular dwellings (20-22 cm deep), but their exact measurements and details of construction are still unclear.

Several pieces of art are also known as Osipovka culture. They include small sculptured images of animals (bears, birds), symbolical images, beads and pendants from opal, siltstone and green nephrite.

At present fragments of clay vessels and parts of clay figurines are common at almost all of Osipovka culture sites. The first traces of pottery making were found in 1975 during the excavation of Gasya Site. Before this, the culture was recognized as Final Paleolithic or Mesolithic one and initial pottery with the age of 12,000 BP was known only in Japan (Fukui Cave Site). In 1980 one more big set of shreds was found in a compact feature with typical stone tools and charcoal at Gasya site (Fig. 3-3). The reconstructed vessel is about 25-26 cm in height with the diameter in bottom part of 14-15 cm and in the middle section about 24-25 cm. The whole surface of the vessel was decorated with vertical lines (grooves). Lots of crushed organics (grass) served as filler. The firing temperature couldn’t be higher than 350° Celsius scale (Derevianko, Medvedev, 1995).

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Most of the soils in the Amur Region (and in the Russian Far East in whole) are extremely acidic, so practically no early artifacts from bone, wood, shell or antler were preserved as well as any visible traces of human burials.

Osipovka culture is fairly well dated (Gasya, Khummi, Goncharka and other sites) and most of the dates belong to 13-10,000 BP period. It should be underlined that about 3/4 of carbon dates are older than 11,000 BP. For example, dates for the Gasya site fall within the range from 13 to 10.9 BP, dates from the Khummi site fall between 13,3 and 10,300 BP, while the age of Goncharka-I site looks younger – 12-10,000 BP (Medvedev, 2005b; Kuzmin, 2003, 2005;
Shevkomud, 1997).

**Malyshevo Culture:** Sites and camps of the Malyshevo culture were investigated by archaeologists from the lower reaches of Ussuri River and down along almost the whole valley of Amur River, mostly on the banks but some on islands (e.g. Amur Sanatorium site, Malyshevo village, Gasya site, Innokentievka village, Voznesenovka village, Suchu Island et al.) (Fig. 6-7).

Assemblage of stone tools and instruments is very wide – biface tools (dart and arrow points, knives), scrapers, perforators, burins, drills, blades and flakes with marginal retouch, adzes, axes, chisels, pestles, net weights, hammer stones etc.

Pottery making was one of the principle crafts in Malyshevo culture, which is confirmed by the great variety of vessels types and decoration motives. Most of the vessels were about 25-30 cm of height with 25 cm in diameter. Practically all the known artifacts were decorated; the exterior surface was covered with the ornaments (meander, straight lines, spirals etc.) almost completely.

The dwellings of Malyshevo culture may be divided into three groups: big constructions (150-180 sq. m), medium size (70-110 sq. m) and small ones (30-60 sq. m). Almost all of them are of pit house type – semi-subterranean (extended down into the ground 60-90 cm), rounded in plan, sometimes elongated-rounded, and rarely rectangular with rounded corners. Art objects of Malyshevo culture are represented by mobile forms (clay and stone figurines of anthropomorphic and zoomorphic nature) and decorative forms (ceramic balls with ornamentation used as stamps, ceramic combs, discoid and cylindrical earrings, and pendants etc.).

Before 2007 the earliest carbon data for Malyshevo culture was known from Sikachi-Al' an site - 6900±260 (MGU-410) and the period of its existence was suggested as 7-4,500 BP. Results of the analysis of one more sample from Sikachi-Al'an were published a year ago - 7950±80 (Le-1779). This data confirmed the point of view of V.E. Medvedev about the earlier origin of Malyshevo culture (as min as 8,000 BP) and its connection with the previous Osipovka culture. Other archaeologists are skeptical about a "culture" which was developing during 4-5,000 years without any visible changes.

**Kondon Culture:** Small number of sites of Kondon culture (for example, in comparison with Malyshevo culture) are concentrated along the tributaries of Amur River near Kondon village (e.g. Kondon-Pochta) and Voznesenovka village. The Malaya Gavan site (Lower Amur) also includes the Kondon component (Konopatski 1993) (Fig. 8).

