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Neolithic Culture in Amurland: The Formation Process of a Prehistoric Complex Hunter-Gatherers Society

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Abstract: The recent increase in excavations and new data show that the emerging aspects of a Neolithic culture and its formation process are not uniform. The true image of Neolithic culture cannot be projected from a conventional simplistic model with a transition from a hunting and gathering economy / mobile lifestyle to an agricultural and domestic economy / sedentary lifestyle. More important, the diversity and complexity of hunting, gathering and fishing economic societies have been discussed and their significance in the human history has been pointed out. In this paper, I chose as the subject Amurland, one of the northern Pacific coastal areas where complex hunter-gatherers developed, and which had the earliest pottery in the world. Its realistic process of Neolithization was examined.

Keywords: Amurland; Neolithization; Complex Hunter-Gatherers Society; Oshipovka culture; the earliest pottery.

1. Introduction

As the Late Glacial period ended, the Paleolithic culture, which began approximately 2.5 million years ago, also came to a close. After the Paleolithic culture, a new human culture that adapted to new environmental conditions bloomed in various parts of the world. This phenomenon was the emergence of Neolithic culture.

However, the recent increase in excavations and new data show that the emerging aspects of a Neolithic culture and its formation process are not uniform; rather they are diverse in each case in different areas of the world. The true image of Neolithic culture cannot be projected from a conventional simplistic model with a transition from a hunting and gathering economy / mobile lifestyle to an agricultural and domestic economy / sedentary lifestyle. More important, the diversity and complexity of hunting, gathering and fishing economic societies have been discussed and their significance in the human history has been pointed out (Woodburn 1980; Arnold 1996). How do we explain these new aspects in human history? And how do we evaluate them? Those are the questions that are now thrust upon archaeologists.

In this paper, I chose as the subject Amurland, one of the northern Pacific coastal areas where complex hunter-gatherers developed, and which had the earliest pottery in the world. Its realistic process of Neolithization was examined.

2. Characteristics of Amurland and its Neolithic Culture

The northern Pacific coastal area that stretches from East Asia, including Far East Russia, to North Asia is known as one of the areas of the world where the earliest pottery has been discovered.

The Amur River (Heilongjiang “Black Dragon” in Chinese) differs in character from the major rivers that run in northern Eurasia. Most major rivers in northern Eurasia originate from the southern mountain ranges, and continue to run northwards eventually into the Arctic Ocean. For this reason, the natural environment in those basins undergoes a transition from upstream the steppe to the taiga, the forest tundra, the tundra, and the polar region in the north-south direction. The Amur, originating in the depths of the continent to its west and running eastward to pour into the Sea of Okhotsk, has nurtured in its basin evergreen coniferous forests and mixed coniferous / broadleaf forests (Fig. 1). In this sense, those geographical features have given the Amur the historical role of a traffic route connecting the northern Asian inland and the northern Pacific coastal area and islands; the river has been an artery to carry people, materials, and information.

The presence of independent cultural traditions in the Amur basin that differ from those in the other Siberian areas has long been noted. After the mid-1930s, archaeological research in this area began in earnest. Okladnikov, who took the leadership in research, pointed out from the characteristics in pottery design patterns and always culture the existence of a Neolithic culture that was distinctive in the Far Eastern region and was different from the Neolithic culture in the Lake Baikal-East Siberian region. Okladnikov (1941) then characterized the “Amur Neolithic Culture” as a substratum of ethnogenesis while projecting the ethnic-formation model of fishermen in Far East Russia (refer to Fig. 2).

