

FORMATION OF NOMAD SOCIETIES IN ANCIENT EURASIA — RESEARCH BY COMPARATIVE ARCHAEOLOGY —

ユーラシア地域における古代遊牧社会形成の比較考古学

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Introduction

1. Purpose of the research

The archaeological excavations which the members of the present research participated in north-east Syria in 2005 to 2012 focused on the Bronze Age sites in the *Bishri* Mountains along the Middle Euphrates.

The sites which were excavated consisted of three kinds under different geomorphological conditions: 1) settlement sites along the River Euphrates, 2) grave-complexes near the settlement sites and 3) cairn graves on the *Bishri* Plateau desert.

This series excavations that were parallelly undertaken aimed to grasp the real picture of the development of the nomadic societies in the region; through examining the change of the number of settlements and graves, the change of sites scale and the situation of sites dispersion.

On the bases of archaeological evidences that were yielded by the parallel excavations, we could present a hypothetical view that the *Amorite* societies in the *Bishri* region occasionally changed their subsistence ways by means of intra-society separation into agriculturists and animal herders and their re-union in accordance to the changes of the natural and/or social environments.

Were the developmental processes of the nomadic societies the same between West Asia, where the animal domestication first appeared, and Central Asia where the domestication seems to have secondarily reached as the marginal zones from West Asia?

In Central Asia, not many evidence-rich field research has been carried out, only hypothetical models having been proposed.

One of the two major hypotheses advocates that the nomadic groups of the northern shores of the Black Sea migrated to Central Asia in the 4th to the 2nd Millennia B. C.¹⁾

The another hypothesis advocates that the hunter-gatherers or agriculturists of Central Asia in the 4th to the 2nd Millennia B. C. themselves changed their subsistence means to nomadism²⁾.

Needless to say, these two hypotheses have to be re-examined by further research.

In order to answer the questions above, we planned the present research which aims to comparatively examine the developmental processes of the nomad societies of West Asia and Central Asia, and further of East Asia, taking into a consideration the geographical setting of Kyrgyzstan which borders West Asia in its western part and China in the south-western part by the Tian Shan Mountains.

2. Background of the research

Up to date, the nomadic societies have been considered as the opponents against the urban societies, pulling triggers to destroy them.

It is well known, for example, that the third dynasty of Ur of the 2nd Millennium

B. C. of southern Mesopotamia was destroyed by the Semitic nomads, and the nomadic Huns of East-Central Asia and the Qin/Han dynasties of China were struggling each other around the beginning of the Christian era.

The views to oppose the nomadic societies against the urban societies, however, were created by the latter who invented inscribed letters.

As just mentioned, the members of the present research undertook series of archaeological excavations and field research in 2005 to 2012 in the regions around the *Bishri* Mountains near the city of Raqqa, north-east Syria. These series of research were carried out to know how the “*Amorite* nomadic societies” of the regions were leading their lives in the period around 2000 B. C. (*Grant-in-Aid for Scientific Research on Priority Area (2005-2009) from the MEXT, Japan* “Formation of Tribal Communities in the Bishri Mountains, Middle Euphrates” (General Director: Katsuhiko Ohnuma) and *Grant-in-Aid for Scientific Research (2010-2012) from the Promotion and Mutual Aid Corporation for Private Schools of Japan* “Developments of Nomadic Societies in the Middle Euphrates, Syria” (Director: Katsuhiko Ohnuma).

After the series of excavations and research, several fruitful results were produced, which strongly suggested that the “*Amorite*” people in the *Bishri* Mountains around 2000 B. C. were 1) practicing agriculture and sheep herding at the same time, 2) flexible enough to separate their societies into agriculturists, nomads and citizens and to re-unite them in accordance to external causes such as the changes of climate, and 3) commerce mediators at trading posts along rivers³⁾.

These results not only demonstrated the variations of the founders of the city-based civilizations of West Asia, but also showed that the research of the developments of nomadic societies would be also valid to clarify the developments of human societies on the whole.

The results yielded by the research in Syria, therefore, led us to plan a project in the Eurasian arid region, wider than West Asia and including both West Asia and Central Asia, and to select Kyrgyzstan as the region for a comparative research, taking advantage of our thus-far accumulated field-work experiences in West Asia (see the publication⁴⁾ edited by Ohnuma for the results of the preliminary research) (Fig. 1).

3. Significance of the research

The present research is significant as described below.