People of this culture used a wide variety of stone for tools – siltstone, sandstone, flint, chalcedony, jasper, quartz, and argillite. Microprismatic cores and microblades are of special interest. This is the important technological peculiarity of Kondon culture. Bifacial and unifacial techniques were also used for production of points, arrow points, scrapers and knives. Chopping tools – adzes, axes – are numerous in size, configuration and raw material. Most of them are completely or partially ground.

The collection of ceramic vessels may be divided into three main types – so called pot-shaped, bucket-shaped and vase-shaped. Over 95% of the ceramics are decorated with the utilization of various stamps, combs, spatulas and other instruments. One of the diagnostic motives in ornamentation on Kondon ceramic is a combination of rhomboids and triangles in the upper part of the vessels. Russian archaeologists used the term "Amur twining" or "Amur net" because it is very similar to the example of fishing nets known from the ethnographical records in this territory.
Houses and dwellings are of the same long-term pit-house modification with the foundation sunk into the ground, oval or circular in form. Until recently, timing the age of Kondon culture was based on a single carbon data - 4520±25 (GIN-170) which was interpreted as 5-4,000 BP for its existence. New samples from the Malaya Gavan site were dated in Japan and indicated an older date, suggesting a division of Kondon culture into two periods: early (7-6,500) and late (6,5-6,200 BP) [Shevkomud et al., 2008, p.252].

Voznesenovka Culture: Sites of this culture are spread all over the Lower Amur basin. The most famous complexes are known at Malyshevo site, Gasya site, Bolon Lake, Voznesenovka Site, Khummi site, Kondon-Shkola site, Suchu Island, Malaya Gavan, and Takhta sites (Fig.9-11).

In lithic industry the biface technique dominates, blades and microblades are extremely rare. Multiple ground chopping tools (axes, adzes, chisels etc.) suggest the intensive woodworking. Some of them are very impressive in size, up to 20-22 cm. There are also many arrow and dart points, small knives and scrapers on flakes with marginal retouch and visible traces of utilization.

For this very rich pottery complex the division into two functional groups may be proposed: regular containers for daily use and vessels of ritual (ceremonial) meaning. First group (including such types as bucket-shaped and pot-shaped) served for every day cooking and dining, for long-term and short-term storage, for organic and non-organic materials. Some of the pots could be used as oil lamps. Leading elements of ornamentation in Voznesenovka culture are combination of spirals, meanders and zigzags.

Most of the vessels from second group were found in fragments and only in special contexts; very rare in dwellings, but mostly in connection with specific forms of landscape (springs, cliffs, high parts of river banks etc.) – e.g. Voznesenovka, Suchu, Gasya, and especially Takhta sites. All the vessels were made of high quality ceramic paste, without any organic additions. They are of large size (vases, baskets and spheroid forms up to half-meter and even more), but small cups, bowls, and pots are also known. Pottery is decorated with extremely nice compositions of anthropomorphic, zoomorphic and plant-like mythological personages, masks, bas-reliefs of snakes, birds and human ears. The majority of vessels are covered with bright red or brown paint. This group of pottery corresponds with the numerous examples of mobile art – human and animals’ figurines, ceramic stamps, pendants and beads from clay and stone [Okladnikov, 1981].

Dwelling constructions of Voznesenovka culture are usually rectangular in plan. Some of the houses were of round configuration. Traditionally their size is small or medium – 30-36 sq. m.

Some scholars argue about the possibility of connecting these sites with rock art (petroglyphs) known on several locations over Amur Region with the bearers of Voznesenovka culture pointing to the analogies of design on the cliffs and vessels (spirals, masks etc.).

There are several sets of dates for Voznesenovka culture with the earliest one from the dwelling’s floor on Suchu Island –54555±155 (SOAN-1658) and final ones not older than 3300 BP. This indicates that Voznesenovka culture on its early stage could co-exist with Kondon and even Malyshevo cultures. Most specialists, however, are reasonably skeptical about the early data for Voznesenovka culture and prefer to use 4, 9-3, 3 BP time frames.