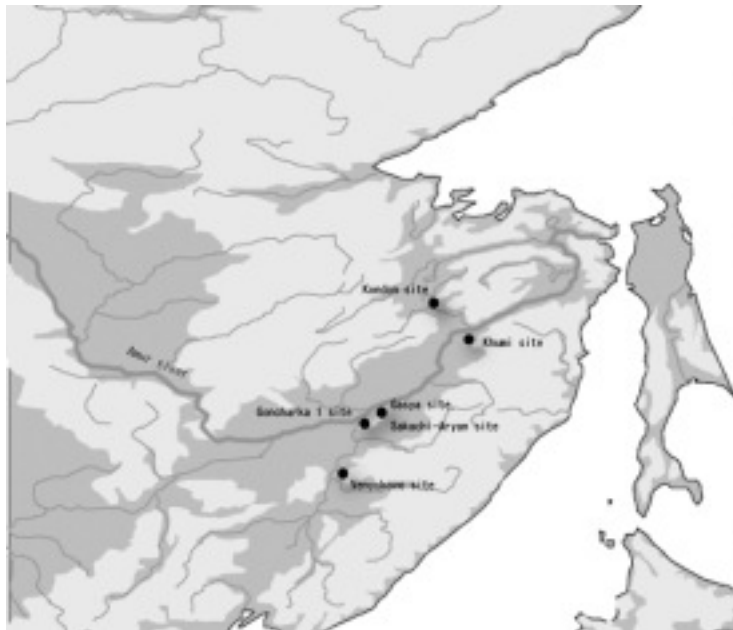


Fig. 1 Geographical distribution of Oshipovka culture

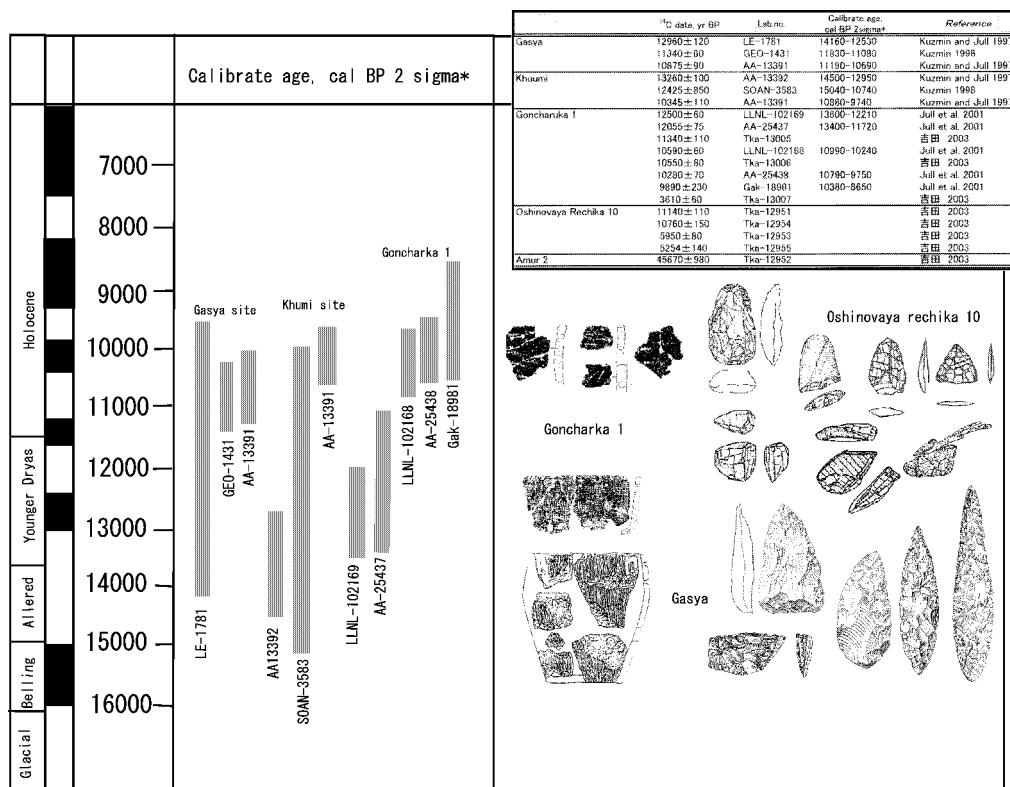


Fig. 2 Chronology of the Oshipovka culture

Later, Testert (1982) also characterized it by evaluating the Amur Basin as an area that has formed an independent society and culture that is unique in the human history. Testert, focusing on the “society deemed an exception” where the so-called Neolithic Revolution did not apply, picked the Amur River basin along with the northwestern coastal area in North America as typical examples (Testert, A. 1982). Testert saw a hunter-gatherer society with food storage and sedentism in Neolithic culture in the Lower Amur. This point of view was based on (1) the active use of aquatic resources in the major river basins, (2) advances in the storage strategy of those resources, and (3) the consequent emergence of settled habitation.

