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**ANCIENT POPULATION OF SIBERIA  
AND ITS CULTURES**

BY  
**A. P. OKLADNIKOV**

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## PREFACE

For many decades the peoples of the Western world have been cognizant of the extensive amount of worthwhile anthropological literature which has been coming steadily from the pens and minds of Russian scholars. For the most part this important corpus of contribution to knowledge of the development of mankind has been unavailable to our scholars. A few institutions, notably the *Musee de l'Homme* in Paris, the Institute of Archaeology of the University of London, and the Peabody Museum Library at Harvard University, have been fortunate enough since the first World War to accumulate a rather full file of these Russian publications. Even so, because of the linguistic difficulties, most of our students are unable to reap the full benefit of them even if they can hold them in their hands.

Dr. Henry Field, conscious of this limitation on our modern scholarship, came to me a year or so ago and proposed that we try to do something about it. After numerous discussions with various members of the Peabody Museum staff and others, we hit upon the plan of a series of translations from the Russian language of selected important books and articles dealing with archaeology and physical anthropology. This publication, *Ancient Population of Siberia and Its Cultures*, by A. P. Okladnikov, is the first of the series.

From 1935 to 1947 Dr. Henry Field published for the benefit of English-speaking scholars 101 translations and abstracts of miscellaneous papers on the archaeology of the Soviet Union. These have been valuable, but spotty. The Russians themselves, with their penchant for organization, have realized this and inaugurated a 30-year plan — the first decade, from 1940 to 1950 was devoted to general excavation; the second decade, from 1950 to 1960, although excavation continues, is mostly devoted to publication, including regional synthesis; this will be followed by a third decade, from 1960 to 1970, which will see problem-oriented excavation based on the previous regional syntheses which, in turn, will be published in the form of final reports.

In this newly inaugurated Russian Translation Series of the Peabody Museum of Harvard University, we are making selections from the regional studies of the second decade of the Russian plan. Six of these regional studies will be translated—one on Siberia, two on the Caucasus, and three on the peoples of Central Asia. The one presented here, the first of them, deals with Siberia, written by A. P. Okladnikov, the leading Soviet archaeologist on Siberia.

Dr. Henry Field is the general editor of the series. He will receive assistance of members of the Peabody Museum staff and other scholars in the United States and Western Europe who are knowledgeable in the prehistory and physical anthropology of the Soviet territories. In the preparation of this translation he has been assisted by Professor Hallam L. Movius, Jr., Curator of Palaeolithic Archaeology in the Peabody Museum and Professor of Anthropology in Harvard University. Dr. Movius has selected Professor Okladnikov's report as the most important summary that has yet appeared of the prehistory of Siberia. Okladnikov's summary appeared in "Narody Sibiri" [The Peoples of Siberia], edited by M. G. Levin and L. G. Potapov, Izdatelstvo Akademii Nauk SSSR, pp. 21-107, Moscow, 1956, a copy of which exists in the library of the Peabody Museum at Cambridge. The following pages contain a complete and unabridged translation of Professor Okladnikov's, section of the report. The Russian Translation Series, of which this is the first number, is presented by Dr. Field and the staff of the Peabody Museum of Harvard University as a service to the scholars of the Western world. The Peabody Museum and its staff do not assume responsibility for the statements made in these reports. We shall transmit them, to the best of our ability, in the most accurate translations we can obtain.

In the prosecution of this work we are receiving full coöperation from our Russian colleagues, who are as interested to have their works made available to Western scholars as we are to have our studies brought to them.

There are many reasons for embarking on a project of this kind. One of the most important of these is the hope that it will encourage and promote the increase of the exchange of information arising from the studies of human prehistory and of physical and cultural development which is the life-blood of social and natural sciences throughout the world.

Our present plan calls for the appearance of these six translations as soon as they are ready, presumably within the next two years. If the plan meets with the approval of scholars and librarians, it can be continued.

In closing this Preface, I wish to include a tribute to the scholarship, enthusiasm, and far-sightedness of Dr. Henry Field, who has conceived this plan and by his stupendous diligence, of which those who know him are well aware, has brought it to the point where we can now present it to the public.

J. O. BREW  
Peabody Museum of Archaeology and Ethnology  
Harvard University  
Cambridge, Massachusetts  
U. S. A.  
March 24, 1959

CONTENTS

PAGES

PREFACE by J. O. Brew.....i

INTRODUCTION by Henry Field.....vii

I. ORIGINAL SETTLEMENT.....1

II. NEOLITHIC PERIOD.....12

III. BRONZE AGE.....22

    (a) Inhabitants of the Steppe Zone.....22

    (b) Tribes of the Taiga.....27

IV. ANCIENT TRIBAL GROUPS OF  
    NORTHERN ASIA.....31

V. THE POPULATION OF SOUTHERN SIBERIA  
    DURING THE FIRST MILLENNIUM B.C.  
    AND FIRST MILLENNIUM A.D.....34

VI. EASTERN SIBERIA DURING THE FIRST  
    MILLENNIUM B.C.....43

VII. TRANSBAIKAL REGION DURING THE  
    FIRST MILLENNIUM B.C.....46

VIII. TRIBES OF THE MARITIME AND  
    AMUR REGIONS DURING THE  
    FIRST MILLENNIUM B.C.....53

IX. SIBERIA AND THE FAR EAST DURING  
    THE FIRST MILLENNIUM A.D.....57

FOOTNOTES.....66

REFERENCES.....67

ILLUSTRATIONS

1 Paleolithic dwelling at Buret: (a) reconstruction; (b) general view  
of excavations.....69

2 (a) Mammoth engraved on ivory plaque from Malta; (b) statuettes  
with representations of clothing from Buret.....70

    (c) Male skeleton with bow from Serovo grave at Bratskii Kamen  
on Angara River.....71

3 Decorations and stone implements from infant's grave at Malta.....72

4 Stone and bone implements: (1) scraper; (2) nucleiform scraper;  
(3) harpoon; (4) spearhead; (5) bifacial scraper; and (6) points.  
Nos. 1-4 from Verkholskaia-Gora; No. 5 from Oshurkovo; and  
No. 6 from Niangi.....73

5	Stone and bone tools from Neolithic graves of Baikal region: (1) flint arrowhead; (2) ornamented bone dagger; (3) spearhead with inserts; (4) nephrite knife; and (5) large adze.....	74
6	Neolithic pottery from Baikal region: Nos. 1-4, Serovo vessels; No. 5, sherd from Ulan-Khada.....	75
7	Neolithic stone and bone objects from Baikal region: (1) stone fish; (2, 6) stone elks from Bazaikha; (3, 4) bone figurines from Glaskovo; (5) marble head from Rasputino.....	76
8	Objects from Afanasiev graves.....	77
9	Anthropomorphic representations and pottery from Andronovo and early Karasuk graves.....	78
10	Objects from Karasuk graves.....	79
11	Neolithic ornaments (Nos. 1, 2, 5-8) compared with those of contemporary Amur peoples (Nos. 3, 4, 9).....	80
12	Tagar representations of animals from Minusinsk basin.....	81
13	Ornaments (5th-2nd centuries B.C.) from West Siberian kurgans in Hermitage: (1) gold ring ornamented with a feline head; (2) copper neck collar.....	82
14	Gold plates (5th-2nd centuries B.C.) from West Siberian kurgans in Hermitage: (1) griffon; (2) winged lion attacking a horse.....	83
15	Fragment of Near East fabric from Pazyryk.....	84
16	Wooden harness decorations from Pazyryk: (1) bridle with representations of griffon heads; (2) pendant in form of mountain ram's head.....	85
17	Sphinx on felt rug from Pazyryk.....	86
18	Goddess and horseman on felt rug from Pazyryk.....	87
19	Objects from Chinese house at Abakan.....	88
20	Bronze Age bone arrowheads, metal objects and vessel from the Taiga, Eastern Siberia.....	89
21	Bronze Age petroglyphs on deer stone from Ivolga River.....	90
22	Petroglyphs: (1, 2) Minusinsk krai (7th-9th centuries); (3-5) Shishkino, Baikal region (6th-10th centuries).....	91
23	(a) Bronze mirror ornamented with dragon (11th century) from Maritime Province, Suchan; (b) Bronze Age clay tripod from Aginskoe, Trans-Baikalia; (c) statue of official (8th-11th century) from Voroshilov-Ussuriisk.....	92
24	(a) Bronze Age slab graves on Uda River; (b) dragon's head (8th-12th century) used as roof decoration from near Voroshilov-Ussuriisk.....	93

## MAPS

1.	Paleolithic settlements and boundary of maximum glaciation in Siberia .....	94
2.	Neolithic cultures of Siberia.....	95
	<i>No. Location</i>	
	1 Baikal	
	2 Amur	
	3 Middle Lena	
	4 Lower Lena	
	4a Lower Lena (?)	
	5 Ob	
	6 Kelteminar	
	7 Ural (Shigir)	
	8 Sakhalin Island	
	9 Maritime Shell Mounds	
3.	Lower and Upper Paleolithic and Mesolithic individual and group sites of the U.S.S.R .....	96

## INTRODUCTION

This article by A. P. Okladnikov was selected for translation by Dr. Hallam L. Movius, Jr. from "Narody Sibiri" [The Peoples of Siberia] edited by M. G. Levin and L. P. Potapov, Izdatelstvo Akademii Nauk SSSR, pp. 21-107, Moscow, 1956.

The translation was made by Mr. Vladimir M. Maurin, a skilled and experienced translator of Russian, who has worked for many years in this capacity for a Washington organization.

Dr. Movius made editorial changes, especially in regard to special terms for Stone Age cultures and techniques.

In addition to my general revision, the text was also read by Dr. Claude T. Richards, who edited part of the Near East Translation Project Series of the American Council of Learned Societies and has acted as coordinator for my "Bibliographies on Southwestern Asia: II-VI."

The transliteration from Russian into English of Chinese and Mongolian proper names posed a serious problem. Professor Herrlee G. Creel, University of Chicago, corrected these names throughout the text. Special problems were solved by Mr. Hsu Cho-yun, formerly research assistant in the Academia Sinica, Taiwan, and now associated with the Department of Oriental Languages and Literatures, University of Chicago. In the Notes (p. 66) Mr. Hsu Cho-yun has commented on three passages in the text.

The maps were redrawn by Mr. William B. Jenna, Jr., cartographer at the University of Miami. Mr. Maurin translated the place-names.

The plates were copied in the Peabody Museum by Mr. David De Harport. The excellent results are due to his skill.

Mrs. Naomi Stratton, Editor of the Peabody Museum publications, contributed valuable suggestions regarding style and format.

The composition of the copy for photo-offset was prepared on my IBM electric typewriter by Mr. Mark Grant, Harvard graduate and formerly with the American Council of Learned Societies. Mr. Grant has also prepared the text for photo-offset of the Near East Series, published by the University of Miami Press.

We are grateful to Dr. Richards and to Mr. Grant for suggestions regarding the format and standardization of style, which in general conform to those used by the American Council of Learned Societies.

This Translation Series may be considered as a continuation after a twelve-year interregnum of my summaries of results obtained by Soviet Archaeologists and Physical Anthropologists, 1935-46. A list of these 101 titles is given in my "Contributions to the Anthropology of the Caucasus," Peabody Museum Papers, Vol. 48, No. 1, pp. 150-52, 1953.

In view of the number of area monographs appearing each year, it was decided to abandon translation of the short articles and concentrate on the more comprehensive works, especially by Soviet specialists, such as A. P. Okladnikov, P. N. Tretyakov, A. L. Mongait and L. V. Oshanin.

It is hoped that this new Series will serve a useful purpose in making Soviet contributions to Archaeology and Physical Anthropology available to those for whom the Russian texts have not been translated.

HENRY FIELD

## I. ORIGINAL SETTLEMENT

The earliest remains of Man and of his cultures found in the European and Asiatic regions nearest to Siberia appear to be those unearthed from the fill of ancient caves at Choukoutien near Peiping. *Sinanthropus pekinensis* had sharply marked ape-like features. Of the Prehistoric animals of warm climates, there lived in those times the saber-toothed tiger (*Machairodus*) and *Rhinoceros merckii*, which later became extinct.

*Sinanthropus* used fire and fashioned stone implements typologically similar to the Acheulean of Western Europe. To those ancient times must also be related the primitive pebble cultures found in the Tien Shan highlands in Kirghizia and on the On-Archa River on the route from Lake Issyk-Kul to Narin.

During the Mousterian period, the animal species of the preceding periods continued to exist in Europe and Asia, but there also appeared for the first time representatives of that fauna which developed as a consequence of the progressive cooling and deterioration of climatic conditions, which lasted until the end of the Ice Age.

To this period are related the implements and the remains of Neanderthals excavated at Teshik-Tash in southwestern Uzbekistan and in the Amir-Temir cave, as well as the finds in the Aman-Kutan cave near Samarkand, and in a number of sites on the Krasnovodsk Peninsula, in the lower Uzbo Valley, and in the Syr-Darya basin near Leninabad and Naukat.

Evidently, the sharply pointed spearhead with bilateral finish, which M. V. Talitskii found on the Chusovaia River, also dates from Mousterian times.

Of especial interest are the rough, massive flakes and points found near the Kanai aul on the Irtysh in northwestern Kazakhstan. They have such an archaic appearance that typologically they could be related to a period which preceded the Upper Palaeolithic. These are the few data now available for tracing the Prehistoric stages of human development in the regions of Eastern Europe and of Central Asia that lie closest to Siberia.

There have also been identified in Siberia remains of an ancient warm fauna contemporaneous with the Lower and Middle Palaeolithic. Such are the remains of *Elephas trogontheri*, *Rhinoceros merckii* and *Elasmotherium* from the sands of Pavlodar, and of the broad-headed deer found in the conglomerate of the second terrace above the Irtysh River in Tobolsk Province, which belong to the so-called Tiraspol complex of fossils. The remains of animals composing the "Khazarian" fauna complex belong to the subsequent Late Mousterian period. This complex extended over an immense territory of Eastern Europe and of Northern and Central Asia, and covered in general the area between 45° and 60° N. Lat. from the Transbaikalian region in the east to France and the British Isles in the west.

In spite of these facts, which indicate that the natural conditions of Siberia and the Soviet Far East were sufficiently favorable for the existence of Prehistoric man of the Lower and Middle Palaeolithic, there have not yet been discovered in this area any incontestable traces of their activity. Thus the question of the existence of Lower and Middle Palaeolithic man in Siberia remains unsolved at the present time. It is probable that in those early times, when primitive humanity went through its first stages of development, the vast expanses extending east of the Urals were still uninhabited.

The probability of this assumption is also confirmed by the fact that as yet there have not been found any traces of ancient manlike apes in Siberia. The first apemen had to remain originally within definite, more or less limited areas of their propagation, where the most favorable natural conditions existed.

The spreading of Prehistoric man north and eastward in Asia met later with very serious obstacles in view of the approaching severe deterioration of the climate at the beginning of the Quaternary, and the subsequent cold during the Glacial period.

During the time of the greatest expansion of glaciers, which coincided with the Mousterian (Riss Glaciation), as geologists assume, there existed also an immense water barrier separating Europe from Northern Asia. This barrier was formed by the waters of the great Siberian rivers which were impounded by glaciers that reached almost to 60° N. Lat. Thus, a strait was formed which connected the Aral Sea with the Caspian basin. As a result, the vast area of the present west Siberian plain became inundated. Glaciers crept down from the Altai and Saian mountains. These natural obstacles had to disappear before men of the Old Stone Age could occupy Siberia. In addition, a complete change in the mode of life and culture of ancient humanity was necessary to make it possible for man to venture beyond the limits of his original area of habitation and reach the Siberian expanse.

It was necessary first to create new and improved methods of hunting, superior to those used during the Middle Palaeolithic, and to learn to build special dwellings which would furnish shelter against cold and wind and provide food storage for the winter. Finally, it was necessary that men should produce sewn clothing which would permit them to move outdoors in winter and hunt animals. All this became possible only during the Upper Palaeolithic, not earlier than 30,000 - 40,000 years ago.

It is not surprising, therefore, that the oldest incontestable traces of man in Northern Asia which are known at present belong to a relatively late period in comparison with the universal history of mankind. This was the last period of the Ice Age (Würm Glaciation); it was also the time when the mixed fauna characteristic of this period still existed. Thus, together with representatives of a typical Arctic fauna, such as the Arctic fox, lemming, musk-ox, ptarmigan or snow partridge, and the reindeer, there lived in the vast expanses of Eastern Europe and Northern Asia the mammoth and the woolly rhinoceros.

At that time, the Aurignacian and Solutrean periods came to an end in Eastern Europe, and the Magdalenian began. The earliest Palaeolithic monuments in Siberia are attributed to this period. About 150 Upper Paleolithic sites have been located. Almost all are located in the valleys of large rivers. It is possible to establish three basic, relatively narrow areas of the distribution of the Upper Palaeolithic sites in Siberia: (a) on the upper Ob with the center near Biisk; (b) on the upper course of the Yenisei from Minusinsk to Krasnoyarsk; and (c) the area around Lake Baikal including the Angara with its tributaries, the Belaia, Irkut, Selenga and Onon, and the Upper Lena. The Palaeolithic sites on the Lena, discovered in recent years, extend up to 61° N. Lat., which is the nearest point to the Arctic Circle known at the present time that Palaeolithic man ever reached.

The earliest Palaeolithic settlement was discovered in 1871 on the site of the Military Hospital in Irkutsk; it was subsequently investigated by Russian archaeologists. Judging by objects carved from mammoth tusks (among them large rings) and by ornamental articles, as well as laurel-leaf-shaped stone points, this Palaeolithic settlement was attributed to the end of the Solutrean period.

In 1928 and 1936, there were discovered on the Angara two famous Palaeolithic sites, Malta and Buret. Both settlements belong to a somewhat later period than that near Irkutsk Military Hospital. According to the European chronology, Malta and Buret probably belong to the Early Magdalenian phase, which is indicated by the

characteristic "bâtons de commandement" pins of the Mezine (Ukraine) type, nuclei with even conical facets, small disc-shaped scrapers, and the advanced processing of bone.

Both settlements are located east of the Yenisei: Buret in the Angara Valley, on the right bank near Angara, and Malta on the Belaia River near Maltinsk. They are characterized by a surprising similarity of cultural features and mode of life, which are so close that one may see in them consecutive settlements of one and the same ancient community or even simultaneous settlements of two related communities closely connected with each other. This connection is the more probable, since both settlements are only 3-4 km. apart.

The systematic, large-scale excavations at Malta (800 sq. m.) and at Buret (400 sq. m.) make it possible to reconstruct this ancient culture and the way of life of its inhabitants not only in general but also in a number of characteristic details.

It is significant that the Palaeolithic sites of Malta and Buret represent true settlements, consisting of a number of dwellings intended for long use. In Buret, for example, were found the remnants of four dwellings. One of them, more complete and better preserved than the others, had a rectangular base which had been excavated in the ground. A narrow passage led out to the river. At the edges of the depression were set, at strictly equal intervals and symmetrically, mammoth femora. Their lower ends, buried in the ground, were fixed firmly with limestone slabs. These served as "posts" and as a framework for the building, upon which rested the walls and roof. Each dwelling had about twelve such posts.

Together with the posts, the remains of the roof completed the cover of the Palaeolithic house. On the floor inside there were many reindeer antlers, undoubtedly collected and sorted with a purpose. In a number of cases the antlers lay across each other at right angles, and with the horns and their branches at such intervals that they formed the pattern of a net. Consequently, the roof of the Palaeolithic dwelling in Buret must have had as a basis a framework resembling a net made of deer antlers, not only with their tusks but also with their branches interwoven.

In the center of the houses were the hearths. Stone and bone tools lay on the floor. In type, ground plan and construction, the houses at Buret and those of similar type at Malta reveal an unexpectedly close resemblance to those of the eighteenth-nineteenth centuries belonging to tribes settled on the coastlands of northeastern Siberia. The similarity consists in: (a) the presence of a shallow pit; (b) a rectangular lay out; (c) an entrance in the form of a corridor; (d) the use of bones of large animals as building material (in one case, those of a mammoth and rhinoceros, in the other those of a whale); (e) use of stones for stabilizing the posts; (f) walls made of earth, slabs and bones (whale vertebrae used by sedentary Chukchi and Eskimos, rhinoceros skulls at Buret); and (g) an elastic and light framework of the roof made of whale ribs (the corresponding material of the framework of Chukot semi-subterranean dwellings, as well as of those in Buret, being interwoven and strapped antlers). The roof of the Palaeolithic dwelling had the appearance of an earth hillock slightly raised above ground level.

The dimensions of the dwellings are likewise very similar. The area of the Chukot houses of the eighteenth century, as well as that of the Palaeolithic dwellings in Buret, reached 25 sq. m. with a minimum height of 2.0-2.5 meters.

The character of the Palaeolithic settlement in general was also very similar to that of the Chukot-Eskimo coast settlements. The dwellings at Buret, similar to the ancient Chukot houses, were located on an elevation and built in a row with all entrances facing the river. The Chukot-Eskimo houses are oriented toward the sea.

Just as definite is the similarity in culture and mode of life of the Palaeolithic

inhabitants of Siberia with that of the later, sedentary Palaeo-Asiatics of our north-east. For example, the Palaeolithic inhabitants of Siberia wore thick fur clothing with a fur hood, but indoors they sat naked.

This is graphically indicated by the twenty Palaeolithic statuettes found at Malta and five at Buret. The majority represent nude females wearing beautifully styled headdresses. However, in 1936, there was found at Buret a fairly large statuette representing a female wearing a sewn dress and with a very clearly expressed hair-dress resembling a hood put over the head. Two similar statuettes, only in miniature and, therefore, rather schematically carried out, were found at Malta. Similar also to the Palaeo-Asiatic tribes and Eskimos, the Prehistoric Upper Palaeolithic inhabitants lived by hunting, possessed throwing stones and so-called "bâtons de commandement," which evidently are tools for softening straps, produced realistically expressed representations of animals from bones and horns, and worshiped female deities and spirits such as Silla and Asiak of the Eskimos.

Nevertheless, the opinion of a number of eminent investigators (Boyd-Dawkins, G. de Mortillet, E. Lartet, and K. Rasmussen), who regard the Eskimos as the direct descendants of the ancient Palaeolithic tribes of Europe, i.e. from the Magdalenian, cannot be accepted at the present time.

The general similarity of culture in this case may be explained by the identical character of the natural and geographical conditions which existed at the end of the Ice Age and of those that now prevail in the Far North, and by a corresponding similarity of the mode of life and economy of the Upper Palaeolithic inhabitants of Siberia with that of the Palaeo-Asiatic tribes and Eskimos of the eighteenth-nineteenth centuries.

The abundant yield from hunting during the Palaeolithic period, when huge thick-skinned animals and herds of northern deer produced not less meat than the present-day Arctic fish industry, induced permanent settlement in favorable locations. The severe climatic conditions of the Ice Age necessitated the building of the same type of durable earthen, semi-subterranean dwellings on the Angara, as those that existed during the eighteenth-nineteenth centuries in the Arctic with its penetrating winds and low temperatures.

Because of a shortage or complete lack of timber, the Palaeolithic hunters, as well as modern Arctic tribes, had to resort to substitute materials, particularly bone, the more so since the abundance of bones and horns suggested to man their application for building purposes. Finally, the wealth of Siberian Palaeolithic art emphasizes the long Arctic night and the severe northern winds which doomed the strong and active hunters of not too long ago to forced inactivity and, together with an abundance of workable material such as walrus tusks, enabled these Arctic dwellers to develop an amazing ornamental art and ability to carve small objects. Undoubtedly, the same skill occurred in the Baikal region during the Old Stone Age.

In this manner, at the end of the Ice Age, there existed a remarkable culture developed by the Palaeolithic hunters of Eastern Europe and Siberia. This may be called the "Continental" culture of the sedentary Arctic hunters of the Upper Palaeolithic.

The undeniable unity of the ancient culture of the hunters of reindeer, mammoth and rhinoceros in Europe and in Asia had a common basis in the conditions of human existence. Nevertheless, the sites at the Irkutsk Military Hospital, and at Malta and Buret, which are the earliest monuments of human culture in Northern Asia, reveal such a close similarity with the culture of the contemporary people of the Ice Age who lived in Eastern and Western Europe, that it cannot be explained merely by simple convergent evolution. It should be noted, however, that in our literature there have also been expressed other opinions, which assume that the Upper Palaeolithic culture represented by the finds at Malta and Buret emerged by convergence,

independently of the culture of contemporaries in Europe (M.G. Levin and O.N. Bader).

At Malta and Buret there were found exactly the same miscellaneous flint implements made of thin, blade-like flakes as in Western European settlements of the Early Magdalenian period, and in contemporary sites of Eastern Europe, i.e. burins, knives, scrapers and, particularly, pins, diverse in shape, including one-sided and double-sided examples, which are so well known from the excavations at Mezine in the Ukraine.

As already mentioned, in the interior of Siberia there were also discovered remarkable monuments of Prehistoric art: figurines of women and of birds carved from mammoth tusks; engraved designs representing the mammoth and snakes; a large quantity of ornamental articles of household use; and delicately worked embellishments. Finally, on the Shishkin rock on the Upper Lena there remained unspoiled the remarkable representations of Upper Palaeolithic wild horses, resembling in type *Equus przewalskii* and in style the Late Magdalenian techniques. A representation of the extinct bison was also found.