Mariinskaya Culture: A new Neolithic culture was recently described by V.E. Medvedev on the basis of the excavation on Suchu Island (Lower Amur Region) in 1999 and 2002. According to preliminary information this culture is represented by microprismatic cores, tools on blades,
points and pottery with decoration limited by the narrow stripe on the upper part of the vessels (Fig. 12). Two carbon dates, 8565±65 (SOAN-4869) and 6180±60 (SOAN-4109), from the lower and upper levels allowed him to suggest the possible existence of this culture in frames of 9-7,000 BP (Medvedev 2005b).

Periodisation
So far the periodisation of Neolithic cultures in the Amur Region is not clear in all details [Derevianko, Petrin, 1995]. Most of the specialists agree with the division of the Neolithic into four stages: Initial, Early, Middle and Late. If Osipovka culture (13-10,000 BP) with the earliest pottery in the region really correlates with Initial stage, other cultures overlap each other and may represent several cultural vectors. Malyshevo (8-4,500 BP), Mariinskaya (9-7,000 BP) and Kondon (7-5,000 BP) cultures cover both early and Middle stages while Voznesenovka (4,9-3,300 BP) culture corresponds with Middle and Late stages [Medvedev, 2005b]. Two technological trajectories (with microprismatic cores and without them) divide cultures into two groups: Mariinskaya-Kondon from one side, and Osipovka-Malyshevo-Voznesenovka from another. Further archaeological research should give more information about the local or regional characters of mentioned cultures and on the correct understanding of their historical significance. For example, Osipovka and especially Voznesenovka may be recognized not as material cultures representing specific social formations, but as broad regional historical traditions involving a number of discrete social formations in time and space.

3. NEOLITHIC OF THE MARITIME REGION (PRIMORYE)

Most of the archaeologists used to connect the beginning of Neolithic in the Maritime Region with the first evidences of pottery-making. For today fragments of early pottery (earlier than 9,000 BP) were found only at two locations: Ustinovka-3 Site in the coastal zone (eastern part) and Chernigovka in the inland part. Ustinovka-3 Site is dated by C14 about 9,300 BP (charcoal from the cultural level) while for Chernigovka we have carbon dates from the organic temper in pottery shreds, about 10,770 BP. So far neither complex can be attributed to specific cultures and their chronological position in the Neolithic periodisation is unclear.

Rudnaya Culture: The culture got its name after the excavation of Rudnaya Pristan (former "Tetiukhe") site near the sea coast in eastern part of the Maritime Region in 1950s and 1980s. This site has a minimum of three cultural complexes. Rudnaya culture is represented by a distinctive complex found in 10 pit houses. Dwelling constructions were of square configuration in plan and of various sizes, from 10 to 100 sq. m, with fireplaces (in rectangular wooden frames, in shallow pits, with clay linings) in the central part of the floor, and with stepped entrances.

In stone industry both flake and facial retouching techniques were used along with bifacial grinding of working edges. The toolkit includes projectile points of different size (arrows and darts), knives, scrapers, saws, drills, and perforators. Blade and microblade techniques were episodic and rare.

The Rudnaya ceramic assemblage demonstrates a number of vessel types with decoration in the form of triangles and rhomboids similar to Kondon culture in the Lower Amur region. Most of the vessels are of conical shape with heights of 20-40 cm (Fig. 13). Similar complexes are known from Ustinovka-8 site, Luzanova Sopka-2 site, Sergeevka-1 site, Pereval site and Devil Gate site. The last site is unique because a local fire and partial destruction of the cave in ancient times created conditions for preservation of organic materials including decorative items (beads, pendants and bracelets from bone and shell), fragments of nets, parts of cords and mats. Several human skeletons were buried with the sediments and anthropological analysis
identifies them as representatives of Mogoloid population.