The former Soviets open-door policy since the mid-1980s and the collapse of the Soviet Union in 1991 greatly influenced the research conditions in Amurland. Particularly worthy to note is that a large number of international joint research projects have been conducted. Of those projects, much attention has been given to the findings in the joint research of the Suchu Island by the Institute of Archaeology and Ethnography of the Siberian Division of the Russian Academy of Sciences (IAESBRAS), and the National Research Institute of Cultural Properties in South Korea (Деревянко и др. 2002) and another of the Novopetrovsk III site and Gromatukha site by the IAESBRAS and the Jeju Island Institute of Cultural Properties in South Korea (Деревянко и др. 2003, 2004). Meanwhile, the Khabarovsk Provincial Museum (the current State Museum of the Far East) conducted a series of joint research projects with Japanese research institutes to further investigate the period of emergence of pottery and the Late Neolithic period

(Kato, Yamada and Shevkomud 1998; Kato and Ishii 1998; Shevkomud and Naganuma 2003; Fukuda and Shevkomud 2005).

Those new viewpoints and challenges that accompany the progress in recent research projects indicate the prehistoric cultural image of a new Amur basin.

- i) Research on the formation process of Neolithic culture has advanced. As a result, it has become clear that the dates of pottery emergence in the relevant sites were extremely early. Also, since the date of pottery emergence slipped back in time, it has been revealed that the dates of the Upper Paleolithic and the early Neolithic overlap in a complex fashion.
- ii) More data on the hitherto-unknown first half of Neolithic culture has been accumulated, thus, researchers were able to propose new cultural stages and dates.
- iii) Radiocarbon dating has been accumulated and systematized further and further. A comprehensive chronological arrangement of Neolithic culture was conducted.
- iv) Regional characteristics and cultural diversity in the Late Neolithic were further reevaluated, and the discussion on the correlativity with the succeeding Early Iron Age made further progress.

In the following, I will examine the new trends in the Neolithic Amurland culture in line with periodic changes.

3. Slipping Back the Dates of Pottery Emergence

The time in which pottery would emerge in this area in the form of earthen vessels was the Younger Dryas period (approximately *c.*12000 to 11000 BP [12900 cal BC-11500 cal BC]), a regressive shift of temporary cold in a climatic change towards the global warming of the Final Glacial period. One unique point of the pottery-emerging process in this area is that pottery was not linked to social changes such as agriculture and sedentism, but emerged from the Paleolithic cultural tradition.

Since there have been a small number of ruin sites, the transitional process from Upper Paleolithic culture to Neolithic culture in Amurland has not necessarily been clear. Based on newly accumulated recent data, the measured date of the end of the Upper Paleolithic in the Amur basin ranged from *c.*14200±200 yr BP (SOAN-3287) to *c.*10520±95 yr BP (SOAN-3590) (calibrated date: 17610 cal BC to 11960 cal BC) (Kuzmin, Shevkomud 2003). At the Gornyj Mys 4 site in the Lower Amur, the measured date ranged from *c.*12925±65 yr BP (AA-36277) to *c.*10340±50 yr BP. (AA-36280) (calibrated date: 16065 cal BC to 11780 cal BC) (ШЕВКОМУД и КАТО 2002). Based on those dates obtained, the Upper Paleolithic stage with mainly microblade tools ended approximately *c.*12000 BP in the Amur basin.

Until recently, Neolithization in the Amur basin was understood as an Osipovka culture that had employed mainly spearhead-shaped bifacial points complex, along with pottery (Окладников, Медведев 1983). In recent years, however, research cases of new ruins and dated materials on Osipovka culture have increased (Shevkomud 1997; Naganuma 2003). The first point to note is the composition of Osipovka culture. Conventionally, one of the stone tool indicators was that

they were accompanied by spearhead-shaped bifacial points of different sizes and forms. However, recently accumulated materials show that wedge-shaped microcores on bifaces and narrow-faced microcores on small oval pebbles, which suggest relations to the microblade techniques of Upper Paleolithic culture, are often found at various sites. Also, willow-leaf-shaped and flat-triangular bifacial arrowheads were reported at several sites (Kato and Akai 2003; Naganuma, Shevkomud, et al. 2005). Those data reflect that Osipovka culture was far more diverse than had initially been believed and that the duration of that culture needed to be reexamined.