With all its undeniable individuality, the rich Upper Palaeolithic art of Siberia appears to be a direct branch of the highly developed and characteristic artistic culture which flourished among the Palaeolithic hunters of Europe during the Glacial period. This holds true in regard not only to subject matter, but also to the small, specific details. Such, for example, are the characteristic treatment and pose of female representations. As far as the individuality of the monuments of Siberian Palaeolithic art is concerned, this is quite natural if one considers that marked differences are evident even between the finds of Mezine, Ukraine, and those made on the Don. It is clear that analogous differences distinguishing the art of the inhabitants of Eastern Siberia from that of contemporary people on the Don or Dnieper, could not be less significant.

All these facts furnish the basis for the assumption that the Prehistoric inhabitants of Siberia came to the shores of Lake Baikal from Eastern Europe toward the close of the Ice Age, during the Solutrean and Magdalenian periods, and brought with them the original culture of the Arctic hunters of the Upper Palaeolithic.

In the course of time, however, profound changes occurred in the life and culture of the inhabitants of Siberia, and evidently also in their composition. These changes were so far-reaching that one could consider them to be the result of a complete interruption of the cultural and ethnic tradition if facts to the contrary were not present which prove that certain cultural features of the Late Palaeolithic in Siberia were inherited from earlier times (e.g. Malta and Buret).

In Late Palaeolithic times, which are represented by such monuments as Afontova-Gora on the Yenisei, Verkholskaia-Gora at Irkutsk on the Angara, Oshurkovo, Niangi and Ust-Kiakhta on the Selenga, Makarovo, Shishkino, Niuia, Markhachan and other settlements on the Lena, the ancient population of Siberia increased rapidly. This is indicated by the increased number of settlements at the close of the Palaeolithic. At this time they can be counted by the dozens, not by units. The area occupied expanded to the same degree. Tribes settled the valleys of the most important Siberian rivers in their southern parts: the Amur, Selenga, Yenisei, Angara and Lena. They spread across the Altai, where before only glaciers existed. In the Lena Valley they penetrated to Olekminsk and Markhachan, further north than any other Palaeolithic sites in Europe and Asia.

Such settlement of large areas by Palaeolithic hunters took place simultaneously with considerable changes in the natural conditions that surrounded the ancient inhabitants of Siberia.

Afontova-Gora, one of the earliest sites attributed to the Upper Palaeolithic, differs from the more ancient settlements only by the absence of the woolly rhinoc-



eros. Otherwise, the fauna of Afontova-Gora is very similar to that of Malta and Buret. Here were found the mammoth, reindeer, Arctic fox, wild horse, and bones of animals living even at present in this region, such as the roebuck, fox, wolverine, bear, hare, etc.

A count of animal species found at Afontova-Gora which are characteristic of various climates and landscapes reveals that 24.0 per cent belong to extreme northern species (Arctic fox), 12.0 per cent are those of the temperate climate living at present (common deer, roebuck, saiga-antelope and horse), and the remainder are common to both climatic zones. A count on the basis of habitat revealed a preponderance of tundra and steppe forms. Of these there were 37.0 per cent (Arctic fox, mammoth, horse, saiga), while only 7.0 per cent were forest types (wolverine, common deer, roebuck and bear). The remainder inhabit forests as well as open spaces (reindeer, fox, hare and others). The Late Magdalenian sites in the Yenisei Valley (Pereselencheskii punkt, near Krasnoyarsk, Kokorevo-Zabochka and Kipernyi Log, Biriussinsk localities), and their contemporary monuments in the Angara Valley (Olunki and Ust-Belaia), as well as in the Lena and Selenga valleys, date from the latest period of the first terraces above flood level, which were 6-12 m. in height. The cultural remains were located in alluvial deposits, and neither products made of mammoth tusk nor bones of these animals were found among the kitchen refuse. It follows from this that not only the rhinoceros, but also the mammoth, was already extinct. Simultaneously, there also disappears here another characteristic representative of the ancient fauna of the Würm Glaciation, the Arctic fox, later replaced by forest animals. At the Oshurkovo site, for example, there were found, together with the bison and the reindeer, the bones of the common deer and boar, which are typical forest-dwellers. Evidently, the climate became warmer and was not so humid as before. There began a new, post-Glacial epoch.

Even more significant changes may be observed in the culture and mode of life of the inhabitants of Siberian Palaeolithic settlements. Former settlements, which were composed of a row of durable, permanent dwellings, disappear. The new houses had the appearance of temporary hunters' camps composed of a few dwellings above ground, of which there remained no trace with the exception of hearths indicating the form and plan. The hearths had the form of a circular arrangement of stone plates set edgewise. The diameter was about 60-70 centimeters. Such arrangements were found, for example, at Zabochka on the Yenisei and at Makarovo in the Lena Valley. Comparatively few stone implements, flakes and animal bones were found strewn around the hearths. The dwellings probably had a form similar to modern conical tents, built from thin stakes which formed the framework, and covered with light animal skins or birch bark.

The changes in the general character of the settlements and in the construction of the dwellings must be directly related to the transformations in the nature and mode of life and economy of the primitive hunters of Siberia. The extinction of the gigantic, herbivorous animals of the Ice Age--the rhinoceros and the mammoth--could not but evoke significant changes in the life of ancient tribes. The former almost inexhaustible reserves of meat began to disappear.

In order to live on animals smaller than the mammoth and rhinoceros, it was necessary to adopt a mobile way of life, and to use new, more flexible hunting skills. Moving from place to place after the herds of northern deer and droves of horses and wild oxen, the Late Palaeolithic hunters could no longer build large communal settlements and erect large collective dwellings. Of their temporary sites there remained at the most a few hearths laid out in stone, similar to the stone hearths on sites of the later reindeer-raising tribes of Siberia. It is not impossible that the transition from a severe cold climate to a milder post-Glacial

phase also exerted a strong influence on the type of dwelling. At that time the necessity disappeared for burying living quarters in the ground and carefully covering and protecting them against the penetrating tundra winds. As we shall see later, such dwellings of the semi-subterranean type were preserved in Siberia only by fishermen who lived permanently in one place.

The change in the material culture, especially in the production of stone artifacts, was similarly far-reaching. The change affected not only types of implements, their form and size, but also the working techniques and production methods of stone implements. While in that remote epoch, when extensive settlements of semi-sedentary hunters of the mammoth and rhinoceros existed on the Angara and Lena, the stone inventory of the inhabitants at first had much in common with the ordinary Upper Palaeolithic assemblages of Eastern and Western Europe, there appeared now, unexpectedly, a radical change in the form of stone implements. Instead of fine points with curved or straight, thin edges, miniature scrapers, finely finished, thin blades, and Magdalenian scrapers of various forms, there now appeared large, massive and heavy objects which, at first glance, seemed to be of a primitive and uniform type, made mainly of river pebbles.

All these were essentially specific variants of one and the same product, repeated with amazing perseverance: a massive scraper of nearly oval or half-moon shape, refined along the sharp working edge with long and broad facets. Sometimes, such products have a straight working edge and some, though in only a few cases, have a slightly curved edge. A number of them were worked on the upper side, and some on both sides, but these differences are not characteristic and are infrequent.

In general, owing to the unique form and the characteristic resolved flaking technique, reminiscent of the Mousterian, such products make a particular impression. This becomes even more definite when one discovers among the numerous series of scraper-like instruments of this kind, which resemble Mousterian forms, broad, massive and sharp tools that are in form and workmanship similar to the Mousterian points.

The points from the Siberian Palaeolithic sites resemble the Mousterian even more in that the materials used for them were broad flakes struck from large, disc-shaped pebble-nuclei typically Mousterian in form.

The archaic character of the inventories of these sites is so definite and marked that former investigators saw in them not only Mousterian, but also Lower Palaeolithic elements. They described the oval-shaped, massive implements that are worked on both sides as "bifaced," that is, as closely analogous to the cutters of the Acheulean and even Chellean periods. Beginning with the presence of the archaic forms of stone products and of the corresponding archaic workmanship, they related the Late Palaeolithic types found on the Yenisei by I. T. Savenkov to the remotest antiquity, and dated them as belonging to the beginning or a very early stage of the Palaeolithic period, i. e., to Acheulean and Mousterian times. However, Savenkov himself definitely pointed out that together with the stone objects which resemble in type Mousterian or even Acheulean pieces, his collection also contains articles of quite late Palaeolithic forms, i. e., burins, various carefully retouched spearheads, and small scrapers. He called the attention of archaeologists to the presence of bone products of excellent shape: dart heads, ornaments, needles and awls.

Thus, investigators are confronted with a new, extremely interesting enigma: how to explain and reconcile the unusual combination of typologically ancient objects with new ones which are separated in the West by tens of thousands of years, and in the Altai region and in the Lena, Yenisei and Angara valleys are found together, in one cultural stratum, in the inventory of one and the same Upper Palaeolithic settlement.

They sought the solution of this question in various directions. Some of the in-

investigators (G. P. Sosnovskii and A. P. Okladnikov) attempted, during the 1930's, to regard the Upper Palaeolithic culture of Siberia as a direct continuation of the more ancient ones, i. e. the Malta and Buret cultures, and saw in the transition from one culture to the other the expression of a continuous evolutionary progress of ancient Siberian tribes from a lower cultural stage to a higher one.

Other investigators (L. Savitskii and N. K. Auerbach) were willing to see here only the results of a direct influence of the culture of innermost Asia, specifically of the Mongolian and Chinese Palaeolithic cultures, upon that of the Siberian Palaeolithic inhabitants.

A third viewpoint was advanced by V. I. Gromov, according to which the peculiarity of the stone implements which are characteristic of the Siberian Palaeolithic depended upon the local coarse material available to the inhabitants. Because of the lack of such excellent, workable material as, for example, the flint from the chalk found on the Don, the local craftsmen had to be satisfied with such coarse stone material as the black touchstone in the Transbaikalian region or the pebbles of greenstone varieties on the Yenisei and in the Altai Mountains. The supporters of this theory argued that as a result, the production of fine, thin flakes, which formed the basis for the perfect finishing of stone tools by secondary working, could not develop here. This point of view cannot be accepted for the reason that in later Neolithic times there existed in Siberia a fully developed Neolithic technique of stone processing that was not less, but perhaps even more, perfect than that of Europe. As completely developed were the secondary working methods, in particular those which were frequently applied to the same "coarse material" that was available to Palaeolithic craftsmen. Thus, it was not the material but the needs of man that determined the techniques in the production of implements as well as their form, and even the selection of the material.

But what were these needs? Were they concomitant with evolutionary inertia, with traditions formed in the course of millennia? Or, on the contrary, were they the result of a change caused by the replacement of the old inhabitants by new ones with other and different traditions, customs and inclinations? While both viewpoints have some weighty facts in their support, however, upon closer scrutiny they meet with substantial refutation.

Militating against the first hypothesis is the fact that actually it is not possible to establish a direct evolutionary connection between the inventory and the specific stone-carving technique of Malta and Buret, and the types of implements and production techniques which are characteristic of subsequent times. It is, for example, inconceivable how the more perfect prismatic nucleus could evolve into a disc-like nucleus of a more ancient type, or the end-scrapers into the much coarser scrapers of the Mousterian type. The second viewpoint is supported by the great and real similarity between stone implements and production techniques of the Siberian Palaeolithic and those of Eastern Asia. In spite of this evidence, however, such specific objects as the leaf-shaped points or oval scrapers, and the flat bone harpoon, which were so characteristic of the Siberian Palaeolithic, are nowhere to be found in the Palaeolithic remains of Eastern Asia. Clearly, all these articles developed independently and locally in Siberia. All these facts, taken together, indicate that the situation was actually far more complicated than was assumed earlier. It is evident that the followers of the theory of direct evolutionary development, who assumed that the "mixing" of the elements of the material culture of different times or stages, which characterizes the Late Palaeolithic of Siberia, was due to the survival of very archaic cultural elements of local tribes, to their strong conservatism, and to the fact that they preserved the techniques of the remote Lower Palaeolithic past much more stubbornly and persistently than their contemporaries in the West, were just as wrong as their opponents, who ascribed this fact to the impact of

different cultural and ethnic groups. The latter also developed essentially the same viewpoint in regard to the greater backwardness of the Siberian Palaeolithic tribes as compared with European tribes, but expressed it even more definitely in a more accentuated, even tendentious form. According to this viewpoint, which was formulated most emphatically and distinctly by the Abbé Breuil in regard to the Palaeolithic period of China, the deep interior of Asia was considered as a region where ancient forms were preserved from time immemorial, where stagnation and inertia prevailed, in contrast to Europe where cultural change occurred rapidly.

It is easy to see that such an exposition of this viewpoint is not only superficial and unfair, but is outright offensive in regard to Asiatic nations, and that it expresses basically the imperialistic conception which is refuted by the whole history of Asiatic nations, and in the first place by that of the Chinese people.

Indeed, a more profound and objective study of the monuments of the Palaeolithic period of Siberia, as well as that of Eastern Asia, reveals a markedly individualistic, and yet undoubtedly progressive course in the development of Asiatic tribes of remote antiquity, which has to be approached with other measures of classification and evaluation than those that are suitable for the Palaeolithic period of Western or Eastern Europe. This holds true from the point of view of the uniqueness of this historical course, as well as from the standpoint of the peculiar contribution of the ancient inhabitants of Northern and Eastern Asia to the culture of the Stone Age.

By analyzing the types of stone products from the Siberian Palaeolithic monuments, not in a static but in the dynamic manner of their development, it is not difficult to see that from the original, insufficiently formed, scraper-like products of the larger type which are characteristic of such settlements as Malta and Buret, there evolved gradually more precisely formed and technically better finished implements of an "archaic" type which have been discussed above. In addition, while at the beginning these large objects were represented only by relatively few examples, their quantity increased persistently in the course of time until finally they far exceeded in number all other types of stone implements. In the inventory of the Late Palaeolithic period of Siberia are evident, then, not the technical traditions of the Lower and Middle Palaeolithic periods, not the relics of remote antiquity, but the signs of new growth. We witness here not stagnation and backwardness, but a lively, irresistible development of such an originality that it cannot be made to fit into the ordinary scheme of Western European classification.

Evidently, the cause of such an individual development should be sought in the field of those necessities of the life of primitive hunters which were served by the given types of implements. These tools could hardly be used for work connected with the processing of soft materials including furs and hides. They seem to be closer to woodworking tools, since they possess a massive and durable edge suitable for cutting and planing operations. The fact that the cause of the development of the stone inventory characteristic of the Siberian Palaeolithic is to be found in the necessities of techniques and economy, is indicated by the presence among Siberian Late Palaeolithic implements of axe- or adze-like tools which were found in the Altai Mountains, in the Yenisei, Angara and Lena valleys, and in Transbaikalia. Within the persisting Palaeolithic technique there developed progressively a process of forming large choppers of a new type, of implements which were later transformed into real axes and adzes of the advanced Neolithic culture.

Simultaneously, there came into being and flourished in Siberia, earlier than in many other places, a peculiar hafting technique for the production of working tools and weapons. At the sites of Verkholskaia-Gora at Irkutsk and of Oshurkovo near Ulan-Ude, there were discovered excellent bone points with deep grooves for the insertion of sharp flint blades. Consequently, such products combined the flexibility and elasticity of bone and horn material with the durability and hardness of flint.

As a result, they had indisputable advantages over plain stone attachments and stone knives, as well as over bone products without inserted stone edges.

The dog, the first domestic animal of hunter tribes, appeared in Siberia earlier than in other countries. The use of fish as food on a fairly large scale also began relatively early in Siberia. On the Angara at Verkholskaia-Gora and on the Selenga at Oshurkovo, there were found exquisitely finished harpoons of Azilian type, made of common deer horn. At Oshurkovo, together with such harpoons, numerous fish bones were found, indicating that fishing played an important role in the economy of the inhabitants of this settlement.

However, in the process of such progressive development of the definite forms in which cultural evolution took its course, were also reflected the historical conditions under which the Siberian tribes of the Old Stone Age had lived for centuries, as well as those events which took place in this part of Asia.

The fact that the culture of the ancient inhabitants of Siberia developed along similar lines to that of their contemporaries in the West, in the basins of the Danube, Dnieper, Don and Volga, and then, seemingly suddenly, turned in another direction, is undoubtedly not accidental, but is of great significance in the history of Europe and Asia.

This can be explained by the fact that the Siberian tribes originally led the same kind of life as those in the West, had relations with them, and possessed basically the same culture. Then, toward the very end of the Glacial period, the tribes--small in number and scattered over the vast expanses of Siberia--lost their connection with those in the West, and, separated from them, developed in the course of a long period of time an individual life and, in many respects, a different culture. The types of stone implements, combined with the techniques evolved, reveal the satisfactory results obtained by the Palaeolithic hunters. Toward the end of the Palaeolithic, at the time when in the West the process of developing the so-called microlithic technique was in progress, and when the necessary implements were produced mainly by cutting parts of knife-like plates into definite forms, the basic method of shaping stone implements in Siberia was the breaking of large pebbles into two parts, or the striking off of large flakes from the surface of archaic, disc-like nuclei which resembled Mousterian cores.

Simultaneously, under the influence of an isolated existence in the vastness of Siberia and the Far East, there emerged here a specific physical type of local inhabitants. As anthropologists assume, the basic races of contemporary humanity appeared during the Upper Palaeolithic: the Negroids in Africa and adjacent areas of the Mediterranean and also in southeastern and southern Asia, Europeoids in Europe and, finally, Mongoloids east of the Urals. At a time when local remains of the Upper Palaeolithic hunters discovered in Europe reveal mainly an ancient Europeoid type--in a broad sense, a Cro-Magnon one--new archaeological and anthropological data indicate the existence already of definitely Mongoloid features in the inhabitants of eastern Asiatic regions in very early times. A statuette of a woman found at Buret in 1936 has a carefully modelled face with distinct Mongoloid traits. It exhibits narrow, characteristically slanted eyes, a low, almost flattened nose, and pronounced cheek-bones.

In 1937, the Palaeolithic strata of Afontova-Gora at Krasnogorsk yielded fragments of the bones of the hands, a skull fragment, and part of the frontal bone. The latter find was studied by Debets. A markedly depressed nasal bridge indicates a Mongoloid character, and made it possible for Debets to assert that the Upper Palaeolithic inhabitants of Afontova-Gora belonged, in a broad sense, to the Mongoloid Race.

Thus, the scarce data which are available to palaeo-anthropologists at present seem to indicate that the Palaeolithic inhabitants of the Baikal region and of the

Middle Yenisei were Mongoloids. Here the influence of the neighborhood of those regions of Eastern and Central Asia, where, according to Soviet anthropologists, the Mongoloid Race had its origin, could become evident. In this regard, it must be noted that the cultural development of the Late Palaeolithic inhabitants on the territory of the Mongolian People's Republic can be traced basically in the same direction as in Siberia. For this reason, all of this immense territory of the Late Palaeolithic may be boldly designated as the "Siberian-Mongolian" cultural region.

Considering the paucity and fragmentary nature of the finds, however, it would be risky to apply everything that has been said above about the physical type of the ancient inhabitants of Siberia to the entire territory. It is quite possible that the inhabitants of other regions, particularly those of the Altai and of the Minusinsk basin, belonged, on the basis of their anthropological type, to the Europeoid and not to the Mongoloid Race as early as Palaeolithic times. As we shall see later, the palaeo-anthropological material of later epochs favors this assumption.

In general, the end of the Upper Palaeolithic appears to be that all-important stage in the past of Siberian nationalities and of those of our Far East, when their ancestors branched off from the rest of humanity and formed a specific physical type with a characteristic culture all its own. This was the second significant stage in the ancient history of Siberia. Its third stage coincides with the time when new Neolithic settlements became widespread.

## II. NEOLITHIC PERIOD

The Neolithic is the following and extremely important stage in the history of culture and ethnic relations in Siberia and the Far East.

The transition to the Neolithic in Siberia, as in all other parts of the world, was marked by a considerable development of the productive powers of ancient people, which was connected with the use of new techniques, the appearance of new types of tools, and the invention of the bow and arrow in the first place. The latter preceded everywhere the polished tools at a time when pottery was still absent. The Early Neolithic in Siberia and the Far East, however, has so far been little studied.

In the Baikal region, the earliest local Neolithic sites which, in one way or another, correspond to the Late Mesolithic settlements of the West, include a few graves of the Khin stage. Here were found flint arrowheads, archaic in form and workmanship, which were flaked only on the lower and upper end. Their characteristic feature is a concavity of the base and a projection on one side which thus forms a sort of tang. One encounters such arrowheads everywhere in sites which date from the closing stages of the Palaeolithic (Epipalaeolithic) and in the earliest remains of the Neolithic.

During the time to which the sites of the advanced Neolithic period belong, those which include polished stone implements and pottery vessels, several successive stages of the Neolithic culture followed on the territory of the Baikal region, which has been studied more thoroughly in this respect.

The first and earliest among them, the Isakovo stage (fourth millennium B.C.), is known by the material from several graves in the Angara Valley. The largest burial ground, which has also yielded the richest finds, was discovered near Ponomarevo, and, like the majority of other Neolithic cemeteries of the Baikal region, it is located on a promontory at the mouth of a deep gorge. These graves were completely lined inside with slabs of limestone which forms here the basis of ancient terraces. In the graves were found bones only of forest animals, mainly elk, roe deer and beaver. Judging from the remains of the fauna, the people who buried their dead on the Ponomarevo promontory lived in the depth of the taiga and were typical hunters. Here were found bone spearheads, excellent as to workmanship and size, which were provided with sharp flint edges made of especially dented knifelike plates. Together with them were lying large stone arrowheads formed by a typically Neolithic technique: bilateral finish, with a characteristically shaped head in the form of an asymmetrical swallowtail, one end of the fork being longer than the other. The bow was of wood, probably simple. The people of these times also used excellently finished adze-like woodworking tools made from a special kind of slate, household knives of similar slate and nephrite, various scrapers, bone pins and needles, awls, and other products.

Ceramics from the graves of the Isakovo period indicate that the art of pottery had appeared only recently. In vertical cross section, the vessels are of the simplest parabolic form. The outer surface is covered with textile imprints of finely meshed nets, of which there are preserved distinct traces of quite thin, tightly twisted thread and knots. The people of the Isakovo period decorated themselves with wild boar tusks which they placed on their foreheads, in the fashion of a diadem, and also with pendants of deer teeth. In general, the Isakovo graves yielded extremely archaic material. The large oval scrapers resembled Late Palaeolithic types. The widespread use of mammoth bones and the type of bone spearheads also

recall the ancient Palaeolithic cultures. They undoubtedly reflect the traditions of remote antiquity, indicating that in the Baikal region there continued to live in Neolithic times, as before, the descendants of the Palaeolithic inhabitants of this region, the direct heirs of the latter's culture.

The Isakovo culture was followed by that of the Serovo stage (fourth-third millennia B.C.) when, together with persistently preserved traditional features, new ones heretofore unknown emerged.

In the stone and bone inventory of the graves, particularly in the pottery, there were now evident signs of considerable progress. The ancient vessels of simple undivided form were replaced by new types with pronounced necks, edges and bodies. There appeared original vessels--jars with lugs for suspension. Widespread was the pectinate--dotted, straight line--geometric pattern of ornamentation.

The hunting equipment improved considerably during the Serovo stage. In the graves on the Angara and Lena were discovered long bone plates, the linings for bows. The Serovo bows appear to be the oldest true examples of bows in the world, made of bone and wood, and are the earliest predecessors of the composite bow. In addition, there were excavated well-shaped representations of fish, mainly turbot, infrequently salmon or gang fish (sterlet), made of various, sometimes rare, stones. Exactly the same types of fish figurines were used by various tribes of the North, i.e. the Evens and Evenkis, Eskimos, Nentsi and Koriaks, as bait in fishing with harpoons under ice, luring fish to the hole where the hunter was waiting.

The Serovo settlements had the appearance of seasonal camps with hut-tents of which the ring-shaped hearths built from boulder stones remained intact. Sometimes more solid structures with a base sunk into the ground were encountered. The remains of such a dwelling were discovered at the well-known site of Ulan-Khada on Lake Baikal. A remarkable feature of the interment in the Serovo period was the relative uniformity of the grave furniture. In the majority of the graves there were: a pottery vessel, bow plates, arrowheads, polished adzes, knives, bows and arrows. The latter were found equally in male and female graves. This circumstance brings to mind the female warriors and active female partners in hunting expeditions of a number of Siberian nationalities of the past.

The Serovo burials and other monuments of that stage furnish interesting and valuable material for the understanding of the spiritual culture of the Neolithic tribes of the Baikal region, as well as for the characteristics of their beliefs and art. The first place in art is taken by the realistic representations of animals, mainly elks. There also emerges the straight-line ornamentation of a distinct style for which a combination of horizontal and vertical lines, as well as symmetrically arranged groups of short incisions, are characteristic. The burial ritual of the Serovo period reflects indirectly the ideas of close family relationships and of the "transmigration of souls." Of great significance in the religion of these ancient hunters was the cult of the elk.

In general, the material of the Serovo stage, at its peak, expresses vividly a ripe and individual culture of the forest hunters of the Baikal region.

The graves of the Kitoi stage, which succeeds the Serovo period, are distinguished by a specific feature of the burial ritual--the custom of scattering red ocher over the dead and sometimes of filling the entire pit with ocher mixed with sand or earth. Among the various, frequently excellently made products which were found in classic Kitoi graves, as well as in a number of other graves (at the Cyclodrome in Irkutsk, at Rasputino on the Angara, and at Zhigalovo on the Upper Lena), there are composite hooks of a peculiar kind that have at the end of the shank a semi-lunar shaped enlargement of the head. Such hooks were placed in almost every grave; this indicates the increased significance of fishing.