Faunal remains from the cave confirm the complex structure of the economy – hunting (bear, wolf, wild boar, red deer), fishing (fish and sea mammals bones), gathering (nuts, acorns) of Rudnaya culture bearers. The Rudnaya culture has several carbon dates: for example, 8380±60 (LE-1565A) for Pereval Site; 7690±80 (GIN-5983), 7550±60 (GIN-5631), 7390±100 (GIN-5984) for Rudnaya Pristan, and 6825±45 (SOAN-1212), 6710±105 (LE-4182) for Devil Gate. Most scholars prefer to date the Rudnaya culture in frames of 8 and 5,500 BP. Some specialists propose dividing this culture into two stages, Rudnaya stage (7,7-6,500 BP) and Sergeevka stage (6,5-6,000 BP), with a more narrow time frame for the whole [e.g. Batarshnev, 2008].

**Boisman Culture:** The first sites with materials belonging to this culture were found as early as the mid-1950s but were not interpreted as a special complex until the excavation of Boisman-1 and Boisman-2 sites in the coastal zone of the Maritime Region.

Boisman-1 Site includes the remains of two pit-dwellings of rectangular configurations and with a total floor area of about 20 sq. meters. The fireplace was located right in the middle. There also were three shell middens with numerous faunal remains, stone and bone tools, and fragments of broken clay vessels.

Boisman-2 Site is exceptional site for the whole territory of Russian Far East. It was initially recognized as a large shell mound close to the sea coast but in the process of excavation it became clear that the mound covers a rich cemetery, middens and part of a dwelling construction (Fig. 16). Thanks to the covering shell, the preservation of the burials is excellent and allows tracing of the burial ritual in all details. Archaeologist point on two possible concentrations of burials –so called Set 1 and 2. There are several types of burials –single, double, multiple. In terms of technique there are primary and secondary burials. Most of the skulls have traces of intentional deformation which may be interpreted as indicating the high status of individuals. Both were organized in round order with the principle burial in the center which may reflect the social organization of Boisman people (Popov, Chikisheva, Shapakova 1997).

Buried individuals were accompanied by very rich grave goods –bracelets from shells, bone and antler artifacts with ornamentation, ceramic vessels with decoration, hunting (points, knives) and fishing (harpoons) gear, different for males and females. Most of the shells from the mound belong to oysters (*Grassostrea gigas*), very tasty and rich in protein. Some of the specialists connect this with burial or post-burial ceremonies accompanied by feasts with special food consumption (Tabarev, 2007).

The beginning of Boisman culture is connected with pointed base pottery technologically and with the southern regions (perhaps the Korean Peninsula) geographically. The later Boisman pottery complex is represented by flat-based pots and vessels with rich ornamentation – rows of comb impressions, horizontal bands, geometric compositions of straight and curved lines, etc. To make tools from stone, people of the Boisman culture used schist, tuff, flint, jasper, and chalcedony and in rare cases they imported obsidian. Its source is known about 300 km from the Boisman-2 site. Most of the instruments were prepared on flakes, blade technology was almost unknown. They also used partial and facial grinding for points (up to 13-15 cm long), knives and adzes.

Bone and antler instruments include leister points, harpoon heads of toggling and non-toggling types, fish hooks, borers, awls and needles. Massive middens deposits demonstrate wide hunting and fishing activities of Boisman people –white shark, red skate, Pacific herring, redeye, red deer, elk etc.

Today sites with Boisman culture attribution are
known both in the coastal and inland parts of the Maritime Region: Khansi-1, Zarechie-1, Posiet-1, Luzanova Sopka etc.

According to a multiple set of dates from Boisman-2 Site and other locations, it's possible to date this culture between 7,5 - 4,500 BP and to separate its evolution into five stages.

**Zaisanovka Culture:** This culture is represented by dozens of sites located on the territories of southern and eastern Maritime Region, both along the coast and in the inland. For the first time it was described as a culture in mid 1950s on the base of excavation of Zaisanovka-1 site and specific ornamentation of the pottery, comb-incised or comb-stamped vertical zigzag (Fig. 17).