Similarly, a new examination is needed for excavated pottery as well. At Gasya, the site that had drawn attention initially, the presence of flat-bottomed vessels with parallel-line patterns was noted. While research has progressed at the Goncharka 1 site, the Novotroytskoye 3 site, and Osinovaya Rechka 10 site in recent years, it was clarified that horizontal internal scratch patterns, circular hole impressions, and zigzag comb-like instrument impression patterns were included at those sites. Thus, the diversity of pottery decorations in this culture as well as the necessity of chronological subdividing have been pointed out.

In addition, Shevkomud (1998) proposed an idea to separate Early and Late Osipovka cultures based on the stratigraphical data from excavation at the Goncharka 1 site. As seen previously, diversity has been clarified in stone tool kits and potteries; the results of radiocarbon dating (below-¹⁴C dating) have confirmed this as well. The ¹⁴C dating obtained from the Gasya site, which had drawn much attention initially for the excavation of pottery, showed a range from $c.12960 \pm 120$ yr BP (Le-1781) to $c.10875 \pm 90$ yr BP (AA13393). Converted to the calibrated date, it showed a range from 16110 cal BC to 12640 cal BC. A similar trend has been observed at other sites of Osipovka culture as well. The ¹⁴C dating from the Khummi site showed a range from $c.13260 \pm 100$ yr BP (AA13392) to $c.10375 \pm 110$ yr BP (AA13391). At the Goncharka 1 site, two dating peaks were confirmed from $c.12500 \pm 60$ yr BP (LLNL-102169) to $c.12055 \pm 75$ yr BP (AA-25437), and from $c.10590 \pm 60$ yr BP (LLNL-102168) to $c.10280 \pm 70$ yr BP (AA-25438). Those ¹⁴C dating results were also applicable to results of the stratigraphical excavation at the Goncharka 1 site (Kuzmin and Shevkomud 2003).

Newly accumulated data suggests that a culture accompanying pottery emerged in Amurland at least approximately $c.13000$ BP. The important point is that we cannot find circumstances under which a major change had occurred in the process of pottery emergence between this culture and the previous culture. This can also be seen from the condition of sites that both accompanied and did not accompany pottery coexisting in the same area. Thus, the use of pottery undoubtedly began in a group equipped with microblade techniques, which had belonged to the Upper Paleolithic culture. This issue questions the efficacy of defining Neolithization solely by the presence of pottery. In other words, is the presence of pottery effective enough to be in line with indicators that show an epoch of cultural differences as well as with actual conditions?

Worthy to recall is that the earliest pottery had accompanied a group of microblade techniques in the Japanese Archipelago as well. This group, which had spread from North Asia to the northern Pacific coastal area, had extremely uniform features, indicating the cultural extent of the same system. Therefore, it is necessary to examine the background to the event in which pottery emerged in various parts of the world in about the same period. This phenomenon, that

accumulated in recent times, the idea of organizing the materials as the Voznesenskoe culture and then subdividing them, including the regional characteristics, have been presented (Kato 1998; МЫЛЬНИКОВА 1999; ШЕВКОМУД 1998, 2003). Consequently, the Voznesenskoe complex was compiled by limiting their patterns to spiral, meandering and vertical comb-impressed zigzags, thus presenting, with regional characteristics in mind, the proposal of a three-stage transition from the Gorin stage to the Orel and Udyl' stage and on to the Mala-Gavan' stage (ШЕВКОМУД 1998, 2005).