The characteristic feature of the Kitoi graves, which are located near the sources

of the very valuable raw material of this period--green nephrite, the original deposits of which are known to be in the adjacent Saian Mountains, is the great quantity of nephrite products they contain, among them unfinished blocks. It is not impossible that the use of nephrite as a means of exchange was of great importance in the life of the tribes or clans who lived in the Kitoi Valley and adjacent areas, similar to the primitive barter trade which once left its mark on the life of a number of tribes of North America and Northern Asia, which "specialized" in trading products peculiar to their territory, or in simply carrying out the role of middlemen.

Simultaneously, one observes new facts which point to some important dislocations in the internal social life of the population of the Baikal region. Next to graves with an "average" quantity of burial articles, there appear individual graves with particularly abundant finds, as well as graves with a poor inventory.

The Kitoi stage of the Baikal Neolithic period (third and beginning of second millennia B.C.) is still completely within the limits of the Neolithic. There are no traces of metal dating back to those times.

During the time when, in the course of millennia, this original culture evolved on the shores of Lake Baikal, on the Upper Lena, Angara and Selenga, the local tribes of the Amur Valley of the Soviet Maritime Region developed a culture and history of their own. The most ancient traces of human activity on the Middle Amur, in the area of Blagoveshchensk, are stone products that are in many ways similar to the Late Palaeolithic objects found in Eastern Siberia and Eastern Mongolia.

On the Lower Amur, in the environments of Khabarovsk near Osipovka settlement and the Amur railroad bridge, on a high ancient terrace on the left bank, there were found in an argillaceous stratum the remains of fireplaces built of cobblestones, and also laurel-leaf spearheads or knives, retouched with a technique reminiscent of the Solutrean flint-knappers, pointed scrapers, lamellae, and typologically Acheulean choppers, with edges suitable for cutting. These finds belong to a very early stage of the Neolithic, to the Proto-Neolithic or Mesolithic. The most ancient traces of man in the Maritime Region are stone objects discovered in 1953 near Osinovka in the Voroshilov-Ussuriisk Raion. These were found on a high hill near the old overgrown bed of the Osinovka stream which, in ancient times, must have been considerably wider and abundant with water. The first inhabitants came to Osinovka when the hill had no soil cover. They settled on the wind-eroded surface of the granite. The stone objects lay in a reddish stratum, which stood out sharply against the background of the light yellowish clay which covered it. It is very probable that this layer corresponds to the lateritic deposits which formed as the result of wind erosion during sub tropical climatic conditions. When the site of the ancient settlement was cleared, the excavators deduced a characteristic picture of the working life of the ancient inhabitants of the Far East. In the center stood an anvil block of hard quartz covered with numerous hollows--traces of long, laborious work. Around were strewn stone chips used for making tools.

There were also found many complete tools made in this primitive workshop. These were strange objects flaked from large river boulders of a dense greenish mineral. One end of the boulder was hewn by a number of strong, skillful strokes and thus transformed into a broad, massive edge resembling contemporary axes or choppers. The other end, serving as a handle, preserved the nodular core. With similar crude tools, it was possible to split bones, to cut trees, to dig earth, to collect edible roots, and to kill game. Tools of such shape are not known west of the Urals. They do not even exist in neighboring areas of Siberia. However, it is interesting that they resemble in form and method of production such chopping-tools made from boulders as those known from the Stone Age of China, and of even more remote regions of Asia, as far south as Burma and Indo-China. The Osinovka finds

precede the Maritime Neolithic, and may be attributed either to the end of the Palaeolithic or to the beginning of the Mesolithic.

The same imprint of individuality and at the same time of definite similarity with the ancient cultures of neighboring Eastern Asia is also evident in the culture of later inhabitants of our Far East.

In 1955, during the excavations on the same Osinovka hill, there appeared on top of the ancient cultural layer a second and more recent stratum. This belonged to other people and to another cultural-historical epoch, the New Stone Age. These people who were separated in time from the life of the original inhabitants of the Osinovka hill by several millennia already knew how to produce smooth adzes and axes from stone. They learned how to make pottery vessels of good appearance for those times. They possessed spears with heads made of stone, and, what is more important, bows and arrows.

The most significant and abundant finds of that period were discovered near the mouth of the Tetiukhe River. High on a promontory, at the confluence of two streams, stood an extensive settlement of ancient hunters and fishermen.

As the excavations of 1955 have shown, many generations of hunters and fishermen lived on the Tetiukhe hill, and each one left behind traces of their activities and remains of their culture. On the very bottom of the loose deposits on the terrace cultural remains were lying, which prove that the first settlers must have come here with an already high culture of an advanced Neolithic phase.

Together with excellently polished stone products, arrowheads and knives, exquisitely finished by fine retouching, lay fragments of large pottery vessels with flat bases. The upper part of the sides of these pots was decorated with a simple but effective pattern suggesting a broad band woven of ribbons of fabric or leather.

Vessels of this kind are unknown in the taiga region of Siberia; however, pots, similar in shape, were used some 4000-5000 years ago by the Neolithic tribes of southern Mongolia and in northeastern parts of China.

The people of the lower horizon of the Tetiukhe site also made superbly finished, one-sided stone adzes which were convex in cross section, and perfect arrowheads similar in form to those of the Baikal region. They possessed bone or wooden daggers, knives, and spearheads with attached points made of carefully finished stone plates. According to the cultural level, this was already a fully developed Neolithic culture, attributed to the third-second millennia B.C.

After a thousand years, that is, about 4000 years ago, significant changes occurred in the life of the ancient Tetiukhe inhabitants.

The first sign of something new in their life was a change in the character of the settlement itself. On the site of the ancient hunters' camp there grew a large settlement, a veritable village of Stone Age times. This settlement consisted of a number of solid, permanent dwellings. On the Tetiukhe hill were found intact the remains of more than two dozen such dwellings, each one with a surface of about 100 square meters.

During the excavation of such a pit, it was found that on the sides of the rectangular trench dug into the ground there were deep holes for food storage, and in the middle several small hearths.

Of especial significance was a second, adjacent dwelling, whose floor was raised by two steps around the central fireplace. On the steps were lying stone objects, among them excellently finished stone adzes. These objects were not scattered around in chaotic disorder as it might seem at first glance. On the contrary, there was a definite order in their distribution, connected with the arrangement of the work and life of the inhabitants of the dwelling.

In one place were concentrated stone spearheads; in another small flint flakes struck during the production of tools. On the step benches of the dugout had been

placed flat-bottomed pots. When whole these vessels stood vertically, but tumbled on their sides after the dwelling was abandoned, and were then crushed by earth. The walls of the house consisted of posts set vertically all along the edge of the pit; many of them placed closely next to each other were still preserved.

Thus, we are confronted here with an unexpectedly expressive picture of the life of an ancient community of the Stone Age.

The first excavated dwelling on the Tetiukhe hill was one where the life of a household took place. Here were peculiar stores in the form of pits where the Stone Age men kept their food reserves. Here also food was prepared on fireplaces built especially for this purpose.

The adjacent second dwellings served other purposes. Judging by ethnographic analogies, there were wide steps or benches around the central and only fireplace of the house. On these benches sat and worked the inhabitants of the dwelling. Here they fashioned the stone implements, among others, dart heads or harpoons. Incidentally, the master occupied a definite place--east of the hearth. It is very probable that elderly men occupied the lower benches, younger ones the upper benches. The once-whole pots also stood on the benches. This dwelling thus seems to have been a council house, a place for assemblies. Such homes were thoroughly studied by ethnologists among many other tribes of Northern Asia and America during the eighteenth-nineteenth centuries.

The appearance of such settlements, where more than 100 people lived permanently or for a long time, was connected with important changes in the productive forces and economics of the population of the Far East.

These tribes, one of which lived on the Tetiukhe promontory, did not use metal and still belonged to the Stone Age, but among them appeared the first signs of a progressive economy, the beginnings of crop cultivation. This is indicated by the numerous remains of grain pounders and querns. Relations with neighboring territories and countries became closer and more extensive. For example, from the distant Baikal region was brought an adze made of the semi-precious nephrite. Particularly remarkable were decorations in the form of long, cylindrical beads and curved pendants, resembling boar canines. These objects disclose relations of ancient maritime tribes with the population of the coast of China and Korea. Relations with tribes in China and other Asiatic regions are also indicated by the fragments of clay vessels. The Chinese evidently knew these tribes under the common name *Su-shên* (Sushen or Sishen).

The whole mode of life of these Far Eastern tribes of the third and second millennia B.C. was at the same time markedly distinguished from that of the taiga hunters and East Siberian fishermen, who did not know a sedentary life, did not build permanent dwellings of the semi-buried type, did not possess flat-bottomed, clay vessels, and decorated their pots which had sharply rounded bottoms in an entirely different style of geometric, the straight-line pattern.

Their neighbors in the Amur basin, particularly in its lower part, below the present city of Khabarovsk, lived basically in the same way as did the Neolithic tribes of the Maritime Region.

The developed Neolithic is represented along the Amur by numerous settlements, the earliest being found on Suchu Lake near Marinsk and on the Kuenga River, near Nikolaevsk on the Amur. Among many Neolithic monuments on Suchu Lake, there appeared the remains of a large semi-buried dwelling which had its base dug deep into the ground and which had vertical walls and, on the floor, a great number of holes for posts. In the dwelling were discovered numerous characteristic objects: polished stone adzes, arrowheads, scrapers, knives, pins, sharp-pointed heads finished on the edges, maces of porous, volcanic stone, decorations or amulets, and also numerous fragments of clay vessels.

The pottery of the ancient Neolithic settlements on the Amur resembles that of the Maritime Region, and both differ radically from pottery of the Baikal region. Here, too, the vessels had flat rather than pointed or round bases, but they bear no imprints of a woven net pattern. Instead, they are covered with a pectinal-point pattern in the form of parallel vertical zigzags. Resembling closely in form and pattern the ancient "cylindrical" (ento-doki) vessels of Neolithic settlements on the islands of Japan, such vessels evidently come directly from the peculiar high cylindrical baskets of the southern regions of Eastern Asia and the neighboring islands. These baskets had the same narrow and flat bottoms, and a surface ornamented in a zigzag pattern woven of vertically arranged, narrow plant ribbons.

Pointing also toward the south are the maces of volcanic stone, the curved decorations of the Magatama type which slightly resemble boar canines, and the exceptionally rich and individualistic ornamentation. As distinguished from the traditional Neolithic ornamentation of the forest regions of Siberia and Eastern Europe, the Amur Neolithic ornamentation is fundamentally not of a geometric straight-line, but of a curved-line pattern. There prevail in it not the simple zigzag or combined horizontal and vertical-line patterns in belt-like arrangement, but complicated spirals, like those of the Maritime Region, and imaginative weaves of curved ribbons of the wattling type. Even the geometric straight-line patterns here have frequently the form of complicated meander composition. Particularly unexpected is the presence of polished red with engobé-covered vessels, the ornament on which was scratched and then painted over in black. Such an inventory of vessels reminds one vividly not only of the finds on the Japanese Islands, evidently left long before the ancestors of the present Japanese appeared there, but particularly of the remarkable Neolithic painted pottery of North China and South Manchuria, which are known from the settlements of the ancient agriculturists of the Yang-shao culture and from the Sha-kuo-t'un cave in Manchuria.

The basic occupation of the Neolithic inhabitants of the Amur region, as well as those of the Soviet Maritime Region, was fishing. Analysis of clay vessels found beside Suchu Lake revealed marine diatoms, most probably deposited during the course of food preparation; this consisted of sturgeon, possibly "Kaluga." The stone maces of volcanic origin served, evidently, as implements with which these large fish were stunned or killed. As the layers of fishbones, scales, and various shellfish found in the later settlements of the Amur and Maritime regions so clearly indicate, it was fishing that caused local tribes to assume a sedentary existence and determined their characteristic way of life.

The third great group of Neolithic settlements that reveal a new original culture was recently discovered in Yakutia. As was the case with the Neolithic period of the Baikal and Amur regions, the settlement of Yakutia is divided chronologically into several stages which succeeded each other during the course of many centuries. In the south of Yakutia, the earliest Neolithic finds are encountered in IUedei on the Oi-Muransk channel and on the Kullata River, 40 km. north of Yakutsk, and in the north of the Yakut ASSR, on Wolba Lake, 20 km. from Zhigansk, almost on the Arctic Circle.

Characteristic for the IUedei and Wolba sites are the archaic retouched arrowheads which are crudely worked on the greater part of their surface, and only partly finished along the edges. On the shores of Lake Wolba and other lakes in the neighborhood there was discovered a whole group of Neolithic settlements which exhibit the specific mode of life of fishermen during two stages of this period.

After these Early Neolithic monuments of the type of the IUedei site, follow others among which the settlement at the mouth of the small stream known as Malaia Munku (Malaia Cherepanikha) near Olekminsk is typical. This site is located deep in the river valley under the lee of a high, ancient terrace. During the excava-



tion, there were unearthed in the upper turf layer small hearths and next to them fragments of clay vessels of the Early Iron Age. Below lay the basic Neolithic stratum. Judging from the rich inventory, the inhabitants of this settlement lived by hunting and fishing. On each square meter of excavated surface there was found at least one stone arrowhead. Fishing was done with bone hooks of the sectional type, and also with harpoons.

The stone inventory of the settlement contained, in addition to axes of the Baikal type (axes with handles), paddle-shaped axes and adzes with short arms on the handle, which are unknown in other parts of Northern Asia, but partly resemble similar implements in Southeastern Asia and on the American continent.

The inhabitants of this settlement achieved high perfection in processing stone by all methods known in the Neolithic period: ordinary finish, striking and chipping, sawing, drilling, and polishing. They also had at their disposal an excellent raw material supply: black chert, flint of milk-white, red and other colors, and various crystalline minerals. They made articles also from the semiprecious nephrite. As distinguished from the implements of the Baikal region, the knives, axes and adzes from the Middle Lena were fashioned not from dark green, but from white, nephrite. The types of nephrite objects, particularly the decorated ones, were likewise different from those of the Baikal region. In Yakutia, on the Vitima River, was located probably not only the local source of the valuable raw material, but also a separate production center of nephrite articles, independent of the Angara-Saian supply.

These craftsmen also made pottery vessels with the characteristic pointed base. Their pots often had the same cone-shaped base as Scandinavian vessels found in shell-middens. The surfaces of many vessels were covered with textile imprints, that is, with imprints of a mallet covered with a fabric or with threads of plant fibers. The pattern was simple and geometric, and only the ornamentation on the handle differed markedly from the rich and generously applied decoration of the Late Neolithic period of the Baikal region.

The sites of the Munku type were followed by settlements of a type excavated on Ymyiakhtakh Lake in the Sottinsk stratum of the Ust-Aldanskii Raion of the Yakut ASSR, 60 km. northeast of Yakutsk. This was a typical site of lake fishermen, to which they came periodically in the course of a long period of time, during which a cultural layer of a thickness of 60-70 cm. was built up. The cultural remains were concentrated in the accumulations of ashes around the small hearths.

As compared with the finds on the Munku site, the pottery here is represented by only a few, uniform samples. Instead of the former textile-ornamented pots, there prevailed pseudo-textile ceramics with the simplest linear cut pattern in the form of triangles suspended from a band.<sup>1</sup> There are some fragments of a smooth vessel with an applied molding. Significant among the stone inventory are arrowheads with straight and oval bases, and also nucleus-like, polyhedral cutters.

In the cultural layer, there was an abundance of fish bones among which were found bones of an elk and of a human being equally burned and chopped, which suggests cannibalism.

During the Neolithic and the following period, rock paintings attained a particular development in Yakutia. The most remarkable representations are the numerous red paintings on Suruktakh Khaia rock in the valley of the small stream of Markha which joins the Lena below Olekminsk. These petroglyphs are dated from the objects found at a sacrificial place. On top were lying Iron Age arrowheads; below, Bronze Age objects; and still deeper, Late Neolithic arrowheads and scrapers, flakes, mother-of-pearl beads, and fragments of needle cases ornamented with straight, incised lines. Thus, the beginning of the worship of Suruktakh Khaia rock must be attributed to Late Neolithic times.

However, the oldest representations on the Middle Lena must be considered to be the portraits of an elk on a rock near Churu, and other such representations similar in style, which are distinguished by their realistic, masterful execution, and by the dynamic and lifelike presentation of the form of the animal body. Later on, one observes a prevalence of schematic designs and a loss of the former realistic features.

In spite of the existing similarity between the culture of southern Yakutia and that of the northern part of the Yakut ASSR, certain peculiarities of economic life prevailed in the latter in Neolithic times, which partly influenced the then existing material culture. The successive changes of the Neolithic stages developed their own specific chronology.

Beside Lake Yolba and on neighboring lakes in the Zhigansk Raion, there was encountered a whole group of Neolithic settlements characterized by the specific mode of life of fishermen (fish smokers), which lasted through two basic stages of the Neolithic period. The earliest are the cemetery and the settlements on the hillock (bugor) between Lake Yolba and Lake Zhirkovo. The graves had no outward marks. The skeletons were lying in pits lined with red ocher, as were the skeletons from the Kitoi burial ground on the Angara and that of the Olenii Ostrov on Lake Onega in Karelia. Next to one skeleton there were found large stone arrowheads of an archaic type resembling knifelike plates partly finished along the edges. The settlement occupied the entire area of the hillock, while the cultural remains were contained in two strata. In the lower layer were found arrowheads of the same type as those found in the cemetery, and together with them, heads of a special kind in the shape of "files," that is, triangular in cross sections and worked all over. The remains of a dwelling found here had the appearance of an oval depression with almost perpendicular walls, filled with sandy soil with a considerable admixture of red ocher and stone objects. The latter were represented by a large quantity of large knifelike plates with even edges, made of black chert. The upper layer of the Yolba hillock yielded finds of another kind. Here pseudo-textile ornamented ceramics occur in considerable abundance. Arrowheads acquire the usual Neolithic shape: they are small, retouched on both sides, and have a distinctly formed stem. Widespread are burins of a new type: many-sided ones with distinct handles made of finished nuclei, while formerly primitive burins were used made of blades broken at an angle, or lateral burins made on flint flakes and retouched on the upper end,

Other settlements, contemporary with the formation of the upper layer on Yolba hillock, were found in its neighborhood. There were no traces of dwellings such as dugouts, but instead special hearth pits with ashes piled up on their edges. Such hearths could be used in summer dwellings built of willow twigs, which are known on the Amur under the name khomoran, and which the Lena Yakuts call otuu.

At this stage, and perhaps even earlier, the Neolithic tribes spread to more northern regions of Yakutia, even to the shores of the Arctic Ocean. Along the Lena, between Zhigansk and Chokurovka, there were revealed the cultural remains of wandering hunters of the tundra and the forest-tundra of the Stone Age. There were traces of temporary sites, where one or a few light, portable dwellings of the churn type were once located. Near such dwellings were discovered usually very few, and in their assortment, very limited finds: a few flakes and knifelike blades, one or two finished hunting knives resembling spearheads, one or two arrowheads, and, occasionally scrapers. Pottery was known, but sherds were extremely rare.

In addition to such places, there were found in these areas contemporary sites of a special kind. On high, rocky promontories, windswept from all sides, were thousands of stone chips concentrated in an area of not more than 15-20 square meters. Together with the flakes were also found the tools used in processing stone -- burins made of pebbles, oval or cylindrical in form, with hollows at one end.

Very few ordinary tools of a specific form, such as unfinished scrapers, points and knives, were discovered. Instead, there were many roughly worked stone blocks, a kind of semi-finished product which subsequently could be processed into any desired type of artifact. Thus, ancient craftsmen preferred to process stone, at first only crudely, eliminating the unnecessary weight of its crust and the cracked parts, in order to transport it to other more or less distant places where such workable stone was not available. Such characteristic workshops of the Lower Lena corresponded fully in type to the temporary sites of wandering hunters of the forest-tundra, who constantly changed their location according to season and depending upon the migration of game - particularly of reindeer herds.

Neolithic settlements which, in basic outline, are exactly the same as those of the Lena lowlands are known in a region far to the east of the Lena, in the Kolyma Valley. They have also been discovered in the interior of the Chukotsk Peninsula, where there existed since early times an ancient continental culture which preceded that of sedentary hunters of sea animals. Traces of the latter were found, in the central part of the Peninsula, on the Amguema River, i.e. knifelike blades and nuclei which were completely lacking at the ancient coastal settlements, but were known in continental settlements of Alaska, as, for example, at the site near the University Farm in Fairbanks. On the Amguema there were also discovered arrowheads of a leaf-like shape, superbly finished by grinding.

Ancient sites of the Neolithic forest period of Western Siberia and of the northern and eastern Urals, are still very poorly investigated. However, even the scanty material that has been found up to the present indicates that the development of ancient cultures here took its own course. It is known, for instance, that one encounters in the northern part of the Ob Basin numerous ancient settlements consisting of dugouts. These settlements were located on promontories or cliffs in swampy lake regions, and for this reason are devoid of any traces of fortification. Neither trenches nor ramparts were necessary, since the natural surroundings provided adequate protection. These dugouts were very large, in area up to 625 square meters. Such structures must have served as communal dwellings. Although in considerably smaller dimensions, dugouts continued to be used as dwellings for 3000 - 4000 years. On the Ob River they were in use as late as the eighteenth - nineteenth centuries under the name mys-khat or earth dwelling. Excavation of dugouts on the northern Sosva revealed polished and trimmed stone implements, among them chisels, knives, scrapers and arrowheads, together with fragments of thin-walled, egg-shaped pots. These vessels were usually decorated with a pectinate indented pattern, in type similar to those of the Central Ural settlements of the Late Neolithic period, about 2000 B.C.

Somewhat later, at the end of the second and beginning of the first millennium B.C., the general character of the material culture of the inhabitants of the Lower Ob region changed. The vessels became more varied in form and ornamentation. There appeared flat-bottomed pots and plates or pans. Ornamentation became richer. For the first time one observes complicated combinations of impressed, small rhomboids forming a kind of net. There appear delicate meander-like patterns resembling the Shigir designs of the Urals as well as the ornamentations of the Andronovo culture of the steppes. They are partially similar to the Neolithic ornamentation of the Soviet Far East. This similarity also extends into other branches of their culture.

As in the case of the Amur tribes, the inhabitants of the Ob region lived mainly by fishing. The Ob, with its many old river beds, channels and lakes, was for the Neolithic people a source of livelihood no less dependable than the Amur. Fishing determined not only the type of dwellings and pottery, but also other features of life, including clothing from fish-skins. At the beginning of the eighteenth century, Novitskii wrote:

All their clothing is of fish-skin, especially of turbot or of catfish, sturgeon or sterlet, from which they obtain the skin, which they soften laboriously and from which they then sew all kinds of clothing, even socks and boots. This feature the inhabitants of the Ob region also have in common with the Amur tribes, whom the Chinese of old called the "fish-skinned."

In spite of the immense spaces which separated these regions of Northern Asia, the general similarity of the mode of life and the common economic conditions created inevitably a convergent material culture of the ancient tribes of fishermen on the Ob and on the Amur.



## III. BRONZE AGE

## A. Inhabitants of the Steppe Zone.

At the end of the Neolithic and the beginning of the Bronze Age, when the various tribes which inhabited the vast expanses of the Siberian taiga, tundra and forest-tundra regions, and also those of the Maritime and Amur territories, continued to pursue their former way of life, i. e. that of hunters and fishermen, there took place in the neighboring steppes events of very great importance.

These events occurred almost simultaneously west of Lake Baikal, in the Minusinsk area and in the Altai, on the one hand, and on the forest-steppe and steppe territory of the Trans-Baikal region on the other. Evidently, it is in the west that they occurred first. At the end of the third or the very beginning of the second millennium B. C., there existed in the Minusinsk krai and in the Altai the remarkable Afanasiev culture. It was still in many ways directly connected with the Stone Age culture.

This is evidenced first of all by the form and ornamentation of pottery vessels found in great quantity in the graves of the Afanasiev period. These vessels have a pointed bottom and an elongated egg- or turnip-shaped form. On the surface they are decorated throughout, and remind one of Neolithic patterns, particularly when the ornamentation is arranged in horizontal rows or belts. Together with such vessels, there are also encountered in the graves stone objects of Neolithic forms, i.e. a polished axe, flint arrowheads, a "hatchet," and on the sites, in addition, knifelike plates and other small stone tools. As did the Neolithic hunters, the people of the Afanasiev period liked to decorate themselves with pendants made of animal teeth.

A connection with the Neolithic is apparent in the burial rituals of the Afanasiev period: the dead were interred near the rivers, in pits lined with stones; kurgans were only built later. Blood-red paint was used in the burials.

Of particular importance is the fact that in the graves of this period were found the first copper objects, and the remains of domestic animals, mainly sheep, horses, and cows. Consequently, the Afanasiev people were not only the first metallurgists of the steppes of southwestern Siberia, but also the first cattle-raisers of Northern Asia. It is true, the metal products of the Afanasiev graves are still few in number and primitive in form. They are crude platings of wooden vessels, the simplest leaf-like knives, hanging rings, and copper needle cases. However, metal was already well known and its use undoubtedly highly appreciated.