First of all, it is a comparative research based on archaeology, using the original data which we have so far accumulated in West Asia. Nowadays, regions for archaeological research are highly specialized and too much sub-divided, but the present research covers the large part of Eurasia from West Asia to Central Asia. Such an occasion to cover several regions for a common research theme is very rare, featuring the present research to be highly significant.

Secondly, the present research has a potential to contribute not only to the archaeology of West Asia and Central Asia, but also to the archaeology of East Asia, including the clarification of the ancient Japanese history. Most probably, the nomad societies of Central Asia which had emerged until the beginning of the second Millennium B. C. greatly influenced upon the formation of the Early Dynasties of China, which also had emerged until that time. In concrete terms, all of the wheat, bronze objects and horse-chariots of the Chinese Early dynastic period can be archaeologically traced as the inflows from West Asia and/or Central Asia.

And thirdly, the present research which traces cultural flows between West Asia and East Asia in the past, taking into a consideration the formation of the nomad

societies of West and Central Asia, will contribute to the expression of future images for Japan to coexist and cooperate in the 21st century Asia. In other words, we can view that the ancient Japanese society, which undoubtedly was established by the strong influences from the Chinese civilization, accepted several cultural elements from West Asia and Central Asia by way of the Silk Road. How were the bases of the political, economic and cultural relations between Japan and Asian countries formed in West Asia and Central Asia? This question may be answered by the present research, and academic suggestions for the future continuation of the present state of relations with Asian countries may be presented.



Fig.1 Map: Arid regions of Eurasia

Plans of the research activities

The northern part of the Tian Shan Mountains in the eastern part of Kyrgyz, where the present research is undertaken, is the natural barrier bordering China, and most probably was the terminal point of the inflow of the animal domestication from West Asia.

The research in this region, therefore, is ideal for a comparative research of the developmental processes of the animal domestication in its original region and the marginal regions which received it.

At the same time, the animal domestication of East Asia is within the scope of this comparative research, for Kyrgyz is located at the contact point of West/Central Asia and East Asia.

In these views, the members of the present research, Ohnuma (Director of the research), Yasuyoshi Okada (Professor, Institute for Cultural Studies of Ancient Iraq, Kokushikan University) and Shogo Kume (Associate fellow, Japan Center for International cooperation in Conservation, National Research Institute for Cultural Properties, Tokyo) carry out sites surveys and excavations in Kyrgyz and analyze the objects obtained from the surveys/excavations to clarify the natures and dates of the sites.

Results of the research

From 2nd to 18th of July of 2013, Ohnuma and Kume visited Kyrgyz to

participate in the archaeological excavations at the site of *Aigyrzhal* 2 in the *Naryn* valley (Figs.2 to 5) directed by Professor Aida Abdykanova of the American University of Central Asia.



Fig.2 *Naryn* heights



Fig.3 *Naryn* valley



Fig.4 Excavations at
Aigyrzhal 2 (1)



Fig.5 Excavations at
Aigyrzhal 2 (2)

Eight charred specimens unearthed during the excavations were dated by the C14 method and yielded the values which are described in the following paragraphs for the research results of the Epi-Palaeolithic/Neolithic and Bronze Age periods. Also, 9 charred specimens of wooden materials were analyzed for species identification.

1 Results of the Palaeolithic research

Around 200,000 years ago, the archaic *Homo sapiens* who were the proto-type of the authentic *Homo sapiens*, the direct ancestors of modern humans, emerged in the African continent, and some 80,000 years ago they reached the eastern world such as the Iranian plateau and Indo/Pakistan by way of Palestine and/or the Persian Gulf⁵⁾. Around 50,000 to 40,000 years ago, the authentic *Homo sapiens* in the Iranian Plateau and the Indo/Pakistan region who had fully developed into the modern humans moved to the west to West Asia and Europe, to the north to Caucasia and Central Asia, and to the east to East Asia⁶⁾.

This is the scenario agreed nowadays upon the emergence and dispersal of modern humans.

During the stay in Kyrgyz in July of 2013, Ohnuma studied the Palaeolithic materials of Kyrgyz to know what features characterize the Palaeolithic industries of the country.

The most noteworthy Palaeolithic site is *Ak-Olon* which is located on a fan-like topography at the mountain hill at the western shore of the lake of *Ishiku* in the north-eastern part of Kyrgyz. A vast number of chertish rocks are exposed at the outcrops at this factory site, and countless large cores and flakes are distributed near and distant from the outcrops (Figs.6, 7, 8).