This ongoing reorganization of cultural transition from the Late Neolithic to the Final Neolithic made it possible to subdivide the hitherto unclarified excavated pottery from the Kondon site. Thus, new perspectives for the Kondon culture have been presented. Shevkomud (2003) reexamined excavated pottery from house dwelling pit No. 9 and No. 10 at the Kondon post office site and, based on the analysis on Amur net pattern pottery, subdivided it into the Early Kondon culture and Late Kondon culture. Furthermore, his characterization differed greatly from the previous sequence; in his reevaluation he concluded that the Kondon culture had preceded the Mal'shevo culture (ШЕВКОМУД 2004). This view will be deemed appropriate if the stone tool kits from the dwelling pit No. 9 and No. 10 at the Kondon post office site are reevaluated as belonging to the arrowhead on the blade complex. There has already been the possibility of dating back the Amur net pattern pottery (Kato 1989; Kimura 1992), the view supporting it being based on recent data of the Russian "Primorie" region (Ito 2005).

There was also an important discovery to evaluate the Mal'shevo culture as a stage preceding the Kondon culture as Shevkomud had contended. This was the Malinsk culture, a new Neolithic culture, which was confirmed on Suchu Island (МЕДВЕДЕВ 1999). The Malinsk culture was detected from the under the floor of the dwelling pit of Voznesenskoe culture. Accompanying the materials excavated from the sandy layer under the floor of dwelling pit were data on the arrowheads in the blade complex, such as blade, microblades, arrowheads on the blade, scrapers, polished and chipped stone axes, and stone weights. Also found were flat-bottom pottery with organic temper in the ceramic paste. The decoration of pottery was quite simple: comb-impressed patterns decorated the lip, below the lip edge and the upper half of the body. The ^{14}C dating of $c.8585 \pm 65$ yr BP (SOAN-4869) and $c.6180 \pm 70$ yr BP (SOAN-4109) were obtained, indicating that the Malinsk culture had lasted from approximately $c.9000$ to 7000 BP (ДЕРЕВЯНКО А.П. и др. 2002).

As for other cultures that accompanied blade technique and arrowhead on the blade, some materials have been presented to discuss the cultural spread from areas other than the Amur basin. At the Malaya Gavan site in the Amur basin, pottery with cord-marked patterns and blade technique were found. From this combination, one can point out a link to the further northern Bel'kachi culture, thus indicating the necessity to take into consideration some cultural influence from the Yakutsk area in the Early Neolithic (Konopatski, A. K. 1993).

Recent accumulation of materials show the possibility that, in the transition of the Amur Neolithic culture, the Osipovka culture was followed by the cultural stages of Malinsk, Kondon, and Mal'shevo, which were accompanied the arrowheads on the blade and blade technique and which also might have had a certain existing period. By establishing the duration accompanying the arrowheads on the blade as one cultural stage, it became easier to understand the chronology

of the Early Neolithic in the Amur basin. Fig. 4 shows the comprehensive understanding and accumulation of new and recent materials.

5. What the Neolithic Culture of Amurland Indicates

In this land where there is no indicator called the beginning of agriculture, Neolithization has been defined with the emergence of pottery as its indicator. As mentioned in previous sections, pottery appeared approximately c.13000 BP (16500 cal BC-14500 cal BC) in Amurland. However, since the earliest pottery was found among the groups equipped with microblade coplex that belong to the Upper Paleolithic culture, one cannot clearly see a preceding cultural transition there. As for the areas mentioned in this paper, one can at least wonder if the existence of pottery was an indicator to show an epoch of a cultural change, and question that efficacy.

Now then, how should we comprehend the cultural transition in Amurland? What aspects of human history should it manifest? First, the background to pottery emergence has been discussed with various theories. What led to the emergence of pottery: (1) the expansion of the forest environment and the resulting use of nuts, and (2) the shift from a mobile lifestyle dependent on forest and grassland resources to a more settled way of life dependent on the major river aquatic resources. However, judging from the archaeological materials examined thus far, it is difficult to find a major change in lifestyles and residential conditions. It is difficult to understand that the emergence of a sedentism derived from the emergence of pottery. It has been pointed out that the knowledge and technology to bake clay was shared among Upper Paleolithic groups in Siberia. In fact, the emergence of pottery as earthen vessels and the shift in lifestyles and subsisting activity are probably not interlinked. Then, what was the meaning of the emergence of pottery?