Cattle-raising was still primitive. The use of milk was not yet known, nor was the power of domestic animals used for traction. However, incomparably more dependable and lasting food reserves were now obtained in the form of herds of domestic animals. Domestic cattle also provided their owners with the material for clothing. The herders of the Afanasiev period knew how to spin wool and to make thread. Consequently, they could easily produce fabrics to replace the ancient fibers made of plants.

It follows from the foregoing that with the emergence of the Afanasiev culture of early cattle-raisers, it was the steppe region, rather than the taiga, which became the territory of an advanced economy and the center of new production methods. In domesticating animals and adopting animal husbandry, the people of the steppe progressed far ahead of their neighbors, the inhabitants of the forest and tundra.

From now on, there existed next to each other in Northern Asia not uniform or closely related, but, in mode of life and character, completely different cultures. Such proximity could not remain without far-reaching consequences for the cattle-raisers, as well as for the sedentary agriculturists of the Old World who, during the course of historical events, were soon drawn into a definite relationship with the cattle-raisers of the steppe.

Afanasiev skeletons give us an idea of the physical type of the creators of that great and unique culture which existed during the third - second millennia B. C. on the Yenisei. The remains of human skeletons of the Afanasiev culture are characterized by dolichocephaly (C.I. 74-76), markedly protruding nasal bones, a broad and low face, and strongly developed superciliary ridges. These men were distinguished by their height (1680 cm.) and rugged constitution. Their physical type reveals Europeoid characteristics. Debets sees in them the Cr6-Magnon type, or, as he prefers to call it, the Proto-European type which was widely distributed throughout Palaeolithic Western Europe.

It is very important, therefore, that there are also a number of features of western and southern origin to be found in the material culture of the Afanasiev people: (a) shells (*Corbicula fluminalis*) originating in the Aral Sea region; (b) incense pans of the "Catacomb" type; (c) traces of painted ornaments which were discovered on a vessel from the Tesinsk grave; and (d) the general similarity of Afanasiev pottery with the Kelteminar examples from the Amu-Darya lowlands. To this also belongs, apparently, the relatively well-developed metalwork and animal husbandry. All these features indicate definite relations of the Afanasiev people with tribes of the west, i. e. Central Asia, the Ural and Volga regions, and possibly the Black Sea region.

The Afanasiev stage is followed in the steppe by the Andronovo stage (about 1500 - 1200 B. C.). Andronovo sites are to be found in the Minusinsk krai, in the Altai, in Kazakhstan, and in the Urals as far as Chkalov. Traits of similarity with the Andronovo ceramics were also noted in the finds from the Amu-Darya lowlands, northern Kirgizia, and in the Semireche Raion. The Andronovo culture evolved from the Afanasiev culture--an evolution clearly indicated by the similarity of the early Andronovo (Okunev chronological stage) vessels and of their ornamentation with the Afanasiev vessels.

In contrast to the Afanasiev stage, the Andronovo is characterized not by round-but by flat-based vessels, which appear richly ornamented with meander patterns, and also by metal objects, including celts, flap-eared axes, daggers, and spearheads with collars resembling the so-called Seiminsk heads in the Volga region and the Turbino types in the Urals. Thus, during Andronovo times, local metallurgy advanced to a high level. Not only copper, but also tin and gold mining developed rapidly. The sources of tin were the ore deposits of the Kalbinsk and Narym ranges on the Upper Irtysh. The further progress in animal husbandry during the Andronovo stage is indicated, according to S.V. Kiselev's data, by the appearance of two breeds of sheep, the coarse- and the fine-wooled. Next to cattle-raising, agriculture acquired great importance in economic life, particularly west of the Altai. Agriculture determined the sedentary life of the Andronovo tribes.

During the excavations at Alekseevka on the Tobol River in the Kustanaisk Raion, there were discovered the remains of a settlement consisting of five rectangular dugouts of an area of up to 250 sq. m, which belonged to the end of the Andronovo stage. The roofs of the dwellings, evidently covered with straw and sod, rested on a series of wooden posts firmly dug into the ground; these were able to carry a great load. It seems that the walls were also built of wood. The dugouts were heated by hearths. In addition to central hearths built of stone, there were several other hearths which were probably used by other family groups. Around

the dwellings were pens for horses, cows, sheep and goats. The fact that the inhabitants of this settlement practiced agriculture is indicated not only by stone querns and hoes, but also by bronze, sickle-like, knife-cutters used for weeding planted ground. Finally, on the bottom of especially dug pits, there were found the remains of burned wheat grains and straw. The development of agriculture, cattle-raising and mining by the Siberian steppe tribes made barter possible. All these facts caused important shifts in the social order.

In order to evaluate the social relationships, one has to use the rich material furnished by the Andronovo graves. Against the background of mass burials with uniform and scanty inventory, there stand out individual burials which are distinguished by their arrangement, dimensions, and wealth of grave furniture. Incidentally, such differences could be observed as early as Afanasiev times, but they are particularly noticeable toward the end of the Andronovo stage. There appear now large kurgans of the kind investigated at Bes-Oba near Karkaralinsk. Together with large metal objects, gold ornaments were found in such graves. In the planning of interments can be discovered features that point out a natural and, for cattle-raising tribes, unavoidable development of patriarchal family communities. In the Andronovo grave near Orak, the skeletons of the dead were lying in pairs, man and woman, next to each other. The spiritual culture of Andronovo tribes is indicated by samples of their art and by monuments of their cults.

The rich geometric, straight-line ornamentation on clay vessels is characteristic for the Andronovo stage. The decoration covers almost the entire surface. It consists of even, strictly symmetrical zigzag patterns, hachured inside triangles and meanders, sometimes very fancifully combined into a complicated composition. Underlying the motif is the principle of a horizontal division of the surface into separate belts of ornamentation. At the bottom are placed rhythmic repetitions of large figures such as triangles or angles of meander elements, or of hachured triangles.

In the graves near the church in Abakan were revealed unique bone objects, consisting of two smoothly polished plates on which human faces were delicately engraved in a peculiar style. One plate bears the face of a woman, with a long, narrow nose and narrow chin, and framed in long, abundant hair. The woman wears earrings of strung beads and a necklace or an embroidered shirt collar. These articles led investigators to relate to the Andronovo stage similar stone sculptures from the Minusinsk steppe, which seem to represent deities or women ancestors.

Of particular interest for the characterization of the art as well as the beliefs of ancient tribes of the Minusinsk krai are the remarkable, monumental sculptures, i. e. panels which formerly were said to be Karasuk products, but are now dated by M. P. Griaznov as originating in Andronovo times. They are known only in the Minusinsk krai. These panels are covered with various representations, among them circles which emit rays. The most important characteristics of the Karasuk sculptures are the unique "masks" that represent the muzzle of a bull or horse, which is usually crossed by a broad belt resembling a halter. Furthermore, the Karasuk "masks" bear horns on the side and wavy bent belts extend upward, framed by short lines projecting sidewise. In some cases, in addition to the two regular eyes, a third eye is represented on the forehead. There are also sculptures with the head of a ram.

The sun cult is suggested by a construction found in Bes-Oba, which consists of a round platform surrounded by stone slabs placed like rays. The close relation of the religious concepts and practices of the Andronovo land-tillers to their agricultural mode of life is reflected by the character of the sacrificial place at Alekseevka, where there were found ritual pits filled with burned wheat.

Skeletons from Andronovo graves in Minusinsk krai and in the Altai reveal in

general a type that resembles closely the Afanasiev type, i. e. Europeoid, but distinguished from the latter by a higher cephalic index, a straighter forehead and a longer face. These traits also characterize the crania from the Andronovo graves of western Kazakhstan, and, together with the similarity of the inventories of Western Siberia and Kazakhstan graves of the Andronovo culture, indicate that the Andronovo anthropological type came into southwestern Siberia from the Kazakhstan steppes (Debets).

Undoubtedly, there were also important cultural relations between the Andronovo people of Siberia and their contemporaries who lived west of the Ob River up to the Urals and the Volga, where, in those times the Srubnokhvalinsk and Seiminsk-Turbino cultures existed, which resembled in many characteristics the Andronovo culture.

Thus, the basic area of expansion of the Andronovo culture and of Andronovo tribes was located on the steppes of Western Siberia and north and eastern Kazakhstan, while in the Minusinsk area only its easternmost branch developed.

The succeeding stage in the development of the Bronze Age culture in a classical sense is represented by sites of the Karasuk type in the Minusinsk basin on the Yenisei. This stage covers a period from about 1300 - 800 B. C.

The Karasuk stage is characterized, first of all, by the peculiar location of the graves. As a rule they are not near, but far from, rivers, on lakes and small streams in the steppes--locations suitable for cattle-raising. The very great importance of animal husbandry in the economic life of the Karasuk inhabitants of the Minusinsk krai is confirmed by the widespread custom of placing in the grave meat of domestic animals, preferably of sheep (58.6 per cent according to S. V. Kiselev). In the graves are also found the bones of cows and horses. The Karasuk people possessed camels as well as horses and cattle. The presence of the camel, provided it was domesticated, is interesting in that it indicates direct relations with the steppe regions of Central Asia and signifies the great importance of animal husbandry in the economy of the Karasuk people.

In this regard, attention is also called to the presence of an embossed representation of a four-wheeled covered wagon on a panel found in Znamenka, which indicates the considerable development of a mobile nomadic way of life of the ancient cattle-raisers on the Yenisei. These covered carts are, in principle, of the same construction as those used by nomadic tribes of later times.

A new, progressive, cultural advance of the inhabitants of the Minusinsk krai of this period is indicated by metal-working. There appear new forms of daggers, knives and other metal objects. Such, for instance, are new shapes of bronze celts which differ markedly from those of earlier Andronovo times. Variants of knives, daggers and even swords were produced, with the general characteristic of protrusions in the section between the handle and the blade. Knives had, in addition, a characteristic elbowed bend and a curved blade point. In widespread use were clippers and sickles. New types of metallic ornaments appear, among them broad and massive bracelets, rings, and paw-like pendants. The casting technique of copper and bronze products attained the level of truly artistic craftsmanship.

Simultaneously, there occurs a further growth of barter, which is reflected first in the wide distribution of metal products of the Karasuk type. One encounters such articles not only in the neighboring forest areas along the Angara or on the Upper Lena, but also in the interior of Yakutia. It is even more interesting that they can be traced far to the west of the Yenisei, to the Ural forest region (Turbinsk grave) and to the European part of the USSR (Seiminsk grave at Gorki).

The continued increase in productive power and the general progress of economic life caused a growth of the population. This is evident from the fact that the number of the dead in the graves is considerably greater than in the Andronovo cemeteries. Frequently, the cemeteries consist of dozens, even hundreds of graves.

The growth of the population resulted in a migration of the Karasuk tribes from the steppe to the forest steppe, up to the mountainous taiga region to the west and southwest of the Minusinsk basin. In these regions there now appeared local cultural centers, which are in character close to the Karasuk culture of the Minusinsk krai, although they possess various traits of their own. This phenomenon took place on the Middle Yenisei at Krasnoyarsk, on the Ob at Tomsk, and in the Altai. The influence of cultural relations extended still further, and left its imprints even on the culture of tribes living as far north as the Viliuia Valley, and also on tribes living in Kazakhstan and in the Urals.

The social order continued to develop in the same direction as in Andronovo times, that is, in strengthening the patriarchal clan order. This is indicated by the plan of large Karasuk cemeteries, where individual graves with enclosure slabs protrude above the ground to form a veritable net. Inasmuch as such graveyards contained only a small number of graves, it is possible to regard the latter as a kind of small cemetery of individual families, i. e. patriarchal family communities, united in clans.

The originality and high level of the Karasuk culture as compared with the preceding period found its clearest expression in monuments of art. Such are, first of all, examples of artistic casting represented by products of utilitarian purpose: knives and daggers covered with geometric ornamentations and carved decorations. The handles of knives and daggers end frequently in amazingly lifelike and realistically executed animal heads, mainly of rams, elks and, in fewer cases, of bulls. However, the realism of these sculptured representations, cast with great technical skill, is modified by a peculiar styling, which imitates a slightly primitive appearance emphasizing one or the other characteristic traits or details of the animals depicted.

Thus, in the works of the Karasuk casters are evident for the first time those specific features of the animal style of steppe tribes which later blossoms forth in the art of the first millennium of our era among the Scythians of the Black Sea region and Central Asia, and among the people of southern Siberia and of distant Mongolia.

At the same time, the metal objects of Karasuk type reveal a very marked similarity with the products of North China, including those found in the graves of the Yin (Shang) dynasty on the territory of the capital city of this dynasty which was founded about 1400 B.C. Not less evident is the similarity of the Karasuk vessels with vessels of ancient graves of about the same period found in districts that border North China from the northeast, in Zhekhe. To this group belong, for example, the round-based and cylindrical vessels with handles.

The theory regarding the similarity of the Karasuk culture of the Minusinsk krai with the Bronze culture of North China and adjacent steppes in Eastern Asia was first discussed by S.A. Teploukhov on the basis of archaeological material, and substantially developed and formulated by S.V. Kiselev. According to the viewpoint of the latter, during the time of the Yin dynasty, a small number of migrants from the East penetrated into southern Siberia as far as the Minusinsk krai. As Kiselev assumes, this movement from Southeastern Asia toward the north was caused by the emergence of the ancient Yin State in North China and by its pressure upon neighboring tribes which were forced to retreat northward.

The emigrants from the southeast brought with them a new, higher culture which was created in North China and which exerted a progressive influence on the culture of the basic Afanasiev-Andronovo Europeoid inhabitants of Siberia. The latter continued to live in their homeland, but mixed with the newcomers.

As mentioned before, articles of Karasuk type found their way far to the west, to the Urals (Turbino) and to Gorki (Seiminsk grave). The Mongoloid admixture,

however, is missing in the skeletons from the graves of the western Altai and northern Kazakhstan of that time. Furthermore, the culture was different here in many respects and preserved Andronovo traditions. As before, the ancient agricultural population of Andronovo times continued to exist and develop persistently its own culture. The fate of the tribes of the Transbaikal steppe and forest region took its own course.

As early as the end of the Glaskovo period, essential shifts in the economy and culture of local tribes took place. Next to the ancient vessels with pointed bases, there appear here flat-based jars which, in their pseudo-textile ornamentation, resemble closely vessels of ancient Chinese settlements of the Ch'eng-tzu-yai (Black Pottery Culture) type which preceded the monuments of the Yin (Shang) dynasty. Among the embellishments in the inventory of the Fofanovo grave on the Selenga, there are sea shells which originated in southern seas, in the area of the Moluccas and of the Japanese Islands.

Finally, together with the metal objects of Karasuk type and stone axes which are similar to those found in North China, there appear on the Selenga for the first time domestic animals, horses and cows. Thus, the Transbaikal tribes detached themselves from their more backward taiga neighbors. Abandoning the primitive hunting and fishing economy of their ancestors, they adopted a new, cattle-raising economy, and perhaps even an agricultural program.

The conditions under which this progressive change in the life of the Transbaikal tribes occurred are indicated, as we have seen, by the appearance of vessels of a new type, and by the spread of sea shells which are characteristic of China.

The influence of the highly-developed culture of the ancient agriculturists of China, where at this time hieroglyphic letters appeared in their initial form, also reached the Transbaikal region, and extended to the southwestern shores of Lake Baikal, to the estuary of the Selenga. Nonetheless, it must be noted that the original local population which had inhabited the Transbaikal region since Stone Age times continued to live as before. There is nothing on the Selenga that would indicate a mixing of the newcomers with the aboriginal tribes.

### B. Tribes of the Taiga

There exists a widespread opinion in the professional literature that during the time when the Siberian steppe tribes passed from the use of stone to that of metal, their northern forest neighbors--hunters and fishermen--remained on the level of the Stone Age. However, such a viewpoint does not convey the actual situation quite accurately. That opinion holds true only for the very distant areas of northeastern Asia, but cannot be regarded as correct for the major part of the Siberian taiga, particularly for the Baikal taiga region, where an important and characteristic culture of the Baikal Neolithic Age developed during the course of millennia.

We left off our discussion of this area at the end of the Kitoi stage, that is, at the end of the third millennium B.C. Let us see now what occurred in the Baikal taiga region, on the Angara and Upper Lena, during the second millennium B.C., when the Afanasiev culture, followed by the Andronovo culture, still existed on the steppes of the Minusinsk krai and in the Altai.

The study of the sites of the Glaskovo stage, which followed that of the Kitoi, showed that during this stage (about 1800-1300 B.C.) metal came into use in the Baikal region. In addition to stone and bone products of various kinds and pottery of Neolithic form, the earliest Glaskovo graves contained leaf-like copper knives and also small, thin blades or lamellae of the same new material, which served as decorations. The early Glaskovo graves were followed by later

ones in which are encountered, in addition to copper, bronze products of archaic but more perfected form: leaf-shaped knives with short handles, massive fish-hooks, needles, tube-pins rolled from metal plates, and some other small articles.

Simultaneously with the appearance of the first copper objects, a change occurred in the form of a number of typologically important products. Flint arrowheads acquire a straight base; there appear double harpoons (spears), bilaterally convex (symmetrical in cross section) nephrite axes, a special type of stone bars--weights for sectional hooks, pyrophyllite beads having the form of short, white cylinders, remarkable discs, and rings of white nephrite. The coming into use of objects of a new type is accompanied by the disappearance of archaic products: inserted knives, men's hunting knives (asymmetrical triangular and spear-like in shape), and also arrowheads of archaic type.

The general change in the inventory and technique ended with a marked and important turn in the economic life of the population of the Baikal region which started already in Kitoi times. If hunter burials are typical for the Serovo stage, then the Glaskovo graves with the wealthiest inventory belonged to true fishermen in whose bags various fishing equipment was placed in strict order. The great importance which the fishing industry acquired in the life of the Glaskovo people may also be judged by other indirect data. The graves were no longer oriented toward the sun as before, but toward rivers. In many cases the form of the graves resembled boats. Decorations were made of river shells, and one encounters fish bones with the dead.

Phenomena of social life evolved in a similar manner as did the tendencies which were noticeable already in Kitoi times and which became fully expressed in the economic life of the people of the Glaskovo stage. Individual burials with a wealthy inventory began to stand out more clearly and became increasingly frequent against the background of ordinary "average" burials. The case when one skeleton, a man, is accompanied by a second, a woman, becomes usual, while the inventory of each differs in its composition. Men were given articles of use in male occupations, while women were accompanied by articles for household use. Near Nizhniaia Buret, for example, was found a grave with two skeletons. On one side lay a male skeleton with various stone and bone articles, including large, dagger-like spearheads. Next to it lay the skeleton of a woman with a baby; in the pelvis of the former stuck a stone arrowhead which had penetrated her body with great force. Judging by the position of the head in the bone, the woman was felled by a shot from a bow squarely from behind at a moment when she bent or fell to the ground. The general situation of the burial leads to the conclusion that after the death of the man, the woman--his wife, concubine or slave--was purposely killed and interred with him in a common grave as a companion for the future life.

The growing economic inequality, the appearance of slavery, the transition of the matriarchal to the patriarchal order--such were the social changes that are characteristic of the Glaskovo stage in the Baikal region.

Two conditions must have been of real significance in the early development of the patriarchal system and attendant events, as has been mentioned before. The first was the fact that barter between the Glaskovo people and their neighbors doubtlessly continued to exist and to increase. Furthermore, it is very probable that the proximity of the Baikal region tribes with those of the steppes promoted the fur trade. The barter relations caused the disintegration of the original equality of tribesmen.

The second condition was no less significant. In Northwestern America a peculiar social order came into being which was based on such a laborious occupation as fishing. Individual "aristocratic" families separated themselves from among the wealthy people, and slavery spread. The Northwest Indians attained the same

level of technological development as did the Glaskovo people who, in addition to stone and bone articles, possessed copper articles of an archaic type. It is quite natural that in the Eneolithic Baikal region the Glaskovo fishermen also displayed the same basic features of life and of social culture as those of the Indians on the northwestern shores of America during the eighteenth-nineteenth centuries of our era.

These all-important changes had to be reflected in the thought, religion and art of the ancient people of the Baikal region. The prevalence of the new orientation of graves toward the rivers in Glaskovo times indicates the emergence of the belief in the departure of the dead down the river where the realm of the dead was supposed to be. This agrees with ethnographic data regarding the existence of the belief in a country of the dead which is ruled by a hideous creature, a female deity, the former matriarchal sovereign. During this period the cult of male anthropomorphic spirits develops. There appear the first shamans (graves at Anosovo and Ust-Udi on the Angara). In art a conventional schematic treatment of the subject prevails.

Being closer to the population of the Transbaikal steppes and that of Western Siberia than their contemporary inhabitants of the forest, and even more so of the tundra, the tribes of the Baikal region naturally developed their culture faster and attained greater results by reason of their favorable geographic location.

Nevertheless, the inhabitants of distant forests also were by no means in a state of stagnation. Of extraordinary interest for the characterization of their life during the Bronze Age are, for example, the archaeological monuments of Yakutia which present in a completely new light the beginnings of the Metal Age in that distant country with its inhospitable climate. As these monuments show, the tribes of the Far North did not remain forever on the level of Stone Age technique, but adopted metal and thus entered the Bronze Age.

The outstanding scientific significance of the discovery of the existence of an original Bronze Age culture among the northern tribes, not only of Europe but also of Asia, is indicated by the single fact that in science an opinion prevails to this day, to the effect that the existence of such a northern culture during the Bronze Age is held impossible. Starting from the traditional viewpoint of the everlasting backwardness of the culture of the peoples of the North, archaeologists usually explained the finds of bronze implements of ancient form which they encountered in the Far North as incidental imports from the outside, from more advanced people with a higher culture. But as soon as archaeologists began to study systematically the antiquity of Yakutia, they found that even here a genuine and very ancient Neolithic culture, which we have mentioned before, was followed in time by an ancient local phase of the Bronze Age.

Near Pokrovskoe, 80 km. south of Yakutsk, there was discovered on the high bank of the Lena an ancient grave which contained stone and bone arrowheads, flint scrapers, and a bone spearhead with inserted sharp, knifelike flint blades. According to the inventory, the Pokrovskoe grave should have been attributed to the Stone Age. However, among the stone and bone implements there was also a metal article--a small copper or bronze awl.

The very same picture was found also in other places--for example, on the Bugachan River; this time, however, far to the north of Yakutsk, beyond the Arctic Circle, in the very heart of the polar region. Next to the skeleton of an ancient hunter and warrior armed with excellent daggers of deer horn and bow and arrows tipped with stone, lay a small tube--a needle case. Inside the tube, however, was not a bone needle, as is usually the case, but one made of copper.

Naturally, one could suppose that these very simple metal articles were not produced locally but were brought from other places. However, further investi-

gative work in the polar region of Yakutia yielded new, even more important data. On an ancient site in the Lena lowlands, near Siktiaxh, far beyond the Arctic Circle, there was found intact, together with stone implements and fragments of archaic vessels, a hearth of an ancient smelter of copper and bronze. Within the hearth lay hardened metal splashes, and around it fragments of miniature clay vessels in the form of spoons in which the metal was smelted and with which the casting forms and molds for metal objects were filled.

It becomes obvious that in Yakutia the Metal Age began in very remote times, at least at the end of the second millennium B. C. The essential fact here is that this important advance in the North took place under the influence of the Glaskovo tribes of the Baikal region who lived further south on the Upper Lena. Traces of such an influence are clearly evident in the art of the population of Yakutia--in the characteristic styling of the flat anthropomorphic figurines made of bone, jars made of white nephrite, and also small "paste" beads, analogous to finds made in Glaskovo graves in Kachuga on the Lena, and on the Angara. There are also traces of a reverse influence: original bone points with a split base from Glaskovo graves on the Upper Lena, produced, undoubtedly, according to examples which are characteristic for the Middle and Lower Lena.

The peculiar character of the mode of life of Siberian forest tribes conditioned by their migratory way of life, the relative scarcity of the population, and the lack of stone marks on the surface of graves, cause great difficulties in locating burial grounds of the Bronze Age. However, we possess finds indicating that the early stage of the forest Bronze culture was also followed here by another phase at a time when the culture of local tribes attained a new, higher level.

The basic occupation of the tribes of Yakutia which inhabited the Lena basin at the end of the second and during the first millennium B. C. was, as had been the case for thousands of years before, hunting and fishing. Nevertheless, they possessed bronze celts, spearheads, and even swords which were produced on the Karasuk steppe as well as those copied from ancient Chinese types, borrowed from masters of the Yin (Shang) period. Their swords were not smaller in dimension or less perfect than the Urartu swords of Transcaucasia, and the spearheads did not have their like in size and graceful form either in Siberia or in Eastern Europe. Even more significant is the fact that these swords and spearheads were made by local metallurgists and smelters, who knew how to produce copper from ore, smelt it in special miniature crucibles, and cast the objects in clay molds made by their own hands.

The same general mode of life was followed by the descendants of the Glaskovo people, the tribes that created a rich local Bronze Age culture, and inhabited the lowlands of the upper course of the Angara. Here the graves of the Shiverskii stage coincide with the Karasuk monuments. The former are interesting in that they contained objects of art which differ radically from the Karasuk steppe types. Such are, for example, a markedly stylized figure of an elk carved from horn, and the cast representation of a fantastic "serpent." The latter was found in the grave of the leader, at whose feet was thrown the corpse of a man in a contracted position evidently with tied hands and feet.