The cores and flakes found at this factory site, one of the largest in Central Asia, are highly characterized by the Middle Palaeolithic technology such as the Levallois methods of flake, blade and point types, most probably dated to the final stage of the Middle Palaeolithic period, 60,000 to 50,000 thousands years B. P. , and are similar to the contemporary materials of West Asia. They are different, however, from the materials in the eastern world such as China and the Japanese islands.



Fig.6 General view of the Middle Palaeolithic factory site of *Ak-Olon*



Fig.7 Out-crop of raw material chert at *Ak-Olon*



Fig.8 Core found at *Ak-Olon*

There is a possibility that these artifacts were made by the authentic *Homo sapiens*, and it is hoped that more detailed techno-typological analyses will clarify the lineage of the artifacts and the human type who made them.

The research of the Palaeolithic sites of Kyrgyz including *Ak-Olon* will contribute a great deal to answering the important questions such as the possibility of arrival of the archaic *Homo sapiens* into Central Asia in the Middle Palaeolithic period after their departure from Africa and the relations between the Middle Palaeolithic materials and the *Homo Neanderthal* people who undoubtedly lived in many places of Central Asia in the Middle Palaeolithic period.

2 Results of the Epi-Palaeolithic/Neolithic research

As previously described, we participated in the archaeological excavations at the site of *Aigyrzhal 2* from 2nd to 18th of July of 2013, which yielded Epi-Palaeolithic/Neolithic and Bronze Age layers.

Described below is the outline of the excavations and a brief description of the Epi-Palaeolithic/Neolithic layer.

The site of *Aigyrzhal 2* is located on the left bank of the river of *Naryn* running from the east to the west in the Tian Shan Mountains in Kyrgyz (Figs. 2 and 3). The river of *Naryn* is a branch of the river of *Syr Darya* which flows into the Aral Sea. The height around the site of *Aigyrzhal 2* is over 2,000m above the sea level.

The site is a mound, oval in outline in the direction from the east to west, and 280m in the longer (east to west) axis, 79m in the shorter (north to south) axis, and

some 11m higher than the terraces of the river of *Naryn*.

Judging from the deposition of soils, it is supposed that the base of the mound used to be a part of the sands in the river of *Naryn*; alternating deposition of gravel bed-rock, sandy soil and clay associated with river actions being recognizable.

The excavational works were undertaken in the trench established at the eastern edge of the mound, where rather many lithic artifacts had been distributed (Fig. 5).

The cultural layer which contained the objects of the Epi-Palaeolithic or the Neolithic period was 100 to 135cm deep from the mound surface. Because this layer is essentially composed of sand, it is most probable that the bank of the river of *Naryn* was nearer to the site than today.

The main structure is the trace of a hearth, some 30cm in diameter (Fig. 9). The surroundings of the hearth are often turned red due to the influence by heat, and many microlithics were unearthed around it (Fig. 10). Although very small in quantity, potsherds and animal bones were also unearthed.

The microlithic tradition in Central Asia continued up to the Bronze Age period⁷⁾, and it is impossible to determine this layer by means of lithic artifacts alone. Thus, we dated the charred specimens from this layer by the C14 method and obtained three calibrated values of 12,000 to 11,000 cal. B.C.

These values can be placed in the framework of the Epi-Palaeolithic period in Central Asia established so far⁸⁾, but it seems impossible to restrict these values to the Epi-Palaeolithic period alone.

Though the possibility of intrusion of the potsherds of the upper layers into this layer can not be excluded, it is rather possible to date this layer with potsherds to the Neolithic period, if taking into consideration that the world oldest Neolithic industries with pottery have been unearthed in North-East Asia such as China, Japan and Siberia⁹⁾.

In connection with the chronological problem mentioned above, the palaeo-zoological/botanical and palaeo-environmental information was necessary to reconstruct the subsistence activities at the time concerned, and we analyzed the three charred wooden specimens for species identification.

This analysis resulted in the identification of the two specimens to be broad-leaf tree (*Syringa reticulata* (*Oleaceae*)) and unidentifiable broad-leaf tree.

In order to confirm the extension of the Epi-Palaeolithic/Neolithic layer within the mound, we set a test trench on the slope at the northern edge of the mound facing the river of *Naryn*. No objects were unearthed from this test trench, but a hearth-like spot with concentration of the traces of charcoal was found on the top of the alternating deposition of sandy soil and clay, some 120cm below the surface (Fig. 11).