Here, rather than regarding that meaning as a result of adaptive behavior from an ecological standpoint, let us examine it from the aspects of social behavior and representation of a human

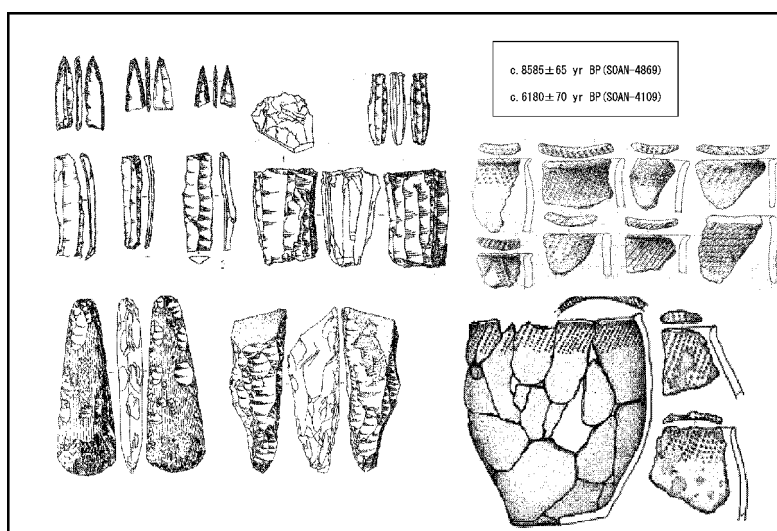


Fig. 4 Cultural complex of Malinsk culture

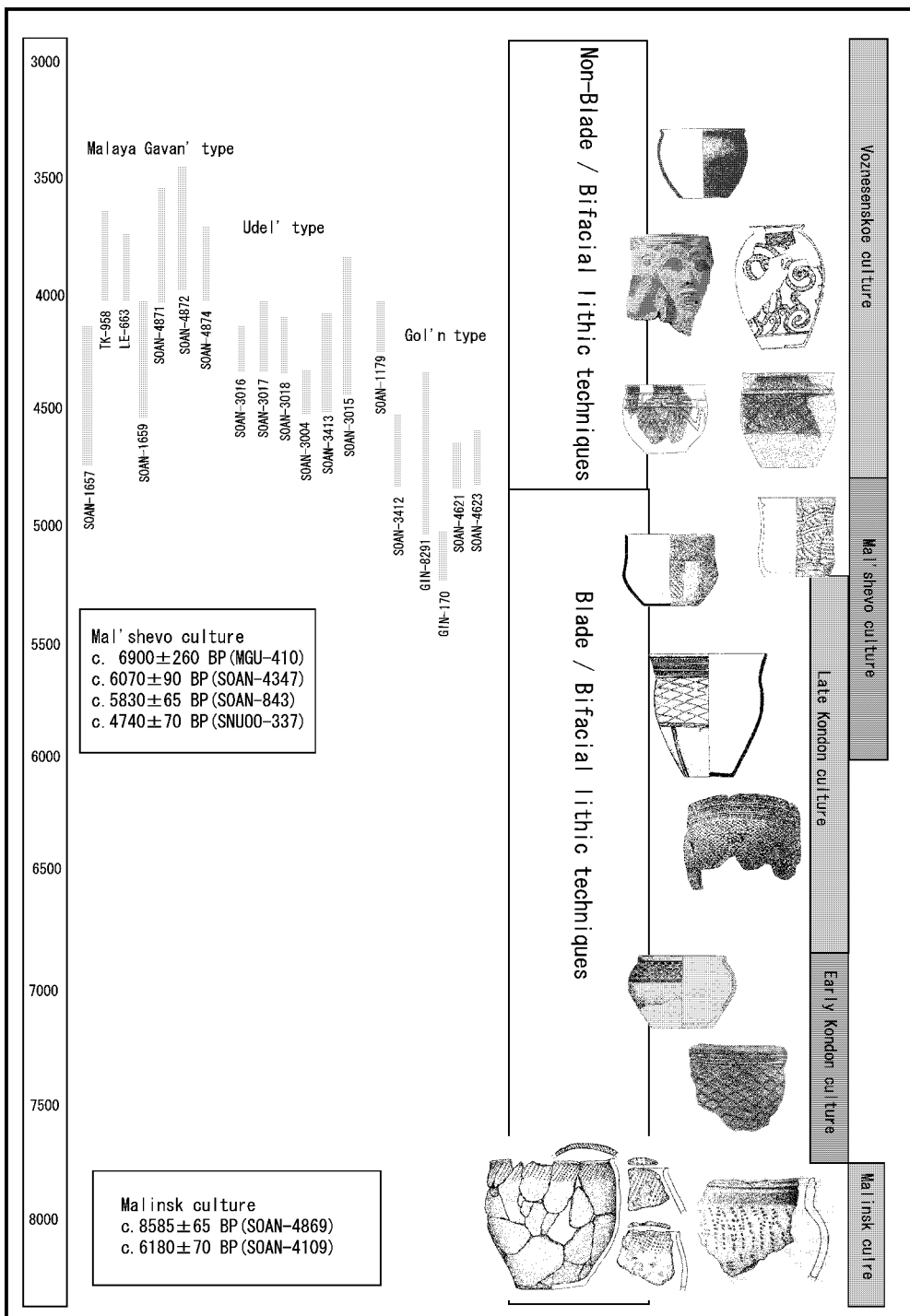


Fig. 5 Chronology of Neolithic culture in the Amurland

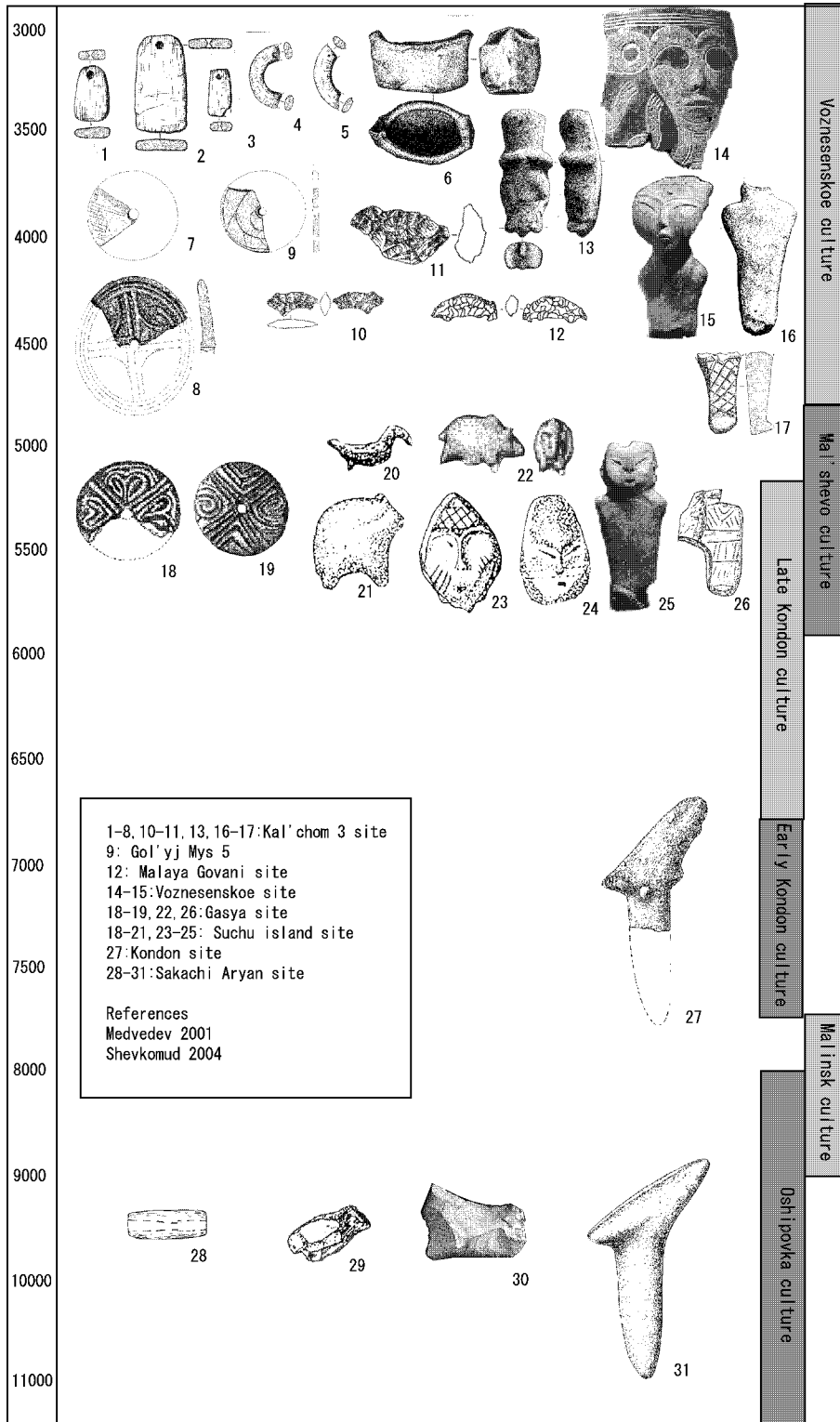


Fig. 6 Chronology of Neolithic portable art in the Amurland

group. Pottery at the time of emergence has a diverse composition of patterns. The people, who possessed microblade complex that had spread to various northeastern Asian regions with the coldest period of the Final Glacier as its peak, were highly mobile hunter-gatherers. Let us suppose that those groups in scattered locations began to utilize pottery with ornaments as a symbol of representing individuals and their group, as well as a means of communication with other peoples under ever-changing climactic conditions and environmental changes. This does not mean, of course, that their functions as pottery totally denied.

In this projection of energy into symbols and icons, it is possible to see the essence of Neolithic culture. After the advent of pottery, this area saw no change in lifestyle and subsisting activity, such as a sedentism and agriculture. Yet, one can see a trend of having the subjects around diverse groups of people designed. From