There are found in the graves of the Shiverskii stage rings of white nephrite which show that the relations of the Baikal region with the inhabitants of the Amur region and of the forest zone of the European RSFSR, which is represented by the Turbino and Seiminsk graves, belong exactly to this, and not to the earlier Glaskovo period.

#### IV. ANCIENT TRIBAL GROUPS OF NORTHERN ASIA

The monuments of the Neolithic and Early Bronze Ages in the Siberian forest region are also interesting because they furnish a wealth of material for the study of the ethnic history of these regions. Thus, for instance, the Glaskovo period is remarkable not only because it introduces a new cultural and historical epoch--the age of the general use of metal--not only because at that time the most important changes in the social life of the tribes of the Baikal region occurred, but also because the Glaskovo sites furnish vivid evidence for the solution of the problem of tribal ethnic characteristics of that epoch, and of the relations of these tribes to contemporary ethnic groups.

The study of the Glaskovo burials supplied valuable data which made it possible to visualize and reconstruct the essential features of the clothing. The most characteristic element of the clothing of the Glaskovo people was the apron or vest, sewn and ornamented with strings of shells. In the Fofanovo grave on the Selenga was found such a vest which looked like a broad belt made of mother-of-pearly beads which reached from the neck down to the hips. In the Nokha depression on the Angara, and in some Upper Lena graves, the vest consisted of a narrower belt which lay along the spine of the dead, becoming broader at the pelvic girdle. A similar vest or apron is a well-known indispensable part of the costumes of northern Tungus and of tribes which are in culture and mode of life close to them, for example, the Yukagirs. The Tungus-Yukagir aprons of the nineteenth century were decorated with various pendants, most frequently with ringlets and rings.

Costumes of the Glaskovo period likewise had nephrite discs and large rings. The headgear of Eneolithic times can be easily reconstructed according to the position of similar traditional mother-of-pearl and nephrite decorations on the crania from the graves in the Lenkovka depression and others on the Lena and Angara. In the graves, these decorations are usually represented by bands on the forehead reaching from temple to temple. In the Lenkovka depression, the head decorations consisted of four excellently polished discs of white nephrite placed symmetrically on the forehead, occiput and the temples, while the frontal area was framed by a belt of small mother-of-pearl plates. This headgear also resembles that of the Tungus-Yukagir.

Like the Tungus and Yukagirs of the seventeenth-nineteenth centuries, the ancient tribes of the Baikal region lived in tents covered with deer skins that were equipped with stone hearths, used boats made of birch bark, and fished with artificial bait shaped like small fish. Like the Yukagirs and Tungus, they had their own characteristic art form which was based on geometric straight-line ornamentation. Among them shamans already existed, and their religious beliefs were undoubtedly consistent with those of the Tungus-Yukagirs of the seventeenth-nineteenth centuries. The social order of the Tungus and Yukagir tribes of this period appears in many ways as a further development of the order which was still characteristic in its initial form for the Glaskovo people: a patriarchal system and economic inequality among families which composed the clan, slaves, and warfare among clans.

In its turn, the anthropological material of the Baikal region graves studied by Debets makes it possible to relate the Neolithic inhabitants of this region, in contrast to the inhabitants of Western Siberia, to the great Mongoloid Race. According to Debets, the Neolithic crania of Transbaikalia (excavations by G. P. Sosnovskii in

the Ulan-Ude District and the Fofanovo grave in the Selenga estuary) should also be related to the Mongoloid type. The crania from the Neolithic cemetery in Krasnoyarsk (Bazaikh) also reveals a Mongoloid type, possibly with some Europeoid admixture.

Anthropologists observed particularly the kinship of the ancient inhabitants of the Baikal region to the contemporary Tungus and Yukagirs. Their common traits characterize the ancient Palaeo-Siberian peoples, whose features are noted also among other Siberian tribes. The essential fact is that, in contrast to other bearers of these "Palaeo-Siberian" traits, the Tungus and Yukagirs best preserved the cultural traits of Neolithic tribes, and more than that, on the same territory where the Glaskovo culture existed more than 3000 years ago.

Especially significant is the fact that in 1952, together with numerous stone and bone objects of Neolithic forms, a human cranium was discovered on the Shilka River, near Sretenskoe, in a cave near Shilkinskii zavod. A study made by M.G. Levin revealed that the Shilkinsk cranium was even closer to the Tungus than the Neolithic crania from the Baikal region proper. The territory where the ancestors of the Tungus lived during the second millennium B.C. covered, therefore, the Baikal region as well as the Upper Amur region—something that is quite natural if one takes into consideration the similarity of these areas and common natural and geographic conditions.

Comparing the rich Neolithic finds on the Lower Amur with the data which, ethnographically speaking, characterize the contemporary culture of the Amur tribes, we can say in the same manner that they coincide in a number of essential aspects, particularly economic life (fishing as the basis of their economy and semi-buried dwellings) and art.

As seen by comparing the ancient Neolithic ornamentation of the Amur region with the Nivkh and Nanai ornamentation, they coincide not only in their general curved line and ribbon character, but also in ornamental motifs such as meanders, spirals and weave patterns.

Some authorities on the national art of the Amur tribes express the opinion that its characters may be explained by its direct imitation of Chinese examples and by its borrowing of motifs from Chinese masters.

Now it becomes clear that one cannot speak of an imitation or borrowing, but only of some mutual similarity of art between the Amur tribes and the Chinese. This closeness in its beginnings might be dated even to extremely remote times, to the epoch when the Yang-shao culture (about 2500-2000 B.C.) existed in the Yellow River Valley of North China which had much in common with the culture of the Amur inhabitants.

Thus, at a time when the inhospitable Siberian taiga and the steppes of the Baikal region were settled by the ancestors of the present Tungus and Yukagirs, the mild Amur-Maritime region, in a large area of which grow wild grapes and warm climate plants, was inhabited in Early Neolithic times by other tribes whose descendants, the present Amur tribes (Giliaks and Ulchi) and their neighbors the Ainu, preserved, even until the present time, a culture with a marked southern imprint.

While it is possible to assume that the Baikal Neolithic culture belonged to the ancestors of the later Tungus and Yukagir tribes, and that the culture of the Amur tribes has its roots in the Neolithic period of the Amur, the unique culture of Yakutia, which spread from Vitim in the south over the whole expanse to the north, up to the Arctic Ocean, was created during the Neolithic probably by other tribes. The latter, one should assume, are closest (among tribes still extant) to Palaeo-Asiatic tribes.

First of all, it seems that a role was also played here by some of the ancestors of the Yukagirs, who in those times occupied undoubtedly a much larger territory

than during the seventeenth-nineteenth centuries of our time. At least, as data on the distribution of the Yukagirs in the recent past show, they must have occupied the area between the Lena in the west and Aldan in the south, the Anadyr in the east and the Arctic Ocean in the north--the more so since in the seventeenth century they were much more numerous than in the eighteenth-nineteenth centuries.

Tradition reports that: "Yukagir campfires were as many as stars in the sky; birds which flew over them changed their color in the smoke from white to yellow." In the remote past, the ancestors of the Yukagirs could have occupied even larger territories of Northern Asia, even north of Yakutsk along the Lena, within the limits of the extent of the original Neolithic culture of the Middle and Lower Lena.

According to numerous data, the most ancient settlers of the northern Ob region in Neolithic times can also be related to later inhabitants of this region, the Khanti and Mansi. This is very clearly indicated at least by the general similarity of the original Neolithic ornamentation to the contemporary style of the Khanti and Mansi, which is as definite as that observed on the Amur.

Very interesting is the fact that this culture, which should be called the eastern Ural or the Western Siberian, spread eastward far beyond the Ob. Later Neolithic sites on the Yenisei and in the Krasnoyarsk Raion show that even here there was at the end of the Neolithic period much in common with the Ural and Ob regions. For example, at the Ust-Sobakinsk site near Krasnoyarsk, are encountered fragments of pottery vessels with a Shigir-Ural type of ornamentation. Even more interesting is the discovery, in Bazaikh, of miniature representations of bears and men made of agalmatolite, which are surprisingly similar to some examples of the Late Neolithic art of the Ural and even northern Baltic regions. This leads us to the conclusion that there existed some contact between the Late Neolithic tribes of the Middle Yenisei and the tribes of the Ural region and territories still further west. The possibility that individual clans and tribes penetrated from the west to the east, whose influence would explain the presence of western features in the culture of the Yenisei tribes, should not be excluded.



## V. THE POPULATION OF SOUTHERN SIBERIA DURING THE FIRST MILLENNIUM B.C. AND FIRST MILLENNIUM A.D.

Within the limits of this outline it would be impossible to give a detailed description of the important and complicated events that took place in Siberia, particularly on the steppes, during the first millennium B.C. and the first and second millennia A.D. Therefore, we shall limit ourselves to a very condensed general review of these events, and refer those who wish to obtain detailed information to the special literature.

During the first millennium B.C., the Karasuk settlements on the Middle and Upper Yenisei were replaced by the Tagar sites (Minusinsk Kurgan Culture, according to the terminology of certain authors) which belong to the eighth-tenth centuries B.C., and which resemble in many ways the Scythian sites of the same time. It is assumed that this culture belonged to the cattle-raisers of the steppe, everywhere except in the Minusinsk Raion and on the Middle Ob.

The Tagar Culture appears in all basic features as the continuation and development of that of the Karasuk. This is indicated by the pottery, the form of metal products, art, grave furniture, general character of the economy and mode of life, and also by the social order.

The Tagar Culture is divided into a number of chronological subdivisions. Kiselev recognizes three stages of the Tagar period and dates the first one to about the tenth century B.C., the beginning of the second to the fifth century, the beginning of the third to the third, and its end to the first century B.C. It is assumed that during the Tagar period agriculture made great strides in the Minusinsk krai. Large and complicated irrigation systems were built. The channels of canals were sometimes cut in rock. Fields were tilled with hoes. The presence of permanent settlements with log dwellings fits in perfectly with the assumption that agriculture was of great significance. A representation of a similar settlement of Tagar agriculturists can be seen on the well-known Boiarskaia pisanitsa. According to the picture cut into the smooth surface of the rock, it consisted of four log dwellings. Next to them stands a yurt similar to ancient Mongolian tents with a high, narrow "neck" on top. The remains of a log dwelling of the Tagar period were also found near Krasnoyarsk.

The most important event in animal husbandry was, finally, utilization of the horse for riding. This is attested at the beginning by the bronze, and later by the iron horse-bits of early Scythian form.

In metal work one observes a definite standardization of metal products and a specialization of crafts. One encounters stores of bronze objects which are characteristic of the Bronze Age at its peak, and which are connected with its barter of metal and metal products.

The growth of barter can also be judged by the abundance of imported decorations, such as glass beads of various colors and real paste beads made of so-called glass paste. These beads were made in the Mediterranean areas and in the countries of the classic East. On the Minusinsk steppe they were undoubtedly considered to be very valuable. As a result of the growing barter with advanced countries where the use of iron spread during the second stage of the Tagar Culture, iron appears also for the first time in the life of the inhabitants of the Minusinsk basin. In the third stage, iron as a raw material for tools replaces bronze completely.

In Tagar times, the social order of the population of the "krai" is characterized

primarily by the persistent combination of male and female graves, while at the same time a marked difference between male and female grave furniture can be observed for the first time. For women, mainly household articles were placed in the grave and weapons for the men. Infrequently one encounters graves of armed women-warriors. But, in general, all available facts indicate that the family was headed by a man. In family graves hidden under the Tagar kurgans, male graves always occupy the principal place, in the very center of the kurgan or under its highest northern part.

According to Kiselev, a combination of numerous ordinary kurgans with graves for the mass of relatives, and grandiose kurgans for the most important members of the patriarchal clan, was typical for the second stage of the Tagar Culture. One such kurgan, the Salbyk, attains a height of 70 m. with a circumference of 250 meters. It is fenced in with huge stone slabs and pillars.

Later, during the third stage, there appear kurgans which are collective tombs and in which are also present separate burials with the symbols of dignity and eminence. Burial masks were found. There are also indications of a growing development of arms and military art among the ancient Tagar people. Thus, for example, among accidental finds in Minusinsk there were only fifteen Karasuk daggers, but 230 Tagar pieces of this kind. Excavations revealed Tagar graves of warriors with daggers, battle-axes, bows and arrows.

It follows from the foregoing that under the conditions of a developed patriarchal clan order, the clique on top of the ancient patriarchal communities and clans acquired its final form and more and more power. Under the new conditions, unique features appeared in art, reflecting a kind of cult of naked power. There emerges an "animal style" with its inherent dynamism and monumental power.

The tendency to stylization expresses itself most vividly in the decorative deformation of the animal body and of its parts. The torso of the animal is bent in the form of a circle ("rolled-up animal") and becomes unnaturally elongated or widened. Its separate members, like paws and claws, are transformed into rings, the head is elongated or bent, and the neck is decorated with attached heads, including those of birds. With time monstrous and fantastic creatures appear.

There emerged definite techniques of conformity, a kind of pattern, after which various types of animals were shaped. Such is the traditional pose of the "rolled-up animal" for predatory animals. The deer was represented in the same stereotyped pose with the characteristically flexed legs and with the head and antlers bent back toward the spine.

All of these new features developed on the ancient Karasuk culture, but now in a continuous and lively interrelationship with the art of classic Scythia (European as well as Central Asiatic, the Sacae). The latter, in turn, was connected with the Near East and the Mediterranean. In this manner, a basis was established for the great cultural syncretism of the first millennium B.C., that amazing cultural community which, in Scytho-Sarmatian times, comprised the whole of the immense belt of the steppe, and partly forest steppe, which extends from the Amur and Khuankhe in the east to the Caspian and Black Sea in the west.

The basic subjects of this art are representations of animals, most frequently of the horse, elk, mountain goat, reindeer, boar, and also of predatory animals, the lion, leopard and bear. An important place among these subjects is occupied by birds of prey, the eagle or vulture, and also the fantastic "griffon." The characteristic feature of the Tagar animal style was the combination of realism with an expressive stylization of the animal forms which already had its beginnings in Karasuk art. With time one notices a definite tendency toward ornamentalization of the subject and conventional forms, toward openwork representation and, at the same time, a loss of its realistic and concrete appearance.

During the first millennium B. C. , the population of the Altai passed through a stage unique in many ways, although similar to that of the Yenisei people.

The first phase of the advanced Bronze Age of the Altai, which followed the local Karasuk phase, is called "Maiemirsk" by Griaznov. Then follows a series of monuments, the most outstanding of which are the Pazyryk Kurgans. For this reason we shall discuss them in greater detail.

In 1929 the Altai Expedition of the State Museum of Ethnography under the leadership of S.I. Rudenko began excavations in the Pazyryk Valley which is situated 1650 m. above sea level in an Alpine setting. Here were found five large stone kurgans arranged in a line, one after another, from south to north. The largest kurgan, with a diameter of 47 m. and a height of 2.2 m., for the construction of which 1800 cubic meters of stone had been used, was excavated first. The grave was in the center of the kurgan and represented a 4 m. pit on the bottom of which were placed two wooden chambers, an outer and an inner. In attempting to protect the grave from plunder, the builders filled it to the top with 6 m. of logs, for which more than 300 logs were necessary. Nevertheless, pillagers had cut through the timber cover to form an entrance and had penetrated down to the burial chamber. The kurgan had been plundered, but the efforts of the archaeologists spent in its investigation were amply justified, since, owing to peculiar local conditions, articles remained preserved in it which disappear without trace under the usually prevailing conditions of a grave. As a matter of fact, the burial chamber of the kurgan was found completely filled with ice; therefore, wooden objects remained preserved in an ideal state, among them the logs which formed the grave and also pieces of felt rugs which initially covered the walls of the burial vault. But the most important find was unearthed beyond the log structure in a part adjacent to the grave pit. The pillagers could not penetrate that far, although they tried to cut an opening to it. Here lay excellently preserved the cadavers of horses with full equipment, reins, saddles, shields, and even two unique and fantastic masks which covered the heads of the horses.

At the present time, when the excavation of all five Pazyryk kurgans has been completed, the picture of these amazingly unique and striking monuments emerges in its entirety, and at the same time its unique significance becomes clear.

The ancient tribes, which left the Pazyryk kurgans, buried their leaders in them beginning in the fifth-fourth centuries B. C. and for two to three centuries later with the same extravagance and splendor as the Black Sea Scythians buried their kings during that period. The Pazyryk kurgans are distinguished from the graves of Scythian kings in that permafrost not only preserved products made of horn, bone or metal, but also all that would have disappeared without trace under other conditions.

In the Pazyryk ice chambers were preserved valuable fabrics, objects of wool, fur, leather and felt, and many other items, including the corpses not only of horses but also of men. A supply of cheese, which was placed with the dead some 2500 years ago, was also found.

All these facts permit one to reconstruct the life of the builders of the Pazyryk kurgans with exceptional clarity and completeness. The kurgan builders belonged to cattle-raising tribes which had already attained a high level of social and economic development, a stage that was very far removed from the epoch of primitive equality. In spite of the visits by plunderers, these graves yielded the remains of treasures, including various luxury articles brought from far-off countries. Such, for instance, were precious silk fabrics and a bronze mirror of the fourth century B. C. imported from China, Persian fabrics of the Achaemenian period with representations of priestesses wearing high tiaras, products made of leopard hides, coriander seed, and shells from the Indian Ocean. Even horses, the carcasses of

which were placed near their owners, indicate the wealth and rank of the dead. They were excellent riding horses of the best breeds of the East, of noble blood, stately and lively jumpers of gold-brown color. They were not fed green fodder but selected grain, and were kept in well-attended stalls.

The monumental dimensions of the graves, their splendor and luxury, are, in themselves, an indication of the important role which the dead persons buried in the Pazyryk kurgans must have played among their kinsmen. The arrangement of the kurgans in a line points out the the persons interred in them must have been related to each other. One grave was added to another as the members of this noble clan passed on. The small number of the great kurgans in Pazyryk, however, indicates that they do not represent the graves of a whole clan, but rather of successive leaders--a kind of dynasty.

It is not likely that such luxury could surround, in life and after death, an ordinary chief of a clan. These were, evidently, persons who headed large tribal associations, and whose influence must have reached far beyond the limits of the Pazyryk Valley. This is likewise indicated by all the finds made in the kurgans, which reflect widespread and large-scale relations of the Pazyryk tribes with the surrounding world. These relations found an expression already in the very arrangement of the graves as well as in the burial ritual.

The Pazyryk tribes buried their leaders according to Scythian custom, a fact known to us not only by the results of excavations, but also by the reports of a contemporary of the Scythians, Herodotus. Similarly to the Black Sea Scythians, the Pazyryk people built for this purpose grandiose graves in the form of deep pits with large chambers, which they covered and filled with high kurgans.

They embalmed with equal skill the corpses of the dead leaders. According to Herodotus, this practice was caused not so much by the desire to preserve the body forever, as was the case in Egypt, but by the custom of the Scythians of carrying the bodies of the dead leaders through the lands of the dependent clans and tribes. This must have also been the procedure of their contemporaries in the Altai. It is remarkable that the embalmed corpses buried in Pazyryk preserved the tattooing which is casually mentioned by ancient writers.

The tribal leader interred in the second Pazyryk kurgan evidently perished in battle. His cranium was crushed by strokes from a battle-axe, and the enemies had scalped his head. His kinsmen, however, salvaged the body of their leader, embalmed it, and buried it, together with his wife or concubine, whose corpse was also embalmed. Before burial, the dead leader was provided with a long, artificial beard colored in black. His body was covered with elaborate puncture tattooing made by needles long before his death. Above the leader's heart had been tattooed the picture of a fantastic beast or lion-like griffon with a bird's head in place of the tail. On the right hand was a whole series of figures: an ass with a turned hind quarter, a fantastic winged beast, a mountain goat, a deer with the beak of a bird, a predatory animal with tusks, and, finally, a deer with a clipped mane. Two deer and a mountain goat were tattooed on his left hand. On the front of his right leg were a fish resembling an eel and a fantastic beast of prey with a mane of birds' heads and a tail bent upward into a spiral. On the inside of the leg was a series of figures of mountain goats running in a sweeping gallop.

Although on a smaller scale, the burials of horses in Pazyryk repeated the traditional Scythian customs used in imperial funerals.

Herodotus' reports confirm with exceptional clarity such specific details of the Altai burials as the bronze perfume pan containing cannabis, and a six-legged frame of a miniature tent whose significance becomes intelligible in the light of Herodotus' account of the Scythian ritual of purification.

The monuments of art unearthed from the Pazyryk kurgans also indicate a close



relationship with the south, and particularly with the Scythians of Central Asia and southern Russia. The most important elements of Pazyryk art were the representations of animals: elk, roebuck, reindeer, gazelle, hare, lion, tiger and boar. Among the motifs chosen by the Pazyryk artists are encountered just as frequently representations of birds executed in several media and with varied techniques, especially representations of swans, geese, cocks, and especially of birds of prey -- "griffons." Even a pelican was found depicted. Fish motifs are encountered infrequently.

Of particular importance in Pazyryk art are the representations of unreal, mythical creatures which combine fantastically the traits of different animals. One such creature has the body of a predatory animal, supplemented with bird's wings; another represents a bird with beast-like ears and horns; a third has the body of a deer or animal of prey, but the head ends in the beak of a bird. Among the motifs is that of a deer with the beak of an eagle and a cat's tail. In a number of cases the tail of such fantastic beasts ends in a bird's head or the head of a snake. In such representations one frequently finds birds' heads carrying branches of deer antlers.

One of the most frequently repeated fantastic images of this kind is the eagle-griffon, i. e. a creature with the body of a lion or tiger, the wings of a bird, and the head of a bird of prey--a griffon--provided with ears. In contrast, the lion-griffon has a feline head--that of a lion or tiger.

Of especial significance is a sphinx, represented in fantastic, bright colors as a creature possessing a human torso and hands, and the hind part of a lion. Its face is red-brown with a fleshy, hooked nose and black moustache twisted upward. The head of this creature is provided with antlers, and on the back spreads an effectively formed wing with feathers of various colors, red, yellow and blue, with black tips. The tail of the sphinx ends in a stylized antler.

Real animals, as well as the fantastic beasts, are frequently represented in scenes of furious fighting. Such compositions portray goats fighting each other and a lion tearing at a mountain goat. We also see a mythical winged animal of prey with ears--a griffon--tearing apart an elk; a lion-griffon attacking a goat; an eagle-griffon fighting with a lion-griffon. Even a fish is shown catching the head of a ram.

The representations of animals from the Pazyryk kurgans are characterized by a specific style which makes them resemble the art of the Ancient East, particularly that of Iran of the Achaemenian period. Such traits include curved and semi-curved marks, dots and commas, which were used to indicate the most pronounced muscles, ribs, and other details of animals. Such is also the unique style of representing animals with the hind part turned upward, as if the body were bent in the middle in the shape of the letter "S." Not less characteristic was the custom of the Pazyryk craftsmen of adapting the body of the represented animal completely to the form of the object, i. e. a round plate, saddle cover, horse-bit, or the handle of a whip. The Pazyryk masters achieved this purpose with imaginative inventiveness and skill, changing without hesitation the proportions of the animal body or of its parts without sacrificing the realistic approach and marvellous animation of the design.

The art of the ancient Altai tribes, samples of which were preserved in the ice chambers of the Pazyryk kurgans, is original and unique. In spite of that, it reveals much in common not only with the animal style of the Scythian tribes of the Black Sea region, but also with the art of the highly civilized, classic East, i. e. the Near East--particularly Assyria and Achaemenian Iran.

Among the most important finds were two objects excavated in 1949 in the fifth or last kurgan; these overshadowed all other finds. They were two rugs. The first one, made of felt, is astonishing for its size (6.5 x 4.5 m.). Across the rug are pictured, in two horizontal rows, figures of a horseman and of a seated woman which are repeated in the same form. The woman, wearing a high headdress, is

clothed in a long, decorated garment resembling a robe. She is sitting in an arm-chair with carved legs. In one hand she is holding a budding branch. This is undoubtedly a female deity--most probably the Earth Goddess.

The horseman, represented in front of the goddess, wears a short jacket. On his side he is carrying a bow case. From his shoulders hangs a short cape. The bare head of the horseman is covered with thick, curly hair. The face is surprising; his nose is large and curved, eyes black and round, and complexion swarthy. His whole appearance fails to resemble in any way the contemporary inhabitants of Siberia. This is a typical Armenoid. Thus, the large Pazyryk rug from Kurgan No. 5 shows a cult scene which is common in the Scythian art of the Black Sea region, namely, a horseman facing a goddess sitting on a throne. This scene probably represents the bestowal of power on the king or leader by the goddess. In this case, as S.I. Rudenko assumes, it is the Earth Goddess or Tabiti, the protectress of the imperial hearth.

The second rug (4.0 x 4.0 m.) is even more astonishing. This is the oldest rug in the world made of multicolor fabric with a velvety nap. It is not inferior in perfection and fine workmanship to the best Turkoman or Persian rugs, although it is at least 2000 years older than any rug of its kind.

On the second Pazyryk rug there is, around the large square center, which is filled with a geometric pattern of radiating rosettes, a broad ornamental border with representations of fantastic figures of eagle-griffons, realistically styled deer and, finally, horses and people. The horses are shown magnificently groomed in the Near Eastern fashion, with plumes on their heads, the manes carefully clipped, and the tails tied in knots with tassels. They wear breastplates and the saddle-cloths are richly ornamented and framed by thick fringes. The horsemen or the men who are leading these horses by the reins are dressed in typical Scythian clothing. They wear on their heads Scythian hoods (bashlyks) and on their bodies, short jackets and long, narrow breeches.