Fig.9 Hearth unearthed in the excavation trench



Fig.10 Microliths unearthed from the excavation trench



Fig.11 Hearth confirmed in the test trench

The C14 dating applied to one charred specimen from this hearth-like spot yielded the same value as those from the excavation trench at the eastern edge of the mound. Similarly, the species analysis for this charred specimen resulted to its identification to be broad-leaf tree (*Salix* (*Salicaceae*)).

The C14 values for the specimens from the two trenches that are highly consistent strongly demonstrate that the inhabitants of this mound of the Epi-Palaeolithic or Neolithic period exploited the most area of the mound for their activity space, though the way of the exploitation at the test trench area with very few tools and/or weapons was different.

It is possible, for example, that daily constant activity was difficult to exercise at the test trench area immediately facing the river of *Naryn* and that only sporadic activities were carried out there without making and using lithic artifacts.

Furthermore, the results of the species identification demonstrated that all of the analyzed specimens from the two trenches belonged to broad-leaf tree. Although the number of the analyzed specimens is very limited and the appreciation of the results should wait for further increase of analysis specimens, the results, altogether with other means for palaeo-environmental reconstruction, can make basic data to reconstruct the environment around the site in the Epi-Palaeolithic or Neolithic period.

The preliminary results of the excavations at the two trenches are to contribute a great deal to the proposal of a new theme which will deepen the content of the present research, in addition to a possibility of discovering the oldest pottery in the region of the Tian Shan Mountains.

The theme to be pursued hereafter is the neolithization process, that is the transition from hunting/gathering economy to food-producing economy prior to the formation of the nomad societies which dramatically developed in the Bronze Age period.

Was the neolithization in the region of the Tian Shan Mountains the type of West Asia and West Central Asia called “Neolithic package” which was based on the animal domestication and plant cultivation?

Was it of the type of North-East Asia which progressed through collective resource exploitation by hunting, fishing and collecting with the usage of pottery¹⁰⁾?

Or, was it of an independent type which progressed in accordance to the highland environment particular to the region of the Tian Shan Mountains?

Exact temporal and spatial placement of the pottery and lithic artifacts from *Aigyrzhal* 2 is first necessary to see the real picture of the history prior to the formation of the nomad societies in the research region, as is detailed examination of the subsistence activities at the site in the Epi-Palaeolithic or Neolithic period by means of through palaeo-zoological and -botanical analyses.

At the same time, sites distribution survey to clarify the temporal change of the subsistence activities such as the exact timing of the reception of domesticated animals and cultivated plants is vitally important, as is the confirmation of the sites bridging in time between the Epi-Palaeolithic/Neolithic layer and the Bronze Age layer of *Aigyrzhal* 2.

3 Results of the Bronze Age research

The Bronze Age cultural layer which yielded a stone-piled structure was 50 to 130 cm below the surface. This structure is made by piling gravels, 30 to 40 cm in size, up to the height of some 80cm. Although the whole shape of the structure can not be observed due to the destruction, it is shaped a circle, some 120cm in diameter (Fig.

12). Only very few potsherds and animal bones were unearthed except for sporadic stones.

Made under the stone-piled structure is a pit, from which vertebrae of large mammals such as cattle and horse were unearthed (Fig. 13).

We dated the charred wooden specimens and fragments of animal bones from this layer including the pit, and obtained four calibrated C14 values of 1,900 to 1,500 cal. B.C.. These values fit the date of the late Bronze Age in the Central Asian chronological framework¹¹⁾.

The similar stone-piled structures are reported from the Bronze Age site of *Ulaan-Uushig* I of Mongolia, of which the stone-piled structures were constructed with skulls and vertebrae of horses. These Mongolian stone-piled structures were aimed for ritual to offer horse bones in funeral, for they were allocated around a major stone-piled grave¹²⁾.

In the regions surrounding Kyrgyzstan, there are many stone-piled structures of the late to final Bronze Age period, such as the *Andronovo* culture of the 2nd Millennium B.C. and the medieval Turkic period of the 6th to 8th century A.D..

It is most probable, therefore, that the stone-piled structure of *Aigyrzhal* 2 (Fig. 14) functioned as the funeral ritual place like the stone-piled graves of the late to final Bronze Age period in the surrounding regions.