early days, those subjects appeared as the symbolic stone products found at the Gasya site and the Goncharka 1 site, animal designs, or the rock drawings (petroglyphs) at the Sikachi-Allan site. Approximately *c.*4000 BP, those representations would develop into female clay figures, human-faced pottery, animal designs, stone clubs, and decorated earthen balls excavated at the Kondon and Voznesenskoe sites. And eventually they would lead to the construction of sedentary residences and large-scale dwelling pits of a 10m-diameter or greater size. One can interpret that the emergence and use of symbolic designs led to the creation of their managing organization and place, helping bloom an “essential Neolithic culture.” In other words, the symbols and information that had been projected on the subjects of high plasticity such as pottery led to the development of design, which had further advanced the meaning of the initial representation of pottery, as well as the incidental implementation of ritualistic behavior and the creation of a society.

The important point is that in the Neolithic culture in Amurland, though its main subsistence had been a nonagricultural hunting-gathering economy, through its portable art and diverse rock paintings, we can deduce the existence of a complex social organization. The formation process of Amurland Neolithic culture is important archaeological data in defining the complex hunter-gatherers (CHG) which have drawn much attention in archaeology since the 1980s (Arnold 1996). ① It is not that merely a stage on the path to agriculture or state-level societies; ② It is not resulting solely from contact with agricultural peoples; ③ Complexity is not necessarily derived from settled habitation (Arnold 1996). The emergence of complexity in a hunter-gatherer society such as the one in Amurland demands a new evaluation on the story of social complexity apart from the shift towards an agrarian society, the diversity of a hunter-gatherer society and its distinct historic qualities.

Those phenomena, while maintaining their diversity, have been occurring in various parts of the world including northern Asia and the northern Pacific coastal area. A similar cultural transition is related to both establishment and development of the Jomon culture in the Japanese Archipelago. That view is indispensable in relativizing with the broader area of the Jomon culture. Thus, rather than making the complex process of forming a hunter-gatherer society a regional case, it is necessary to evaluate it in terms of human history through an accumulation of cases and analyses.

The evaluation of cultural diversity is an important viewpoint in prehistoric society as well. For this reason, it is necessary to reevaluate the “society that has been deemed an exception.”

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