Most of the sites have remains or traces of permanent dwellings (pit-house type) and other constructions for storage or ritual activity. The size of houses is usually between 10 and 45 sq. meters, averaging 20-30 sq. m. Traditionally the fire-place is in the middle. Also traces of post-holes, assemblages of implements, and remains of stone-tool production were found on the floors in the dwellings.

Two leading techniques are dominating in the stone industry -retouched tools on flakes and tools with partial or total grinding of the surface. Such materials as flint, jasper, tuff, chert and very often, obsidian were used by Zaisanovka knappers. Toolkit is varied and reflects complex hunting-fishing-gathering activities -projectile points, scrapers, drills, knives, adzes, axes, chisels. In rare cases (bad conditions for faunal preservation were poor) they are accompanied by instruments from bone and antler -fishing hooks, points, needles, perforators etc.

Most of the pottery was baked by low-temperature firing (600-650 C) and may be divided into many groups and types according to size, configuration, ornamentation, and function [Krutykh, et.al. 2008]. There is good evidence of some local type which were widespread in southern, southwestern or western regions of Primorye.

The ceramic assemblage also includes spindle whorls of conical and biconical form along with some art items -anthropomorphic mask, small figurines, ceramic rings, pendants, amulets etc. Deer, wild boar, fox, tiger and bear were the objects of Zaisanovka hunters. Sea coast, rivers, ponds and lakes were explored intensively in frames of fishing and gathering activities.

First signs or food production are known in the very end of Zaisanovka culture. During the excavation of Krounovka-1 site grains of two species of millet (*Panicum miliaceum* and *Setaria italica*) were found. Most of the archaeologists connect this with the cultural influence from Chinese territory and underline slow and controversial character of this process (Sergusheva, Vostretsov, 2008). Unfortunately no real burials which belong to Zaisanovka culture were discovered and the anthropological type of these people is still unknown. Many carbon dates were done for sites and complexes of Zaisanovka culture. Its time-period is between 5370-3500 BP.

**Vetka Culture:** The complex of distinctive pottery and stone industry received definition as a separate culture just three years ago after the excavation of Vetka-2 site in the eastern part of the Maritime Region [Moreva, Batarshev, Popov, 2008]. A dwelling of the Bronze Age culture was built exactly upon the previous construction of the Neolithic period so the detailed configuration of early feature is not known. However the collection of pottery and stone artifacts concentrated in the lower level of the excavation unit is absolutely different from the upper ones and may be interpreted in frames as a separate Neolithic culture (Fig. 18).

The stone industry is represented by pressure and percussion flaking of sub-prismatic and conical cores of high quality tuff, jasper and chert. Most of the tools (arrow and dart points, scrapers, awls, drills, perforators, insets for composite
instruments etc.) were made on fine blades with marginal retouch from both sides. There is also one wood-working tool (asymmetrical adze) (Dorofeeva, Popov, 2008).

Pottery was made from clay with the specific additions including ground shells. Most of the vessels are covered with decoration. Ornamentations include triangles, trapezoids, waves, horizontal lines done by seals and combs. Similar complexes of stone tools on blades and pottery fragments are known at Ustinovka-8 Site and Phusun Site. Several carbon dates tentatively put the time of Vetka culture between 6 and 5,500 BP, but most of the specialists believe in more ancient age, starting as min as 7,000 BP. Additional dating and archaeological surveys in the region may give answers about this in a very short time.

Periodisation

So, on the base of current data the periodisation of the Neolithic in the Maritime Region looks like this:

- Initial Neolithic (by analogy with the Amur Region) – 13-10,000 BP - unknown;
- Early Neolithic (represented by dispersal finds in the coastal and inland zones) with early pottery (Chernigovka, Ustinovka-3 sites) – 10-8,000 BP;
- Middle Neolithic (Rudnaya, Boisman and Vetka cultures) – 8-5,000 BP;
- Late Neolithic (Zaisanovka culture) – 5-3,500 BP.