Fig.12 Stone-piled structure unearthed from the trench at the eastern edge of the mound



Fig.13 Vertebrae unearthed from the pit under the stone-piled structure



Fig.14 Stone-piled grave on the mound surface

The animal bones from this Bronze Age layer are now under study by one of our members. And, the species analysis for the charred wooden specimens has resulted to their identification to be broad-leaf tree (*Salix* (*Salicaceae*): 1 specimen) and needle-leaf tree (*Pinus* (*Pinaceae*): 1 specimen).

It should be admitted, however, that the basic data to reconstruct the subsistence activities and environment of the Bronze Age period are not sufficient, though increasing.

In order to accomplish the present research which aims to clarify the processes of the formation of nomad societies, we need detailed reconstruction of the Bronze Age subsistence activities through research concentrated on well-preserved graves and settlements as well as through analyses of findings.

The stratigraphy of *Aigyrzhal* 2 in the trenches where we excavated so far shows a time blank of some 10,000 years between the Epi-Palaeolithic/Neolithic and late Bronze Age layers.

Judging from this limited evidence, the scenario of the formation of the nomad societies in the research region can be the arrival of the *Andronovo* groups from other regions¹³⁾.

Does this scenario really reflect the true picture?

The clarification of the processes of the nomad societies in the research region by further research can answer this question, clarifying the nature of the Bronze Age layer, and can present evidences concerning the continuity or break between the Epi-Palaeolithic/Neolithic layer and the Bronze Age layer on the regional scale.

Conclusion

Through the participation in the archaeological excavations at the site of *Aigyrzhal* 2 in July of 2013 and the post-excavational C14 dating and species identification for the charred wooden materials, we could clarify several aspects of the Epi-Palaeolithic/Neolithic and Bronze Age periods in the northern foothills of the Tian Shan Mountains.

Except for potsherds, the Epi-Palaeolithic/Neolithic and Bronze Age objects unearthed from the excavations are lithic artifacts as daily-use tools and/or weapons, rather than the tools for agriculture, consisting of micro-blades and scrapers and knives made on them, which are considered to have been used as butchering tools or segments to be inserted into organic shafts of composite tools for hunting such as projectile points.

The reason for this biased existence of the tool types may be that the land of Kyrgyz itself is on the highland and has been always favourable for hunting activities ever since the remote past including the Epi-Palaeolithic, Neolithic and Bronze Age periods.

The subsistence activities of the Bronze Age period are under study now and its clarification should wait for further research.

Although we have not yielded any archaeological evidence for the time between the Epi-Palaeolithic/Neolithic and Bronze Age periods, it is highly probable that the process of the introduction of animal domestication and plant cultivation into the Tian Shan Mountains was not the result of the inflow of the “Neolithic package” of West Asia.

Thus, it can be suggested at least that the West Asian scenario, in which the nomad societies developed themselves through modification of their subsistence ways by means of intra-society separation into agriculturists and animal herders and their re-union in accordance to the natural and/or social environmental changes, can not be directly applied to Central Asia.

In order to answer this suggestive question, we need to carry out archaeological excavations or soundings at the village sites of the Neolithic and Bronze Age periods.

At the same time, we need to re-examine the two hypotheses advocated so far that the 4th to 2nd Millennia B. C. nomad groups of the Black Sea regions reached Central Asia and that the hunter-gatherers or agriculturists of Central Asia changed their subsistence means to nomadism.

Kyrgyzstan is rich in archaeological sites of various periods, such as the Middle Palaeolithic period when the archaic *Homo sapiens* is supposed to have reached Central Asia by way of West Asia after their Out of Africa, the Epi-Palaeolithic period when the hunter-gatherers started to change their mobile ways of subsistence to settled ones, the Neolithic period when the domestication of animals and crops is thought to have reached from West Asia, and the Bronze Age and historical periods when the nomad societies might have developed dramatically.

Essentially being based on the results of the present research, we will undertake a 4-years archaeological project with excavations and field research (*Grant-in-Aid for*

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It is possible, therefore, to clarify in more details several themes as below through the project to continue until 2016.

- 1) How the archaic *Homo sapiens* appeared in Central Asia.
- 2) Relations with West Asia and East Asia in the Epi-Palaeolithic and Neolithic periods.
- 3) Formation processes of the horse-riding nomad societies peculiar to Central Asia.
- 4) How the technologies of metal working, animal domestication and plant cultivation in Central Asia were related to West Asia and East Asia.
- 5) How the Huns and the Turkics, who played important roles in the Eurasian history, appeared in Central Asia.

These themes are important to reconsider the history of West Asia and Central Asia, as well as that of East Asia including Japan.

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