Thus, it is evident that the high culture of the ancient Altai tribes which existed in the middle of the first millennium B. C. emerged and developed under conditions of close cultural and, evidently, political relationships with advanced countries of those times. In the light of the Pazyryk excavations, the ancient Altai region presents itself not as a backward and poor, forgotten place, but as the center of a high culture.

Where and when did this culture emerge, and who created it? Most probably, the Pazyryk kurgans were left to posterity by the competitors of the Huns of Mongolia, the eastern Scythians who were known to ancient authors under the name of Massagetae.

As late as the third century B. C., that is, before the ascendancy of the Huns, the Massagetae ruled over the nomads who inhabited the steppes which extend from Central Asia to Kansu. The Huns, who were among these nomads, freed themselves from the rule of the Massagetae under Mo Tê Shan-yii at the beginning of the second century B. C. In 165 B. C. Lao Shang Shan-yii the leader of the Huns, inflicted upon the Massagetae a crushing defeat and pushed them westward. It is quite natural to assume that the Iranian-speaking Massagetae possessed the Altai highlands, a region which was always closely connected with the world of the steppe tribes of Central Asia and Eastern Europe, not only during the second century B. C., but also much earlier. Here, in the course of many centuries, could be located habitations of one of the Massagetae tribes whose basic stock occupied the regions of present Kazakhstan and also, probably, of eastern Turkestan as far as Kansu. In all likelihood, the amazing treasures of the Pazyryk kurgans must have belonged to this Massagetae tribe which lived in the northeastern borderlands of the vast territory inhabited by the Massagetae.

In the Altai, the Pazyryk kurgans are followed by monuments of a later period, i.e. of the third-second centuries B.C. Judging by these, the Altai people persistently preserved their rich and unique culture and ancient customs, including the burial rituals. As before, large frameworks were built for the burial of leaders, the dead were interred in huge sarcophagi, and the corpses of horses were placed with full equipment in separate chambers of the grave.

Art remained basically the same. However, in this art there are no traces of connections with the countries of the Near East, while relations with the China of the Ch'in and Han dynasties are evident. These connections could have been effected through the Huns who, as mentioned before, defeated the *Massagetae* in 165 B.C.

In the Minusinsk krai, in the country of the Khakass (Khiaqas) as the Chinese called it at that time, the outstanding Tashtyk monuments belong to the first centuries of our era.

In Tashtyk times, the inhabitants of the Minusinsk krai practiced cattle-raising and agriculture as before. In this connection may be mentioned the interesting fact that L.R. Kyzlasov revealed, during the excavations of the Syrskaa "chaatas" along the Tuba River, the most ancient reliable traces of deer-raising in Siberia, i.e. charred wooden figurines of deer on which halters, resembling horse reins, are visible. The numerous sedentary and seminomadic population of that time left on the Yenisei graves and burial vaults. In the graves were interred the remains of cremated bodies, placed in a special kind of "nests" woven of grass. In a few cases the remains of artificially mummified corpses were found.

A remarkable characteristic of the Tashtyk interments are the unique masks which sometimes convey the likeness of the dead with the accuracy of a portrait. These masks exhibit quite well the features resulting from the mixing of the Europeoid with the Mongoloid peoples. There were found in the graves anthropomorphic dummies sewn in Chinese silk, obviously analogous in their purpose to the ritualistic representations of the dead among several Siberian nationalities of the nineteenth century, "substituting" for the dead for a period of time after death (for instance, "fania" among the Nanais).

In a number of graves carefully woven braids of human hair were found. In the Tashtyk graves there were also various wooden parts of ceremonial parasols, similar to those found in the Noin-Ula graves of Hun leaders. Such parasols were used in China as a symbol of power. The Chinese emperors usually handed them to the leaders of various tribes which fell under Chinese influence. The aristocracy of the ancient Khakass obviously desired to imitate Chinese customs in every way. Its members carried ceremonial parasols resembling those used by Chinese officials, which in many cases had probably been received from the Chinese government, and they sewed garments from Chinese precious silks. Relations with China are also indicated by the style of Tashtyk sculptures which remind one of the Chinese sculptures of the Han dynasty. Thus, the Tashtyk finds indicate vividly a fundamental change in the principal direction of cultural and political relations, which was even more decisive than in the Altai. While the inhabitants of the Altai and of the Minusinsk krai had previous relations with western tribes, a new influence now became more and more pronounced--that of China, the most ancient and powerful empire of Eastern Asia.

A completely unexpected find indicates the degree to which the country of the Khakass came within the orbit of Chinese influence. The find consisted of the remains of a building not far from Abakan that exhibits Chinese architecture and building techniques. There were found tiles with the traditional well-wishing inscriptions addressed to the Chinese Emperor, and massive door handles cast in bronze, representing anthropomorphic masks of the head of the monster T'ao-t'ieh.

A remarkable feature of these masks is the type of the face which is used as an original for the exaggerated styling in masks. This is not a conventional Chinese design of the head of a cosmic monster, but an exaggerated copy of a real physical type of the ancient Europeoids, the Tagars, with their high, hooked noses and the large, wide-open eyes. It is possible that the Abakan masks were cast by a local master who expressed the spirits of his country as they appeared in the imagination of the local people. However, they could have been made also by a Chinese who wanted to represent in them the unusual and, to a Chinese eye, striking traits of the inhabitants of the Middle Yenisei Valley.

Inside the building were found intact the remains of a complicated heating system with flues placed under the floor. It is very likely that the Chinese general Li Ling, who was captured in 99 B.C. by the Huns, resided here, or his descendants who ruled the country of the Khakass. Chinese reports on Li Ling's fate disclose the concrete conditions under which the influence of Chinese culture manifested itself so definitely on the Yenisei about the beginning of our era, during the time of the Han dynasty in China. These reports combined with archaeological data furnish a guide for a better understanding of the history of the Minusinsk krai during the first millennium of our era.

In 99 B.C., a Chinese army under the command of the general Li Kuang-li, who was famous for his campaign in Central Asia, was sent to the country of the Huns. With him went his grandson, Li Ling,<sup>2</sup> who headed a special detachment of 5000 infantrymen. The Huns surrounded Li Ling's detachment and took him prisoner. Remaining with the Huns, Li Ling was "given Khakass as a domain." Li Ling died in 74 B.C. He was evidently succeeded by his son, who took an active part in the stormy political events which accompanied the disintegration of the Hun alliance under Hu-han-yeh Shan-yii into a northern and a southern part. The period of Li Ling's rule in the country of the Khakass remained for a long time in the memory of the local population. As the history of the T'ang dynasty reports, all black-eyed people were regarded here as the descendants of Li Ling. The Kirghiz Khans considered themselves his descendants and the Chinese took this into account in diplomatic relations with the Kirghiz.

Thus, the influence of Chinese culture found its way to the Yenisei through the Huns, whose aristocratic class was at that time in close relation with China, and was undoubtedly under a still stronger impact of its high culture.

As is seen from Chinese reports, the political and socio-economic history of the Yenisei Khakass took its course under the influence of the Huns, upon whom the "domain of Khiagasy" depended, although enjoying a certain amount of autonomy under the administration of a governor of the Hun, Shan-yii. For this reason one cannot reject Kiselev's suggestion to the effect that the administrative methods which the Huns applied, and the methods of exploiting the original producer, must have stimulated the development of a social order among the Yenisei Khakass and facilitated the stabilization of a local nobility.

The close relations with the Huns also had an unexpected effect in the struggle of the Khakass against the Huns which was headed by Li Ling's son. The Khakass undoubtedly had learned much from the Huns in regard to military and political organization. Consequently, the relations with the Huns and also with China could have prepared in many ways the future emergence of local statehood among the descendants of the Khakass, the Yenisei Kirghiz of the first millennium A.D. Judging by the burial masks and Chinese reports, the ancient Khakass, like the people of the Tagar culture, were, before they mixed with the Turki, typical Europeoids.

A large series of crania from Tagar burial grounds was studied by Debets. In general, these crania exhibit Europeoid traits. As in the graves of the preceding epoch, we encounter here, in addition to the prevailing dolichocephalic type, which

gave rise to the ancient Afanasiev type, a brachycephalic component resembling the Andronovo type. It is not improbable that these ancient Europeoids of Siberia were related to the enigmatic T'ing-ling who are mentioned in Chinese sources.

However, at an early time there appeared on the Yenisei, and particularly in the Altai, an admixture of a new, Mongoloid type of people, resembling the contemporary Central Asiatic type. Thus, among those buried in the Pazyryk kurgans were not people of the Europeoid physical type, as was the case in the Black Sea region, but typical Mongoloids. It follows therefore that the culture of the southern Siberian tribes of the middle of the first millennium B.C., which was so remarkably close to the Scythian culture in the Black Sea region, belonged to some other tribes, among which were representatives of ethnic groups related by blood to the Mongoloid inhabitants of remote regions of Central Asia. These anthropological data acquire a special significance because articles were found in the Pazyryk kurgans which indicate an unexpectedly definite and strong connection between this ancient culture and that of the contemporary cattle-raising tribes of Siberia and Central Asia.

The felt rugs and saddlecloth dug out of the Pazyryk ice chambers, for example, were covered with the very same specific curved-line patterns as those that decorated analagous products of the Kirghiz, the Altai tribes and Kazakhs. On the other hand, among the finds from Tashtyk graves were various articles which connected the culture of the Tashtyk period with that of the Yenisei Kirghiz of the first millennium of our era, as, for instance, sectional belts composed of metallic plates.

The legendary rich art of remote antiquity thus constituted the native soil for the present folk art of the nationalities of the steppe regions of Siberia and Central Asia. It appears as if it would continue to live after 2500 years, although in a very much changed and varied form. Thus is manifest the complexity of the historical past, and the rich cultural inheritance of these tribes which were once considered "non-historic" and "primitive."

## VI. EASTERN SIBERIA DURING THE FIRST MILLENNIUM B.C.

At the beginning of the first millennium B.C., the forest regions from the Yenisei to Lake Baikal were inhabited by numerous tribes which, like their ancestors, lived by hunting and fishing.

The settlements of these hunters and fishermen of the Eastern Siberian taiga are best studied in the Angara lowlands below Bratsko, and near Irkutsk on the islands which exist in that area where the Angara flows out of Lake Baikal.

Here, also, implements and weapons made of stone were almost completely replaced by metallic products of copper and bronze. On sites and among incidental finds, castings of bronze adzes and axe-celts, similar knives and daggers, awls, mirrors, and other metal products become common. A part of these products came from the metallurgists of the neighboring steppe tribes. The steppes, for instance, furnished such characteristic household articles as copper pots of Scythian type on a high conical stand, which were made specifically for the preparation of meat under steppe conditions where dry dung, grass and brushwood were used as fuel. In the taiga, where there was an abundant supply of excellent fuel, such a pot designed for economizing on fuel was not necessary; but inasmuch as the forest tribes obtained these products in such a form, they nonetheless used them. However, many articles were produced locally on the Angara and Lena, following examples that were characteristic for the steppe culture of the Bronze Age. Finally, there were also in evidence traits that indicate basic local traditions. Thus, together with knives exhibiting a steppe form, which is close to the Minusinsk and Transbaikal form, there were found on an island at Irkutsk blade-like knives of a unique type that was characteristic for Glaskovo knives.

Such an imprint of uniqueness is exhibited by the whole material culture of the forest tribes of Eastern Siberia, first of all by their ceramics. As distinguished from their neighbors on the steppe, they produced vessels with round bases rather than flat--a form which was the continuation of that of vessels used by their Neolithic ancestors and by the people of the Bronze Age of the Transbaikal region, i.e. the Glaskovo people. However, the ornamentation of these old-fashioned vessels was new. They were now covered from top to bottom by horizontal, convex stripes of appliqué fillets, frequently appearing like small connected arches.

Ancient woodcraft also continued to exist among Eastern Siberian tribes without great changes. As before, the representations found on the rocks on the Angara and Lena do not show anything like the magnificent decorative animal style of the steppe nomads, neither do they possess the variety of animal subjects so characteristic of the art of the steppes. The inhabitants of the taiga depicted on their rocks, as before, mainly elk with carefully drawn contours of the body. The petroglyphs were painted, as in earlier times, principally in red ocher. Sometimes they were chiselled on smooth surfaces, an ancient technique being used.

Ancient beliefs persisted stubbornly, and the shamanism of the forest hunters evolved gradually. An outstanding monument of these beliefs is the great frieze on the Shishkino rocks on the Upper Lena where, painted in crimson color, a whole row of boats is seen floating in a line on the sacred river into the world of the dead. In the boats are sitting men or anthropomorphic spirits stretching their arms upward. Underneath stands a fallow deer, her head turned back, and on her hips are visible circular concentric spiral lines, such as are frequently seen in representations of animals of the Bronze Age on the steppes. Around the fallow deer is

a group of men or spirits with horns on their heads and with peculiar tails. Strange as it may seem, these anthropomorphic representations resemble to a surprising degree similar figures on Scandinavian rocks dating from the Bronze Age, and on bronze razors of that time. Thus, it is not impossible that during the Bronze Age some cultural relations existed between the tribes of Northern Asia and those of Northern Europe.

No less interesting is the large, isolated figure of a mythical monster, trying to swallow some kind of a round object. It is possible that this drawing represents the monster Mongus, which is well known in the myths of Central Asia, trying to swallow the moon or even the sun.

A remarkable feature of the life of these Eastern Siberian forest tribes was their cultural relationship with far-off China, which is clearly evident in the most prevalent archaeological material, the pottery. Together with fragments of round-bottomed vessels of local type, there were found on islands of the Angara fragments of vessels of an entirely new type, with a small ring-shaped stand, covered on the surface with an unusual appliqué ornament and textile imprints. Since ancient times, including the Bronze Age, identical vessels were used by the ancient Chinese who called them *Tou*. A direct connection with ancient Chinese bronze celts of the Yin (Shang) dynasty is also revealed by the bronze celts of the taiga type which are characteristic for Eastern Siberia. These celts are distinguished by their elongated proportions, rectangular shape, and by their specific ornamentation consisting of convex linear stripes forming concentric triangles and circles with a point in the center. By comparing this ornament with that of Chinese celts of Yin times, it is not difficult to perceive that the casters of the Bronze Age of the Baikal region adopted almost wholly the Chinese ornamental scheme which had so impressed their imaginations. They merely simplified it and gave it a much more schematic appearance. From where and how these unexpected traits of Chinese culture penetrated the forlorn Eastern Siberian taiga becomes clear if we acquaint ourselves with the life and culture of the inhabitants of the neighboring Transbaikalian steppe during the Bronze Age.

Before we discuss the Transbaikalian region, however, it is necessary to mention the tribes which lived at that time even further north and east in Siberia, in the present Yakutia.

In the course of time, about the middle of the first millennium B.C., the descendants of the first metallurgists of Yakutia progressed further. They mastered the art of producing excellent bronze axe-celts, daggers, swords and spearheads. Frequently, their products are striking in their unusually large dimensions, and in their elaborate workmanship they are not inferior to products of the craftsmen of the steppe.

Consequently, the taiga warriors and hunters of the Bronze Age were equipped with excellent bronze weapons. Like the heroes of the Iliad, they fought with copper-edged swords and spears.

Simultaneously, relations of the tribes of Yakutia with those of other countries continued to expand. A bronze sword found on the Viliuia River resembles strikingly swords and daggers of the Karasuk type. A bronze kettle unearthed on the Upper Markha River imitates the form of steppe kettles of the so-called Scythian type. In the Viliuia basin, there was also found a bronze vessel which, in form and ornamentation, is analogous to vessels of the Bronze Age made by Chinese craftsmen of the Chou period.

Otherwise, the forest tribes of the Bronze Age persistently preserved their ancient mode of life and cultural traditions which date from time immemorial. As before, their clay vessels had, for instance, not flat but round bases. As in former times, they depicted on their sacred rocks deer and elk, figures of spirits, and

shamans with horns in their headdress. Their ornamentation remained geometric, straight-line, based on a rhythmic succession of horizontal and vertical, long and short lines. There was nothing in it resembling the exuberant ornamental-decorative style and elaborate patterns of the contemporary cattle-raisers of the steppe. This was an individual and significant culture which extended over thousands of kilometers of taiga, forest tundra, and tundra along one of the mightiest rivers of Asia, the Lena and its tributaries.

In the same manner as among their neighbors of the Baikal region and the steppe tribes, the Bronze Age tribes of Yakutia and the Baikal region experienced a period of transition from a matriarchal to a patriarchal order. This is indirectly indicated by the prevalence of anthropomorphic over zoomorphic faces in rock representations, and also by the appearance of a kind of metal standards which bear likenesses of bearded human faces, probably male ancestors, protectors and defenders of the clan.

## VII. TRANSBAIKAL REGION DURING THE FIRST MILLENNIUM B.C.

At the end of the second and during the first millennium B.C., there lived on the steppes of the Transbaikal region and farther to the east up to the Gobi and Ordos numerous tribes that led the same mode of life and had in common a very similar culture.

These tribes were, in contrast to their northern neighbors in the taiga, typical cattle-raisers. They raised successfully all basic domestic animals: horses and large and small cattle. As compared with the inhabitants of the taiga and the tundra, they appeared as the bearers of a new, advanced culture based on an incomparably more advanced economy and on a primarily new mode of life.

The relatively early emergence and rapid development of cattle-raising in the Transbaikal region and in adjacent Mongolia depended upon favorable natural conditions in these areas of inner Asia with their unlimited expanse of pastures. These natural conditions opened wide opportunities for the growth of herds in an extensive cattle-raising economy of the pastoral type.

The cattlemen of the Transbaikal region could graze their herds the year round without spending any effort to make hay for the winter, since the wide open spaces and hilly elevations which abound here are swept clean of snow, laying bare a dry vegetation. During the severe winter, the cattlemen of the steppe could retire to rivers and secluded valleys protected by adjacent elevations.

In Transbaikalia are located Bronze Age graves as well as traces of temporary sites of cattle-raising communities. These traces are always few and scanty, but for this reason even more significant. They usually consist of fragments of one or two broken pots, and also of a few copper or bronze articles that were incidentally lost or forgotten on the deserted site. No remains of dwellings--semi-subterranean houses, for instance--are to be found here. One must assume that the ancient inhabitants of the Transbaikal region had at that time already available the portable felt yurt as the basic type of shelter, which was used traditionally during thousands of years by the nomads of the steppe. As early as during the first millennium B.C. the Transbaikal cattlemen raised successfully all basic types of domestic animals, primarily horses, and also small and large cattle.

Like the later pastoral inhabitants of the Transbaikal region and Mongolia, they rode horses, using reins with bronze horse-bits, as is indicated by the finds of such horse-bits made in Bronze Age graves.

Rich in tin, copper and other non-ferrous metals, the mineral deposits of the Transbaikal Mountains supplied the basic element, which caused an early and, in those times, significant, development of local metallurgy. The inhabitants of the Transbaikal steppes had mastered to perfection the casting technique by the end of the second millennium B.C., and they improved this technique considerably in the first centuries of the following millennium. Local master craftsmen cast in stone molds exquisite copper and bronze articles, which were frequently embellished by a unique and fine ornamentation and also by realistically executed representations of animals.

Decorations of semiprecious stones and of cowrie shells brought from the Indian Ocean, and white cylindrical beads of pyrophyllite, which were found in the graves, indicate a further expansion of cultural relations. Such relations could not but exert a progressive effect on the life of the Transbaikal tribes, accelerating their economic and cultural development.

The interrelations with neighboring countries, in the first place with China of the Yin, and later of the Chou and Ch'in periods, were of great significance in the development of metallurgy and the art of casting, as well as in the general culture of the Transbaikal steppe and Mongolian tribes. The interrelations of China with the neighboring steppe tribes is clearly indicated by finds made during excavations in Anyang, at the location of the capital of the Yin Empire, which consisted of knives and daggers, the handles of which were decorated with the same heads of steppe animals as had been the Transbaikal knives and daggers of the so-called Karasuk type. The form of these daggers and knives sometimes coincides in the smallest details. It is not impossible, therefore, that the Anyang metallurgists cast their products according to examples fashioned by steppe master craftsmen.

On the other hand, the direct influence of the highly developed agricultural culture of ancient China is revealed in the remarkable tripod pots which were found on the sites, as well as in the graves, of the first millennium B.C. in the Transbaikal steppe from the Aginsk steppe in the east to Ulan-Ude in the west. These vessels have a large body which ends in three wide and hollow legs resembling a cow's udder. In China, the vessels of a similar original form of the *li* type already appear in Neolithic times and exist during the entire Bronze Age. They are so specific and characteristic for China that they can be truly called the symbol of the agricultural civilization of ancient China. For this reason the presence of vessels of the *li* type in the Transbaikal steppes reveals clearly an unexpectedly profound and intimate character of relations between the cattle-raising tribes of the Transbaikal region and early China, the ancient hearth of an advanced culture of Eastern Asia.

If vessels of the tripod type reflect traditional relations of the Transbaikal region with China, other facts attest just as clearly to a continued strengthening of such relations with the west, beginning with the Minusinsk depression, the Altai and Central Asia, and ending with the far-off Scythian tribes of the Black Sea region. Such articles are weapons, including bronze daggers and knives, decorations such as bronze mirrors and parts of horse harness, and many other articles produced from common original examples. Relations with western tribes and the emergence of a similar mode of life and of a culture which is identical in principle may be judged also by monuments of art, among them representations of deer on tablets and deer stones in the Transbaikal region and in Mongolia.

The deer stones, which are widespread in the steppe regions of Mongolia, Transbaikalia and Tannu-Tuva, are impressive monuments of the Bronze Age which are remarkable because of their careful artistic execution and unique styling. As the name indicates, the deer stones depict characteristically styled figures of deer with long, multi-branched antlers that curl along their backs. This fantastic style while unique in some details, reveals, in general, a very close similarity to representations of deer that are characteristic for archaic Scythian art.

The deer stones are supplemented by representations on rocks which show the same figures of deer with antlers as those found on slabs, and by various incidental finds, including handle tops, closely resembling, in general treatment, those of ancient Scythia in the shape of stylized figures of deer, birds, animals of prey and, in one case, even of a porcupine.

However, one should not conclude that the culture of the steppe tribes of the Far East did not possess originality and characteristic features of its own. Particularly distinctive were their burial customs which frequently appear as important ethnic traits.

At the time when the majority of the steppe tribes buried their dead under kurgans filled with earth or stones, the Transbaikal tribes constructed characteristic slab tombs in the shape of rectangular enclosures built of slabs, sometimes huge in size, set up on edge. Such slab tombs have occasionally been grouped into whole

burial fields, and from far away they present against the background of the vast steppe as typical an element of the Transbaikal landscape as the brushwood and the fantastic granite rocks of this scenic country.

The symbol of the principal belief of the Transbaikal tribes was, evidently, the zoomorphic image of a benevolent sun deity, most popularly represented in their art by a gold-horned deer or by a radiant disc in the sky portrayed by a circle or a metal mirror.

On perpendicular rocks and arches of Transbaikal caves there are scattered hundreds of ancient drawings executed in red ocher and dating, according to style, from the Bronze Age. These records portray the cult of a sacred bird, an eagle or falcon, and depict some collective magic rites having to do with the fertility of the cattle, the growth of the clans, and the well-being of their members. They show most frequently one and the same subject, one and the same picture of a magic enclosure protected by a sacred, moon-winged bird, and by anthropomorphic spirits, protectors of the clan, holding each other by the hands.

It is interesting to note that the image of this sacred bird did not disappear without a trace, but was preserved until the nineteenth-twentieth centuries A.D. in old ornamentations on woolen stockings of the Olkhon Buriat. The latter called this bird *iekhe-shubun*--eagle. As is well known, the eagle had an important place in the shaman mythology and cult of the Buriat and was considered, on the Olkhon Island, as the protector and ruler of the inhabitants.

Inside the "enclosure" shown in these drawings and next to it are scattered numerous oval or round spots resembling finger prints. Each one of these spots could have symbolized the belief that a specific member of the clan or his soul was under the protection of benevolent spirits of the clan. There are also representations of animals, usually horses, shown in a characteristic, stylized pose, apparently ready to jump. Such drawings occur on the banks of the Tola River, near Ulan-Bator, along the entire extent of the Selenga Valley with its tributaries, on the Agin steppes, and near Chita on the Ingoda River.

There is no doubt that the Bronze Age tribes of Transbaikalia continued persistently to preserve their ancient communal order. Indicative of this are their burial mounds as compared with the Scythian graves of Southern Russia. Since ancient times, huge kurgans of the tribal nobility were constructed. These were the graves of Scythian "emperors," in which the noble dead were buried according to a strict, pompous ritual, together with their wives and servants, and dozens, sometimes even hundreds, of horses in gold and silver regalia. In addition to these kurgans, there are scattered on the steppes innumerable ordinary graves of Scythians which, in their simplicity and poverty, are in sharp contrast to the graves of the aristocracy.

On the Transbaikal steppes during the Bronze Age there were no burial mounds resembling the grandiose and splendid interments of the Scythian "basileus." All the slab graves are kept in strict conformity to one and the same plan, while their arrangement is a clear indication of stable clan and communal relations. The graves are arranged in straight rows from south to north and are oriented strictly in the same direction--from east to west. Such an arrangement of the slab tombs will immediately recall the well-known planning of the tribal burial grounds of the Iroquois who had a matriarchal order.