It’s very possible that in a short time there may be new finds which change this picture. For example, discoveries of initial pottery along with the typical Final Paleolithic toolkit (wedge-shaped microcores, transversal burins, big blade cores) will lead to the interpretation of Final Pleistocene – Early Holocene Neolithic culture. Also, the definition of Early Neolithic cultures has just begun. Even for Middle Neolithic, list of defined cultures is probably not complete. And finally, Late Neolithic Zaisanovka culture may be subdivided into chronological or territorial subcultures or even separate cultures. The challenge is really intriguing.

4. SAKHALIN ISLAND

Archaeological investigations on Sakhalin have long history but the antiquity and peculiarities of local cultures became really evident only during last 10-15 years. In spite of its island position Sakhalin never was separated from the cultural events and processes on the continent. Starting form the Upper Paleolithic its territory played very important transitional role in the region (e.g. initial peopling of Japanese Islands) (Vasilevsky, 1992; Vasilevsky, Shubina 2006).

Today the transitional period from the Paleolithic to Neolithic may be framed as 13-9,000 BP. It was connected with the changes in climate, bio-resources and technologies of coastal adaptation.

Early Neolithic is represented by the series of sites in the central and southern part of the island; Starodubskoe-3, Ado-Tymovo-2, Porechie-4 et al. with the dates between 9 and 7,200 BP. All the sites are described in the archaeological literature as settlements with multiple dwellings, great quality of organic and non-organic artifacts. The most ancient carbon date for pottery making is known for Puzi-2 site – 8780±135 (SOAN-3819). There is also one data for Starodubskoe-3 site – about 8,660 BP. The early stage of Imchin culture (8-5,500 BP) also may be included into this list. Technologically, Early Neolithic knappers used both blades and flakes, marginal and facial retouch in tool-making. Some very interesting cave sites are know in the eastern part of the island (Zigzag, Ostantsevaya, Medvezhikh Tragedi) where archaeological materials may be dated also as early as 8-6,000 BP.

Several cultures can be ascribed to the Middle and Late Neolithic – Soni culture (6,7 – 5,800 BP), two stages the Imchin culture (5,5 – 2,400 BP) and the Sedykhinskaya culture (4-3,000 BP). All of them demonstrate highly elaborated level of maritime and riverine adaptation with seasonal emphases on salmon fishing, sea mam-
mals hunting, land mammals hunting and gathering (Fig. 19-20).

During the entire period, the Neolithic people from Sakhalin Island were in intensive contact with the culture of Lower Amur in the North and with Jomon cultures of the Japanese Archipelago to the south which may be confirmed by similar elements in pottery design, art, construction of dwellings, and by import of obsidian from the sources on Hokkaido.

CONCLUSIONS

1. Neolithic period in the Russian Far East (Middle and Lower Amur Regions, Maritime Region, Sakhalin) started about 13,000 BP and its beginning is marked by the appearance of the primitive pottery, one of the oldest in the global scale (Kuzmin, 2001; Kuzmin, Keally, 2001; Zhuschikhovskaya, 1997).

2. Neolithisation in the Russian Far East had its important peculiarities and may be described as a specific model. This model includes the processes of technological, social and ritual development of the society during more than 10,000 years - 13 -3,000 PB without transition to agriculture and production of food.

3. The Neolithic economy in the Russian Far East was of complex character (hunting-fishing-gathering) with very important seasonal accent on intensive fishing, probably salmon fishing. Multiple evidences allow interpreting life style of the population as semi-sedentary and sedentary. Many ethnographical observation done on the local aboriginals in late XIX – early XX centuries confirm this -most of the tribes had the system of two types of settlements- basic village with warm dwellings and seasonal ones with light shelters.

4. All the cultures were located in the basins of rivers, near the lake shores or/and close to the sea cost which means that consumption of aquatic resources and maritime adaptations were one of the typical traits of the Neolithic (Vasilievsky, 1998).

5. All the cultures developed effective and sophisticated set of technologies (pottery, stone, bone, wood, shells, fiber etc.) and demonstrated permanent economical and cultural contacts with neighboring territories (Upper Amur Region, modern territories of China, Yakutia, Korea, Japan), (Tabarev, 2001, 2003).