Even in those cases where some graves stand out because of their larger dimensions, they were collective graves. However, it would be erroneous to assume that the people of the Bronze Age in the Transbaikal region lived like their ancestors, the people of the Stone Age. Although they were still far from the level which had been attained by the culturally related nomadic tribes of the Asiatic Sacae, and even further from that of the Scythians, the Bronze Age population of Transbaikalia

nevertheless progressed far ahead of those conditions under which their ancestors lived before the advance of agriculture and metallurgy.

The appearance of domestic animals, the raising of cattle and horses, which yielded a surplus of products exceeding the needs of the cattlemen, promoted the development of barter and increased its importance. Gold objects, which were sometimes found even in pillaged slab tombs, embellishments made of malachite, turquoise, carnelian and other precious gems, and cowrie shells--signs of relations with ancient China and Scythia--indicate the beginnings of luxury and growing wealth of individual families.

As a result, the transition from the ancient matriarchal order to a patriarchate was unavoidable, and a patriarchal family community had to emerge. This was the basis for the formation of a definite aristocratic caste composed of the heads of rich cattle-raising families.

In this regard, then, the slab tombs themselves appear in an entirely new light, and point out clearly the great changes that occurred in the social life of the Transbaikal cattlemen. The sometimes monumental dimensions of these burial structures, and their relative scarcity, indicate that they were most probably the tombs of the heads of wealthy and influential families.

Even clearer evidence is furnished by the monumental sculptures, deer stones, with their excessive stylization. The great amount of labor which was necessary to detach suitable stone blocks from an outcrop of granite rock, to hew them with bronze tools, to give them the shape of a column or a tablet with a sword-like edge, and, finally, to cover the surface patiently with artificially cut relief representations, shows vividly the weight and social influence of those individuals on whose graves these magnificent memorial monuments were placed--monuments which have withstood without change, for 2500 years, the weathering effects of the sun of Mongolia and Transbaikalia.

The valuable articles which accompanied the dead in the slab tombs tell the same story as the drawings on deer stones. Next to the symbolic representation of the sun and figures of mythical solar deer on deer stones, there are also depicted in great detail and accuracy such articles of daily life as a belt, a bow, a dagger identical with the Scythian *akinak*, and sometimes a battle-axe, even discs representing bronze mirrors. Undoubtedly all of these objects constituted the personal equipment of the ancient warrior, and represented the picture of his belongings in his lifetime. According to contemporary beliefs, the warriors had to appear in the "after world" armed from head to foot as behooves a knight of the steppes, always ready for defense against strangers, for an attack on neighbors, and for the seizure of alien property, principally herds of cattle, and the women and children of enemies.

These warriors, whose tombs were marked by monumental tablets covered with sacred representations of solar deer and personal weapons, were undoubtedly not ordinary members of the community, but aristocratic leaders, heads of individual families, distinguished from all others by their wealth and occupying a superior position within the patriarchal communities.

There can hardly be any doubt that the patriarchal clan society of the steppe cattlemen of the Transbaikal Bronze Age advanced far ahead of the customs and norms of the epoch of primitive equality, to a stage where property acquired a private and individualistic character and men became conscious of the concept of private property. One more step remained to be taken in order to establish within society classes opposed to each other and, as a result of the irreconcilable class distinctions, to create an organization based on class rule, i.e. to form the State. It was in this manner that the historical process developed in all advanced countries of Europe and Asia, although among different people its course took various forms and occurred at different times.



Thus, it must also have happened in Buriat Mongolia. This new era emerged in the Transbaikal steppe regions of Buriat Mongolia at a time when iron became widespread, during the second century B.C., at which time the Huns, as they were called by the Chinese and later by Europeans, appeared on the scene of world history.

It is with the Huns, who first created a state organization of the tribes of the steppes of Central Asia, that history finally enters the epoch of class society and the State.

The widely known monuments of Hunnish culture discovered in the Noin-Ula Mountains and in the grave of Ilmovaia Gorge in Kiakhta, listed in Chinese Annals, and materials from Transbaikal settlements, depict the Huns as nomadic cattle-raisers who, incidentally, also sowed some grain (millet). In the society of Huns, tribal nobility stood above the ordinary members of the group. Slavery, which had its source in the wars with the neighbors of the Huns, among them the Chinese, was highly developed. It is probable that the slaves tilled the soil and performed other heavy work.

The core of the Huns' state constituted a military alliance of 24 tribes divided into an eastern and a western branch. The head of the state was the Shan-yü. United in a state, strengthened by tribal traditions and relations, acting as a nation in arms, as a tribal alliance, the Huns represented a terrible military-political power. Within a short period of time, the Huns subjugated a great number of tribes and achieved domination over an immense territory which reached from Lake Baikal to Tibet and from eastern Turkestan in the west to the Amur in the northeast.

A substantial monument of Hunnish expansion in the north is the remarkable settlement near Ulan-Ude on the Ivolga. As it appears today, the settlement occupies an area of 72,380 square meters. Originally, the site was still larger, but a portion of it was destroyed by the Selenga River which washes out its left bank at this point. The settlement was enclosed by four trenches and four ramparts of a height up to 1.5 meters. Dozens of small houses and two large dwellings were located within the fortification. The former had rectangular foundations sunk into the earth and were heated from hearths, the smoke and hot air of which was conducted through special flues along the walls and under the sleeping benches. An identical heating system was discovered during the excavation of the remarkable castle at Abakan near Minusinsk which, as mentioned before, evidently belonged to the captured Chinese general Li Ling.

Pits for the storage of food reserves were found within and outside the dwellings. Food was usually prepared on a small fireplace next to the house. Around these fireplaces were found numerous fragments of vessels, the surface of which was blackened by the fire of the hearths. Inside the dwellings various items of household equipment were discovered, including vessels with holes in the bottom for making cheese. There were also traces of slag. Among the significant finds were bronze vessels--the first to be found among Hunnish monuments. Evidently, the larger houses were communal buildings or dwellings of the Hunnish leaders of this settlement. One of the large dwellings (9.0 x 8.0 m.) was constructed of adobe walls 1.0 m. thick with wooden posts at the corners and in the middle of the wall, after the manner of contemporary structures in Mongolia. The dwelling of the leader had a fireplace similar to that of the smaller houses, though it was larger. As in the small dwellings, flues were built along the walls. Inside there were complete clay vessels for making cheese, storing food reserves, and preparing food, as well as a cast bronze cup, arrowheads, and bone attachments for bow ends.

The finds made in the Ivolga Hunnish settlement are significant not only because this is the first settlement of the Huns to be investigated archaeologically, but also because it furnishes first-class material for the characterization of their culture

and mode of life, and for the clarification of their interrelations with the northern tribes. These excavations on the Ivolga revealed that the nomadic Huns had fortified settlements. In addition to meat, milk and cheese, they also used agricultural products as food, as evidenced by millet found here. This is confirmed by the reports of Chinese Annals which report that the Huns sowed millet. The tilling of the soil, however, was not performed by them, but by captured Chinese.

In addition to being the northernmost truly Hunnish site known at present, the settlement on the Lower Ivolga located at so great a distance from the basic area of distribution of Hunnish monuments which were found in the Kiakhta district, along the Dzhida and on the Upper Selenga, is interesting also because it is surrounded by an unusually strong system of trenches and ramparts. Now, the settlement of the Huns on the banks of the Selenga was surrounded by four strong ramparts and four trenches. The width of this protective belt of trenches and ramparts attained 26 meters. All these facts lead to the conclusion that the settlement on the Ivolga was the northernmost fortified outpost of the Huns in Transbaikalia.

The years of the famous Shan-yü Mo Te rule saw the greatest territorial expansion of the Huns. Mo Te came into power in 209 B.C. and conducted a persistently aggressive policy toward neighboring countries. Chinese sources mention Mo Te's campaigns of conquest, not only toward the south into China, but also toward the north. It appears that the fortifications in the northernmost province of their empire was established by the Huns at that time.

The care which the inhabitants of the Ivolga settlement devoted to its fortification indicates clearly that the Hunnish conquerors did not enjoy a peaceful life in the Selenga lowlands. Undoubtedly, the original population of the Transbaikal region must have despised the warriors and officials of the Hunnish Shan-yüs as oppressors, usurpers and enslavers. Evidently, it was against this hatred that the Huns protected their fortified settlement near the mouth of the Ivolga.

The aggressive policy of the Huns was reflected in the events that affected not only the northern parts of the Transbaikal region, but also the Baikal region proper. At this time new immigrants penetrated to the Kuda Valley, a right tributary of the Angara, and perhaps even further west up to the mouth of the Unga, into the area of the present Balagansk. These people who appeared in the depths of the taiga of the Baikal region amid the local hunting and fishing tribes, were cattle-raisers. They raised horses and sheep, and possessed the same material culture and the same customs as the Transbaikal cattle-raising tribes of the Early Iron Age, who lived in the Selenga lowlands during the third-second centuries B.C. They used the characteristic clay vessels of Transbaikal shape, wore on their clothing the same semi-spherical bronze plates with flat hems decorated with notches, and possessed bows with bone attachments and bone and iron arrowheads identical to those found in Transbaikalia.

These people interred their dead in carefully built rectangular graves made of vertical slabs of red sandstone. As on the steppes of Mongolia and in the Transbaikal region, their graves were arranged in chain formation from south to north, with the same orientation of the corpses and graves--the head looking toward the east.

Like the Transbaikal slab tombs, these were built on a level elevation and at the foot of cliffs with alluvial stones. Such graves were found, for example, on the scenic Mankhai Mountain near Kharganai or Ust-Orda, the center of the Ust-Orda National District of the Irkutsk Oblast. The Mankhai burial grounds show clearly that they were left by a new tribe which came here from Transbaikalia or from the shores of Lake Baikal. These were clearly cattle-raisers of the steppe, the kinsmen of those who left on the steppes of the Transbaikal region and Mongolia the slab graves of the Bronze and Early Iron Ages.

The builders of the Mankhai slab tombs brought with them to the west, to the Kuda Valley perhaps, not only their economic way of life and ancient customs. It is not improbable that, along with the cattle, they also brought seeds of the typical steppe grass dirisu, which gives to the Transbaikal landscape beyond the taiga its characteristic appearance.

What caused this colony of Transbaikal steppe people of the Early Iron Age to migrate to the Kuda Valley, over the mountain passes and swamps of the Baikal range, and what was the reason they abandoned their home valley for the north-west, the country of forest tribes?

The answer to this question lies in the fact that at exactly this time momentous changes took place in Mongolia and the adjacent Transbaikal provinces, because of the ascendance of the Huns and the expansion of their conquests to the north up to the Baikal region. During these difficult times, a part of the Selenga tribes, probably the ancestors of the Turki-Uigurs, could have left their nomadic home quarters and moved further to the north, under pressure of the conquerors. This happened, most probably, during the period of the northernmost expansion of the Hunnish hordes under Mo Tê Shan-yü, when the fortified settlement which served as the principal Hunnish outpost in the north was established on the Ivolga River near Ulan-Ude.

Evidently, it was at this time that a group of ancient cattlemen, leaving behind on the Transbaikal steppes the magnificent monuments of slab tombs, crossed all obstacles under the pressure of the Huns, and arrived in the fertile Kuda Valley with their cattle, wives and children.

The foundation of the vast empire established by the Hunnish tribes was unstable, however, and in the middle of the first century A. D. this state disintegrated under the blows of the Chinese and other enemies. The Huns were divided: one part moved west; the other submitted to the Chinese and lost its independence. Some words which are preserved in Chinese Annals indicate that the language of the Huns was, on the one hand, close to the Turki, and, on the other, to Mongolian. It is interesting that the very name of the Huns is related to the Mongolian word "Hun" which means "man." It is very probable, therefore, that the Huns were not Turki but Mongols. (The Turki call man kizi, kisi, etc.)

#### VIII. TRIBES OF THE MARITIME AND AMUR REGIONS DURING THE FIRST MILLENNIUM B. C.

During the time when, in the course of centuries, there developed west of the Amur on the steppes of Transbaikalia and Mongolia a culture of cattle-raising tribes of the Bronze Age, which later formed the Turki and Mongolian nationalities of the Middle Ages, there lived in the Amur basin and Maritime Region other tribes whose mode of life and culture remained as before, in strong contrast to the life and culture of those cattle-raising people.

The culture of the maritime tribes of the Far East who lived during the first millennium B. C. along the shores of the Pacific, east and north of Korea, at Vladivostok and further north, is known in the archaeological literature as the "shell-mound culture." This name is derived from the shell heaps, usually found in bays, on promontories and isthmuses, consisting of layers of shells of edible sea and freshwater mollusks. Such, for example, are the numerous shell heaps at Vladivostok, along the shores of the Peter the Great Bay. These heaps are usually up to 1.0 m. high, with a circumference of 10-25 meters. In addition to shells, these middens contain the bones of fish, pigs, deer, house dogs, roebuck, bears and leopards. There have also been found in the shell mounds stone axes, slate and bone heads, weights, slate knives, and daggers. All of these at first glance exhibit the usual Neolithic characters, but actually the maritime people who left these shell heaps already had a considerably advanced culture.

Even the stone objects of the settlements with the shell heaps are markedly distinguished from the more ancient types, including those of the immediately preceding sites, such as the one at the estuary of the Gladkaia River in the Posetskii Raion. In these were found abundant obsidian sharp points, arrowheads and knives, and the characteristic pottery decorated with cut ornaments of lines, zigzags and, infrequently, meanders.

Even the material out of which the stone implements were made is now different. In the first place, slate is used, and instead of striking and chipping, stone grinding came more and more into use. In place of one-sided, convex stone adzes, there appear new flat forms, symmetrical in cross section.

Everything else is also different, including the most abundant material of archaeological finds, the pottery. The simple clay vessels of ancient times are replaced by new types more perfect in shape. Among them the most notable are the broad vessels of a more complicated profile, which were formerly unknown, and also flat bowls on narrow, conical stems or stands. The ornamentation and outward finish of the vessels changed markedly. Pots are frequently encountered with surfaces polished to a gloss, sometimes purposely covered with a thin layer of crimson red color. The ancient potters decorated them with incised patterns and, particularly, with appliqué braided patterns in the form of parallel ribbons and also symmetrically arranged cones.

However, the cultural changes of the maritime tribes which left these shell heaps went even deeper. Contrary to appearance, the thick layers of shells and fish bones which impart a primitive appearance to these settlements cannot be explained by the assumption that there lived here poor gatherers of the "produce of the sea," who picked up shells or sea animals which perished accidentally and were washed on shore. Among the shells were some that do not thrive on the shore, but in the open sea at depths of several dozen meters. Together with these shells



are found the bones of fish that also live at a distance from the shores.

These deep-sea mollusks and deep-sea fish could not be obtained without going out into the open sea. This operation required adequate technical equipment--first of all larger, steady boats perhaps already equipped with a sail and balancing outrigger. Fish nets would have been necessary, as well as special angles with weights which could reach greater depths, and many other things upon which deep-sea fishing of the various tribes of the Pacific depended at the moment of their first encounter with Europeans.

Particularly interesting are the flat slate points, which are found in the shell heaps and which sometimes had one or two drilled holes. They are identical with the harpoon heads of ancient Eskimos and other coastal tribes of the Pacific Ocean. Thus, the inhabitants of the settlements with the shell mounds possessed harpoons and other complicated equipment for catching big fish and sea animals. The appearance of this equipment signifies a most significant advance in the cultural development of maritime people, and an important technical progress of sea-going fishermen and hunters from the Japanese Islands to Scandinavia.

Without such equipment there could have been no effective conquest of the immense stretches of the coastal regions of the Pacific and Arctic Oceans, and there could not have emerged a highly specialized culture of sea mammal hunters which, in some aspects, far outdistanced the cultures of continental fishermen and hunters of the Neolithic period.

The existence of a specialized culture of fishermen and sea mammal hunters was the first characteristic feature of the economy and mode of life of the maritime people during the "shell midden period," and its appearance constitutes a most important stage of their cultural history.

Undoubtedly, there also emerged a new psychology of daring seafarers, who became accustomed to the limitless expanses of the ocean. The appearance of the first shell heaps on the shores of the Maritime Region indicates, therefore, not a regression but, on the contrary, a decided advance in the whole life and culture of the inhabitants.

A careful study of the contents of the shell mounds yielded another unexpected discovery. Among these deposits were found stones of an oval boat-like shape. One side of such stones is convex and more or less smooth, while the other side is flat and completely covered with small excised grooves.

In form, size, and character of surface finish, these stones resemble exactly the ancient querns used for making flour from grain. Such grinding stones, which preceded the later hand mills, are encountered again and again in ancient agrarian cultures, beginning with the first center of primitive agriculture in countries of the Near East and of Central Asia and reaching as far as America. Exactly in this manner and with such implements, Egyptian women whose statuettes were preserved in ancient tombs in the "country of pyramids" ground the grain in a kneeling position.

Together with the fragments of stone grain grinders, there were found in the shell heaps stone hoes and fragments of slate knives of a special type in the form of small blades with one-sided, convex edges, and usually two holes drilled through the center. Exactly the same slate knives which served as sickles, and hoes with shoulders, were used in Neolithic times by the ancient land tillers of the Yellow River Valley in North China.

Consequently, the "people of the shell heaps" were not only the creators of a highly specialized culture of deep-sea fishing and sea mammal hunting, but also the first agriculturists of our Far East.

Later, the maritime tribes began to receive metal articles from their neighbors on the steppes, as indicated by individual finds of metal products, and also

by stone daggers and heads which were made, according to metal prototypes, from the end of the second and beginning of the first millennium B.C. With these events, a period of transition from stone to metal began in the Maritime Region, and the Neolithic Age proper came to an end.

During this time, in addition to the dog other domestic animals appeared, and cattle-raising becomes established in its true form, i.e. the raising of animals for their meat, milk, and other products of animal husbandry. The pig, the bones of which are particularly abundant in the shell heaps, evidently played an important role in the economy of the maritime tribes. It is known that pig-raising was widely practiced among all people of Southeastern Asia, and also in areas of the South Seas among the Papuan tribes of New Guinea. Evidently, our maritime tribes borrowed pig-raising, as well as agriculture, from the South.

Other features of the culture of the coastal population of the Soviet Maritime Region in those times indicate also a close relationship with the population of Korea and China, particularly with those tribes which inhabited the shores of China. Such features are, for example, stone axes, slate arrowheads and harpoons, known as far as the island of Taiwan and in southern China in general, and also clay vessels of a shape that was unknown before (bowls on high stems, plates, etc.). One may assume, therefore, that these coastal tribes extended at one time from south to north, and that they persistently maintained their culture, which exhibits various features relating them to the culture of the Neolithic land tillers of China of the Yang-shao period and later times.

According to Chinese sources, these ancient inhabitants of the Maritime Region were called by the general name I-lou. The Chinese left in their Annals short but precise information, which agrees perfectly with archaeological data and supplements them substantially.

In the "San-kuo-chih," a history of the three states over which three dynasties ruled simultaneously in China from A.D. 220 to 264, which was composed by Ch'ên Shou in the fifth century, it is said of the I-lou that they live at a distance of more than 1000 li northeast of Fu-yii and that they are settled along the shores of the Pacific Ocean. In the south they are neighbors of the northern Fo-chi and "where they end in the north, it is not known." In the country of the I-lou there are "many impassable mountains."

The economic basis of the I-lou was agriculture and cattle-raising. They had "five varieties of cereals, and cows and horses." It is specifically pointed out that the I-lou liked to raise pigs, that "they eat their meat and wear their skins." The great role of cattle-raising is reflected in the report of the Annals to the effect that the I-lou "place the cattle pen in the middle, and the people live around it."

The I-lou obtained in their country jasper and exquisite sable, "the same which are now called the I-lou sables," says the chronicle. The use of navigation among the I-lou is also noted. The dwellings of the I-lou were on mountains and in forests. They were dug into the ground--"usually they live in pits. Larger families go as deep as 9 steps down, the deeper the better." In summer the I-lou went naked, "only a piece of cloth of one ch'ih (0.32 m.) covers their body in front and back. In winter they smeared their bodies with several layers of lard in order to protect themselves against wind and cold." The main weapon of the I-lou was the bow: "their bows have a length of four ch'ih (1.3 m.); they exceed crossbows in power. Arrows are made of k'u wood and are one ch'ih (0.32 m.) long. The arrowhead is made of dark stone. . . They are skillful in shooting with the bow. When they shoot at men, the arrow always hits the mark. Inasmuch as the arrows are poisoned, men that are hit all die."

The social order of the I-lou did not develop beyond the limits of primitive communal relationship ("the majority of the people are courageous and powerful; they do not have prominent rulers, but each settlement has a head").

Thus, the I-lou did not have a common ruler, and they lived independently in family communities. This circumstance, however, did not prevent them from defending themselves successfully against their neighbors who tried to enslave them.

The "San-kuo-chih" contains interesting information which characterizes the relations of the I-lou with neighboring people and also their political history. Since the time of the Han dynasty, the Annals report, the Fu-yii subjugated them and imposed on them heavy tributes. During the period of Huang-ch'u (A.D. 222-226) they revolted against the enslaver. "The Fu-yii undertook several punitive campaigns against them. Although their people, living in the mountains in impenetrable places, are not numerous, their neighbors fear their arrows and at the end cannot subjugate them." More than that, the I-lou sailed fearlessly in their boats and struck terror among their neighbors: "They burst in and pillaged from which neighboring countries suffer."<sup>3</sup>

In the north, I-lou adjoined other tribes, whose lives are marked by archaeological monuments found in the Amur Valley at Khabarovsk. These monuments tell about the life of those tribes which later entered the history of the Far East in Chinese Annals under the name Mo-hê. Although in a fragmentary manner, they present a definite picture of the same gradual cultural development of the local people as in the Maritime Region, i. e. from stone to metal, from hunting and fishing to agriculture and cattle-raising, from a matriarchal system to a patriarchate, and then from a primitive family community to a state.

In the lower cultural layer of one of the settlements at Khabarovsk there were preserved traces of a Late Neolithic culture in the form of dugouts on the bottom of which were found primitively formed vessels, covered on their outer surface with imprints imitating some coarse fabric or mat. Higher up were found the remains of a more developed pottery, including cups in the form of two cones joined together at their tops, and big, high vessels with narrow bottoms, narrow neck, and broad, bent, saucer-like edges. At the end of the first millennium B. C., similar vessels were also widespread in neighboring countries of the Far East, as far as the Japanese Islands, where they were known as the *iaei* type.

Simultaneously, the ancient stone implements became obsolete and local metal work began. At any rate, in a settlement of that time at Malmyzh there were found drops of copper indicating the smelting of this metal.

Very characteristic features of belief and burial ritual were also revealed. In the same settlement at Khabarovsk where vessels of the *iaei* type were found, there were unearthed contemporary pillaged graves in which human bones were found in large clay vessels which were tied to each other.

All these new features of material culture and mode of life which connect the Amur region with the neighboring countries of the Far East are remarkable in that they indicate still more important and profound changes in the life of the tribes of the Far East. It is at this time that animal husbandry and agriculture became widespread, that barter intensified, and relations with other countries, particularly China, grew. All of these conditions caused the disintegration of the primitive order. A class of local patriarchal clan aristocracy appears, and there emerged at a later time local political units, first the Bokhai Empire, and after it, at the very beginning of the following millennium, the Jurchen or Chin State.

## IX. SIBERIA AND THE FAR EAST DURING THE FIRST MILLENNIUM A.D.

At this time evolved the state organizations among the Turki-speaking nationalities of the steppe regions of Siberia. The Turki Khanate, which emerged in the middle of the sixth century, united various tribes of Central Asia and of the eastern parts of Middle Asia, with the Altai Turki constituting its core. The State was headed by a Khan. The clan of the Khan, together with the nobility of other tribes, formed the ruling class of the Turki *elia*, the tribal union. Free members of the clans, that is, the basic mass of the nomads, were called *budun*. There were also clients and slaves. In general, the social order of the Turki was patriarchal-feudal.

With their close relations with China and Iran, and their connections, though more distant, even with Byzantium, the ancient Turki attained a relatively high level of culture. They had their own letters with runic characters, very well adapted for a precise phonetic transmission of the sounds of Turki speech. Their art was rich and unique.

The rapid growth of the Turki steppe state was soon followed by its decline. In A.D. 558 the Turki Khanate became divided into an eastern and a western part, and by the middle of the seventh century the Turki came under the sovereignty of China and lost their independence. They made their first attempt to free themselves only after fifty years of Chinese oppression. Then, with the ascendance of Gudulu-Khan (Kutluga), a new Turki State was established on the Orkhon. Substantial monuments of this State have been preserved, among them unique political declarations and famous runic inscriptions in memory of deceased Khans and persons who had been close to them and prominent in Turki political life.

In the Yenisei basin above Krasnoyarsk, there lived during the time of the first Turki State and later, the Orkhon State, which was subsequently replaced by the Uigur Khanate, the descendants of the Khakass, the Kirghiz, who, in the past, were representatives of the Europeoid anthropological type but who, about the beginning of our era, became mixed with the Turki and gradually became completely Turki-cized.