6. Elaborated art symbolism, evidences of rituals and ceremonies, prestige technologies, raw materials and rich burials make it possible to reconstruct the social model of Far Eastern Neolithic as a so called “transegalitarian society” (Hayden, 2001 ; Owens, Hayden, 1997).

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Fig. 1: Russian Far East. Geographical regions.

Fig. 2: Russian Far East. Location of cultures mentioned in the text: 1- Gromatukha; 2- Novopetrovka; 3- Osipovka; 4- Martinskaya; 5- Malyshevo, Kondon, Voznesenovka; 6- Rudnaya; 7- Vetka; 8- Boisman; 9- Zaisanovka; 10- Neolithic cultures of Sakhalin Island.

Fig. 3: Earliest pottery in the Russian Far East: 1- Gromatukha Culture; 2- Novopetrovka Culture [by Tabarev, 2006, 16]; 3- Osipovka Culture (by Derevianko, Medvedev, 2006, 130).
Fig. 4: Novopetrovka Culture: 1- Blade cores; 2- Tools on blades (Tabarev 2005, 113-115).

Fig. 5: Novopetrovka Culture: 1- Blade cores; 2- Tools on blades; 3- Plan of the dwelling (by Derevianko, 1970, 36, 43, 81).
Fig. 6: Malyshevo Culture. 1- Stone tools; 2- Clay vessels. (by Derevianko, Medvedev, 2006, 134-135).

Fig. 7: Malyshevo Culture. 1- Pottery with decoration and clay artifacts; 2- Types of dwellings (by Derevianko, Medvedev, 2006, 136-137).
Fig. 9: Voznesenovka Culture. 1- Stone artifacts; 2- Clay vessels (by Derevianko, Medvedev, 2006, 144-145).

Fig. 8: Kondon Culture. 1- Stone tools; 2- Pottery types (by Derevianko, Medvedev, 2006, 140-141).
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Fig. 10: Voznesenvka Culture.
1. Big dwelling on Suchu Island (Tabarev 2006, 17); 2. Plans of dwellings on Suchu Island (by Derevianko, Medvedev, 2006, 145).

Fig. 11: Voznesenvka Culture.
Examples of art: 1. Clay figurines, stone amulet and petroglyphs (by Derevianko, Medvedev, 2006, 147); 2. Fragment of painted vessel (Tabarev 2006a, 49); 3. Clay female figurine (Tabarev 2006a, 52); 4. Image on the vessel (by Medvedev, 2005, 44).
Fig. 12: Marinskaya Culture: 1- Clay vessel; 2, 3- Stone blades and tools (Tabarev 2006a, 26, 29).

Fig. 13: Rudnaya Culture: 1- Pottery decoration (so called "Amur net"); 2- Stone tools (Tabarev 2006a, 90-91) 3- Plan of the dwelling (by Batarshhev, 2008, 91).
Fig. 14: Boisman Culture: 1-3 - Types of pottery.

Fig. 15: Boisman Culture: 1- Double burial at Boisman-2 Site; 2- Retouched and polished stone artifacts from the burials (by Popov, Chikisheva, Stpakova, 1997,17).
Fig. 16: Boisman Culture. Boisman-2 Burial Site. 1- Decorative items from antler, bone, and jadeite; 2- Bone harpoons.

Fig. 17: Zaisanovka Culture: 1- Clay vessel (Tabarev 2006a, 97) 2- Types of pottery (by Krutykh et al., 2008, 135); 3- Obsidian tools from Gladkaya Site (by Tabarev, 2004, 3).
Fig. 18: Vetka Culture: 1- Stone tools on blades (by Dorofeeva, Popov, 2008, 82); 2- Types of pottery (by Moreva, Batarsev, Popov, 2008, 141-151).

Fig. 19: Middle Neolithic of Sakhalin Island: 1- Pottery containers; 2- Stone tools (by Vasilievsky, Shubina, 2006, 156-157).
Fig. 20: Sakhalin Island Imchin Culture: 1- Pit dwellings at Imchin-12 Site; 2- Stone tools (by Vasilievsky, Shubina, 2006, 158, 161).