The Kirghiz led a sedentary life in dwellings covered with tree bark. They raised cattle but also practiced agriculture. They sowed millet, barley, wheat and Himalayan barley, and tilled the soil with simple iron-tipped ploughs, harvested grain with sickles, and milled grain with paired, rotating millstones. Among the Kirghiz an aristocracy possessing large herds existed. The head of the nation was called *azho*. Metal-working in iron, gold and tin attained a high degree of development. The Kirghiz were skillful blacksmiths, armorers and artistic jewelers. Trade was conducted with the Chinese, the Arabs, and the forest tribes of Siberia. As the Chinese report, music attained a high degree of development among the Kirghiz. The people enjoyed circuses with the participation of acrobats, expert horsemen and trained animals. The Chinese mention, for instance, the camel and the lion, trained for circus performance.

The Kirghiz jewelers left remarkable examples of their craftsmanship in the form of precious articles which were found in the graves of noble Kirghiz. They particularly liked to represent lively hunting scenes: horses stretched out in full gallop, bows bent to the ears of the archer, with game running in terror. Similar drawings were preserved on the rocks of the Minusinsk krai where, in addition to warriors, horses, horsemen, hunting and battle scenes, appear strange figures of priests or sacred leaders in long robes with maces in their hands, fighting male

camels represented in a surprisingly natural and lively manner, and even leopards with clubs in their paws.

The social-political order and culture of the Kirghiz were close to the order and culture of other Turki. Next to the Kirghiz there lived, on the Yenisei and adjacent areas, various other tribes which did not speak Turki. They lived in forests, practiced hunting, fishing, and some cattle-raising. These tribes were culturally on a much lower level than the Kirghiz. Such tribes were, for example, the Dubo, probably the ancestors of the later Tubalars or Tofalars (Karagasi). They may have been the possessors of the cave sites and numerous settlements in the Krasnoyarsk District and to the east of it, and also may have produced the red-colored pictures which were found on the Mana and the Birusa rivers. Among other tribes, neighbors of the Kirghiz, are also mentioned the Kurikani (the Hooligans of the Chinese, the Kuri or Furi of Arabian sources). The Kurikani lived around Lake Baikal, in the Selenga lowlands, and on the Angara and Upper Lena.

The greater part of the remains of the numerous fortified settlements around Lake Baikal belong to the Kurikani times, something indicated by their characteristic ceramics, i.e., fragments of primitive pottery vessels with flat bases. The numerous Kurikani graves which were found on Olkhon Island have the form of small conical yurts built of gneiss slabs. Where this stone was not available, they buried the dead in ordinary graves in the ground.

Like the Kirghiz, the Kurikani raised horses, cows and camels. They sowed grain, used runic letters, and their art was close to that of the Kirghiz and Altai Turki.

The most important concentration of monuments of Kurikani art are the painted rocks at Shishkino on the Upper Lena on which are represented horses in flying gallop, horsemen with banners in their hands, and horses and camels with richly colored plumes and neck tassels. These hunting and warrior scenes depicted on the Lena rocks possess a great deal in common with the art of the Yenisei Kirghiz and of the Altai Turki of the first millennium A.D. The Kurikani were enemies of the Orkhon Turki, as were the Chinese, with whom the Kurikani were friends.

From the country of the Kurikani, the northernmost Turki of that period, must have emigrated the Sakhalars, the Turki ancestors of the Yakut. The Sakhalars first left the Baikal region before the tenth-thirteenth centuries A.D., because at that time the early Mongolian migrants were spreading in this area, although later a new Turki-speaking group moved northward along the Lena which evidently gave the Yakut the assumed name Sakha.

South of the Kurikani, in the Selenga basin, the Selenga Uigurs lived as neighbors of the Orkhon Turki. These Uigurs left numerous stone kurgans (kereksuri) with rectangular or round enclosures, supplemented by ring-shaped structures and horse graves. Crania from the kereksuri, as well as earlier finds from slab tombs, are characterized by a high and flat face and small nasal bones. They are distinguished by brachycephaly, a sloping forehead, and strongly developed superciliary ridges.

At the time when, on the Transbaikalian steppes, the Huns were in the ascendancy and the Kirghiz state in incipient form, together with states of other Turki-speaking nationalities, appeared on the Yenisei, their northern neighbors, the tribes of the taiga and tundra, continued to develop their cultural and social relations, though at a slower pace than the steppe-dwellers. The history of the relations between the steppe and forest tribes was very complicated and is not yet completely clear.

In any case, there is no doubt that the forest tribes preserved for thousands of years their original mode of life, but at the same time they experienced the quickening, progressive influence of their relations with the steppe-dwellers. Particularly significant was the influence of the steppe tribes on the culture of the forest

tribes in the taiga of northwestern Siberia. Already, toward the end of the first millennium B.C., bronze objects of steppe types appear in the Ob region with increasing frequency. In turn, local products exhibit imitative marks of the imported objects from the steppe as, for example, clay vessels which appear as true copies of Scythian kettles. The clearest example of the interaction of the local forest aboriginal culture and that of the steppe are the remarkable finds made in the Poluia estuary on the Ob. Here, among the numerous finds in a sacrificial spot, there were encountered articles of a Scythian-Sarmatian type, and also examples of art resembling that of the Pianobor of the Urals, as well as those of the steppe Scythians. However, as M. P. Griaznov showed, they belonged to a later time, to the middle and even to the end of the first millennium of our era.

Griaznov's excavations for many years near Bolshaia Rechka in Nizhnie Elbany yielded a wealth of data which reveal the life of the forest tribes of the Middle Ob and their relations with the steppe-dwellers. Here Griaznov traced the change of cultural stages from the Andronovo-Karasuk period down to the seventeenth century A.D. As these studies showed, the inhabitants of the Middle Ob lived, during the first millennium, their own characteristic life of forest hunters and fishermen, and created their own culture which was markedly different from that of the steppe tribes. These differences are most clearly seen in the monuments of the seventh-eighth centuries A.D. ("Fomin Culture"). The neighboring nomadic Turki, who lived in the mountains and steppes of the Altai, buried their kinsmen in full war attire, together with saddled horses. It was obligatory to kill a ram at the funeral and place its fat tail in the grave. There are no clay vessels in these nomadic graves. The forest tribes, the bearers of the Fomin Culture, on the contrary, seldom equipped the dead with weapons except, occasionally, with hunting gear. There are no remains of domestic animals in their graves, but only clay vessels yielding traces of vegetable or dairy foods.

Thus, divided only by the Ob River, there existed here two cultural worlds: (a) the warlike steppe cattle-raisers; and (b) the forest hunters-fishermen. It is, therefore, remarkable that the material obtained from the monuments of the Fomin Culture reveals the closest similarity with monuments left by forest tribes, which lived not only in the areas of Tomsk, Achinsk and in the Tara Valley, but also in the northern part of the Ural Mountains and in the Kama and Viatka basins. Of especial significance are belt plates and buckles with representations of bears, which were known in the Urals since Pianobor times (about the beginning of our era), pendants in the form of birds, and cast, flat representations of the "Chudsk type." Also indicative are the vessels which characteristically have round rather than flat bases and which are carefully ornamented in a style resembling the vessels of the Ananino Period on the Kama.

According to physical type, the inhabitants of the forest section of the Middle Ob belonged to the Europeoid group, a fact that emphasizes even more the difference between them and the steppe people, the Turki, who are Mongoloids.

During the ninth-tenth centuries, the Europeoid settlers of the Fomin Culture were forced by the nomads to leave the right bank of the Ob, but continued to live northwest of it, and preserved their ancient cultural traditions, customs and way of life. As V.N. Chernetsov assumes, not only did the interrelations between the forest and the steppe tribes in the northwest of Siberia involve barter and warlike clashes, but also they led to the appearance of new settlers of steppe origin far in the north, something indicated by the very name of the Ostyaks (han-te, hun-ti), and by that of the neighboring Voguls (man-si). Ugriic in language, these migrants exerted a deep influence on local tribes, especially in metallurgy, and the acquaintance with horses in cults and folklore).

At the end of the first millennium, there begins here the formation of two

nationalities closely related in language and culture, i. e. the Mansi (Voguls) and the Hanti (Ostyaks). Then, on the territory between the Ob and the Yenisei representatives of a new ethnic group were spreading: the Samoyed (Samodiisk) tribes, coming, it is assumed, from the Saian-Altai region. As a result of their arrival in the Naryn krai, there began to form in time still another nationality, the Selkupi, who combined in their culture ancient Samoyed elements with those of the Ket, Ugrians and Tungus.

Let us move now from the northwestern regions of Siberia, inhabited then by Samoyed and Ugric tribes, to the other end--to the world of Palaeo-Asiatic tribes of Northeastern Asia.

As we have previously noted, at about the same time (i. e. toward the tenth century A.D.) great events transpired in Northeastern Siberia, where an analogous role as bearers of new cultural elements fell not upon the Ugrians and Samoyeds, but upon the Turki, the ancestors of the Yakut. At this time, the northern neighbors of the Yakut, who lived on the Middle and Lower Lena (probably the ancestors of the Yukagirs) already used iron extensively, although it seems that they still used stone scrapers and arrows, and that they made round-based clay vessels of ancient type.

Still further to the northeast of the Lena extended the region of the ancient maritime culture, where hunters of large sea mammals lived for centuries. How and when this culture appeared in this region is not yet known. One can only state definitely that it was preceded by the continental culture of wandering reindeer hunters.

The most ancient stage of the maritime culture, called, according to the first finds, the Okvik, and Ueleno-Okvik, according to finds on the Chukotka, is characterized by toggle harpoons, ornamented in a special geometric straight-line style, similar in form to harpoons of the Kuril Islands and Northern Japan where the ancestors of the Ainu lived in Neolithic times. Then, this culture passed in the course of its development through a number of succeeding stages, which are reflected in the rich and substantial material collected on the territory of the Chukot Peninsula. This material originates in numerous ancient settlements located along the shores of the Arctic Ocean, east of the Kolyma, and along the coast of the Bering Sea.

The settlements consisted of dwellings sunk in the ground. Their inhabitants, the maritime hunters who came principally from adjoining regions of the Far East (as indicated by the earlier Okvik, as well as the later curved-line ornamentation), displayed an amazing sturdiness and a truly inexhaustible inventiveness in the struggle against nature. Instead of the unavailable timber, they used whalebone widely. Not having sufficient supplies of firewood, they employed seal oil for heating and illuminating the dwellings, using oil lamps made of clay or stone. Since material for wooden or bark boats was not accessible, they invented boats made of skins. These polar hunters ingeniously perfected harpoons, fashioning toggle harpoons. In the course of time, they developed sled dog breeding. Of particular interest is the unique and rich art of these ancient Arctic tribes which, during the period of its highest development--the so-called Ancient Bering Sea stage--produced the fantastically elaborate curved-line ornaments, and the realistically sculptured representations of animals and, less frequently, of men.

According to the objects excavated at maritime settlements, a stabilization of the gradual changes of the material culture, economic life and, partly, of the social relations of their inhabitants, took place. At the beginning, the sedentary coastal people kept close to the shores, hunting seals and walrus throughout the year. Later, one observes an increase in whaling, in connection with which special harpoons appear, and the breeding of sled dogs develops. The widespread use of fishhooks and bird-catching devices evidently indicates an improvement in the methods of hunting and fishing.

The increasing yield from hunting and fishing and the development of barter with neighboring tribes led simultaneously to a transition from the ancient matriarchal to the new patriarchal clan order. This transition found expression in the folklore of the coastal tribes of the Arctic, its central theme (the myth of Sedna) being the struggle between the male and female principle.

About 1500 years ago, iron penetrated for the first time those remote maritime areas of Northeastern Asia which were settled by the ancestors of the Eskimo, Chukchi, Koryak and Kamchadals (Itelmenis). It is true that the tribes of the Far North still lived under Stone Age conditions, but special cutting tools made of iron now came into permanent use. They could obtain iron from the southwest, from the Lower Lena tribes, as well as from the southeast, from the Amur or Kuril Islands.

On the Amur and in the southern regions of the Soviet Maritime Province in general, the historical destinies of the local indigenous tribes were very dissimilar during the first millennium of our era. While antiquated forms of economy and social order persisted through thousands of years in the Arctic regions along the shores of the Pacific and Arctic Oceans, here, owing to the proximity of China and Korea, great progressive changes took place quite early, even during the last centuries of the first millennium B.C. At the beginning of our era, iron had already replaced stone implements. In places with favorable natural conditions, agriculture and cattle-raising appeared and barter flourished.

In the Maritime Region and in the Amur basin, where Tungus tribes penetrated very early, and also in adjacent areas, there occurred an intensive mixing of the local tribes with the aborigines as well as individual state formations of local tribes which began to emerge at the end of the first and beginning of the second millennium A.D.

The process of class formation begins here as early as the fourth-fifth centuries B.C. As the Chinese Annals report, the Mo-he tribes which lived here had long since started raising domesticated horses and pigs and cultivating rice, millet and wheat. Salt was produced in the Mo-he country, and vodka was made of rice. The Mo-he sold to the Chinese and the Koreans river pearls, medicinal ginseng roots, cocks and sables. In return, they obtained metal implements, dishes and fabrics, including silk.

At the beginning of the year 471, permanent cultural and political relations became established between the Mo-he tribes and China. From the beginning of the sixth century, Mo-he envoys visited regularly the Chinese court, while some Mo-he tribes fell under the sovereignty of China and had to pay tribute. In subjugating individual Mo-he tribes, the Chinese court relied upon their ruling clan. One of the Mo-hê leaders, Tu-ti-chi, is mentioned particularly in Chinese Annals. He submitted with his tribe voluntarily to China, for which he received an important rank as citizen, a golden seal on a red cord as a symbol of power, and a parade dress consisting of hat and belt. Tu-ti-chi embraced eagerly the customs of the Middle Empire and never missed an opportunity to exhibit his loyalty to the Emperor. The Emperor, in turn, showed his benevolence by presenting to Tu-ti-chi handsome gifts of exquisite silk fabrics. Accompanying the Emperor in his campaigns, Tu-ti-chi received gifts and new titles on the occasion of every military success.

Events in adjacent Korea were of great significance in the further cultural development and appearance of local state organization in the Mo-hê country.

In 668 war broke out between the Korean principality of Kao-li and China. Kao-li was crushed, the majority of its people exterminated, and many Koreans fled northward beyond the Lake Tumen-Ula, where they settled among the Mo-he. Here they developed agriculture, cattle-raising and metallurgy, and spread the high

Chinese-Korean culture. Under the direct influence of these events, there emerges the first true state among the Mo-he tribes, the Bokhai Empire.

The Annals consider that the Mo-he Prince, Ch'i-ch'i-chung-hsiang, a vassal of the Kao-Li kingdom, was the founder of the Bokhai (Chinese, Po-hai) State. He fled from the pursuing Chinese soldiers and found refuge in inaccessible mountains. Recovering his strength he declared his lands as the Dukedom of Chen, and himself as the Duke Chen-kuo-wang. His son, Tso-jung, expanded his domain considerably and in 699 declared himself the King of Chên State.

In 712 he defeated the army of the Chinese Emperor Hsüan-Tsung and acquired the title Po-hai chün wang, that is, appanaged Prince of Bokhai, deriving his title from the conquered ancient Chinese province of Bokhai, which gave its name to the entire state.

At first, this state included only an inconsiderable territory extending some 1000 km. west of the sea, and there was no real administrative organization in the country.

During the eighth-ninth centuries, the Bokhai Empire expanded considerably. It progressed culturally and politically and became for those times a powerful state. In the south it extended to the middle of Korea, in the east to the ocean, including the present raions of Vladivostok and Voroshilov, to the west it reached Ningan, and in the north the Amur.

The farming population of Bokhai produced sorghum, beans, cereals; they raised cattle and practiced various crafts. Towns existed which were centers of administration and cultural life. The Bokhai State had five capital cities, fifteen provincial, and sixty district towns.

One of the largest provincial centers of the Bokhai Empire, Shuaibin, was located on the site of the present city of Voroshilov. Shuaibin was enclosed with earthen ramparts, bastions and trenches. Inside the wall were dwellings with walls built of well-baked red or dark gray bricks. Roofs frequently were covered with tiles richly decorated with floral patterns, including lotus flowers. Sculptured dragon heads ornamented the gables.

The Bokhai State had a stable administrative system. At the head of the State was a ruler with the title of Duke. He had two ministers, the "right" and the "left," and each minister headed three departments. According to Chinese custom, officials appeared at the court with symbols of their dignity in the form of silver or gold fishes. Military administration was in the hands of a council of military leaders. Foreign political relations were dependably supported by the army and the fleet, which also guaranteed the independence of Bokhai.

The Chinese court aspired to keep the rulers of Bokhai under its influence. Actually, the dependence of Bokhai as a vassal state of the Chinese Emperor did not extend beyond the formality of the investiture of its ruler. The rulers of Bokhai were confirmed by the Chinese Emperor and received, after death, an honorary name.

The Chinese titles were flattering to the barbarians and enhanced the prestige of the Bokhai rulers among their subjects and strengthened their influence upon their neighbors.

However, this formal dependence on the Chinese court did not last long. The son of the founder of the Bokhai State, Tzo-jung, crushed the Chinese forces and brought a number of neighboring tribes under his rule. The Chinese Emperor, Hsüan-Tsung, was compelled to send his emissaries to Bokhai in 713 and to bestow upon Tzo-jung the title of an appanaged prince, the ruler of the "Great Maritime State" of Bokhai.

The Bokhai Empire signified the emergence of a state of Far Eastern tribes and also possessed a flourishing civilization. Bokhai enjoyed among the Chinese

the reputation of a country of enlightenment and of scholars. The Empire was destroyed by the Ch'i-tan, originally nomadic tribes, the ascendance of which occurred during the first half of the ninth century.

Between 922 and 924, the leader of the Ch'i-tan, A-pao-chi, founder of the Liao dynasty, defeated the Bokhai army and captured the western part of the country, while in northeastern Manchuria, in the south of the Ussuri krai, there remained independent Bokhai domains.

By the eleventh century, however, the State of Liao was greatly weakened by internal strife. It was replaced by a new state organization created by the Chzhurchzheni. The latter, a nationality of Tungus-Manchurian origin, were a part of the Mo-hê tribes, and lived since ancient times in northern Manchuria and adjacent districts of the Far East. They practiced agriculture and raised livestock. Hunting was an important occupation. They skillfully tracked down animals, caught roebucks by luring them with birch-bark pipes, and enjoyed long chases. The Chzhurchzheni no longer lived in dugouts, but in dwellings above ground, heating them with ovens from which hot air was passed under the bed benches.

The Chzhurchzheni slept and passed their leisure time on the warm benches. Remains of such benches lined with flagstones may be seen in many places on the Amur and in the Maritime Region. According to Chinese sources, the Chzhurchzheni possessed slaves. Distinct difference existed within the clans. The nobility became a separate class. Slaves and beloved male and female servants were burned alive at the funeral of a nobleman.

The princes of the Chzhurchzheni expanded the territory of their country by continuous conquests, and increased their power. In 1113, A-ku-ta became the head of the Chzhurchzheni and founded the Chin dynasty. He challenged openly the Ch'i-tan whose dependents were the Chzhurchzheni. He defeated the Ch'i-tan in the battle on the Lalin River and incited a revolt which ended, finally, with the collapse of the Ch'i-tan State. By 1122 the State of Liao ceased to exist. The rest of the Ch'i-tan went west to the Baikal region and even further to Semireche in Central Asia, where a new Karachinese state came into being.

After A-ku-ta's death in 1123, his successors inherited an immense territory, which included a considerable part of North China, Manchuria and Mongolia.

During the time of the Chin dynasty, our Maritime Region was a densely populated country.

In the neighborhood of the Bokhai town of Shuai-pin, which was captured and destroyed by the Chin forces, was built the town of Furdunchen. Here were preserved impressive grave monuments which had been erected in honor of Chin princes. Among these monuments were granite turtles on whose backs were attached plates with inscriptions and dragon figures. Numerous ruins of ancient fortifications, roads and mines of that period are encountered everywhere in the Maritime Region.

One of the most important monuments of the history of the Middle Ages of the Far East is Krasnoiarov near Voroshilov. This town, probably founded by the Bokhai, was later inhabited by Chzhurchzheni.

The first investigators of the Ussuri krai stopped more than once in surprise at the ancient fortifications on the high volcanic hill of Krasnoiarov on the left bank of the Suifun River opposite the city of Voroshilov.

The defensive belt of the ancient fortification extends for almost 8 km., conforming to the relief of the volcanic hill. The walls are even now 3 to 4 m. and even 5 m. high. However, the southeastern part of the town is most carefully protected. Here was located, behind high walls, the central section of the town, where the buildings of the palace and the temple of the Bokhai, or better to say of the Chzhurchzheni, stood, enclosed by a supplemental high wall. On the location

of these structures there was a solid layer of tile immediately under the top stratum of soil. These were the remains of the roofs of ancient buildings which lay in remarkable order. Among the mass of tiles, there were in some places fragments of representations of monstrous, fantastic creatures which decorated the roof corners of the buildings. Under the layer of tile protruded large slabs of hewn stone, the supports for the wooden posts upon which the tile roofs rested.

This was, apparently, the same kind of "forbidden city" of palaces and temples as, for example, that of the T'ang capital, Ch'ang-an, that of the Bokhai capital near Ningan (formerly Ning-ku-t'a) at the location of the present Tung-ching-ch'êng, or that of the later Peking. Its architecture likewise had a markedly expressed imprint of a high Chinese culture. It could hardly be otherwise at a time when the magnificent China of the T'ang period served as an example and teacher for all neighboring countries of the Far East. People learned from the Chinese, built palaces and temples according to Chinese styles not only in Bokhai, but also in Korea and Japan. Therefore, it is even more interesting that in the general plan of the "forbidden city" on the Krasnoiarov volcanic hill, there was a very substantial and highly significant feature distinguishing this city from those of Bokhai, and also from the Chinese centers of the T'ang period. The city of the Bokhai capital in Ningan, and that in the T'ang capital of Ch'ang-an were both located on level ground, and had a rectangular form. Straight streets cut the city from south to north and from east to west, forming square blocks of a chess pattern. On the Krasnoiarov volcanic hill, however, the city plan was subordinated to the natural relief of the elevation. Furthermore, the buildings of the "forbidden city" were erected not on level ground, but on recesses especially cut into the hill, forming terraces. Thus, in the planning of this ancient city was reflected the original traditions of the Far Eastern tribes and the features of unique cultural creativeness.

The ancient city near Krasnoiarov, however, became the victim of enemy attacks. The blow was so sudden that the defenders did not succeed in utilizing the reserves of stone projectiles which have remained in piles on the walls to the present day.

It is known from Chinese Annals that the Chin State became the victim of Mongolian conquerors. The Mongols of Ghenghis Khan took the Chin towns by storm, exterminated their population, and ravaged the whole country so thoroughly that it never recovered.

This terrible power which crushed with unprecedented speed the might Chzhurch-zheni Empire and then went on to conquer other countries, rose next to the Amur, on the steppes along the Onon and the Kerulen.

Some graves in the Selenga Valley near Zarubino can be related to the earliest time of Mongolian history. They suggest a life of poor nomadic cattle-raisers and hunters, armed with bows and iron-tipped arrows. A remarkable find in these graves is a musical instrument that is characteristic for steppe people, the Mongolian mouth organ khur. Women were sent to the "world beyond" equipped with shears used for clipping sheep. In analogous graves on the Lena, at the mouth of the Manzurka, there were found next to the women round-based clay vessels of ancient Mongols, which are mentioned in written sources of the thirteenth century. On the Lena rocks there are preserved incised representations of carriages decorated with tassels, rugs and flags. These carriages are drawn by bulls. Carriages of the ancient Mongols of the twelfth-thirteenth centuries are described in the same manner in the "Mystic Tale."

The time of the highest development of the Mongolian Empire in Siberia is reflected in such archaeological developments as the well-known "Niuk treasure" near Kabansk on the Selenga. There were found a silver paidza, rich graves on the Chasovennaia-Gora in Krasnoyarsk, and a number of graves in Tunka. The latter

yielded remains of complicated bows, silver goblets, luxurious leather garments stitched in gold, decorations of gold and pearls, products covered with Chinese lacquer, and bronze mirrors with a pattern of grape clusters and doves. These are all graves of Mongolian "Noions," and at the same time they bear evidence of pillage of cultured agricultural people by the Mongolian army.

As L. P. Potapov has shown, the barbaric rule of the Mongolian conquerors became reflected also in archaeological monuments belonging to the period of Mongolian domination in the Altai, but on an entirely different level. The Altai monuments of the thirteenth-fourteenth centuries are so poor that they indicate a condition of extreme impoverishment of the remaining inhabitants who were pitilessly exploited by the Mongolian feudal lords.

The same thing is observed on the Selenga on its middle and lower course. The glaring poverty of the finds in graves of the mass type which can be related to the period of the Mongolian Empire is so evident that robbers who came later did not even attempt to break them up. And this is in the Transbaikal region where, regardless of size, there is not a single grave of earlier time standing above ground which had not been touched by grave robbers.

The events that were connected with the emergence of the Mongolian Empire had other profound and not less important consequences. As a result of the ascendancy of the Mongols, of the organizational-political activity and policy of conquest of their emperors, there occur new and important changes in the interrelationship of the various tribes and nationalities of Siberia.

Mongolia now became almost completely Mongolian. The Turki, with few exceptions, definitely concentrated west of the Saian Mountains. The forest steppes of the Baikal region, which were settled even before the time of Ghenghis Khan with Mongolian-speaking tribes, Bargu-Buriats, Khorî, Bulagati and Ikhiriti, who mixed with the remaining ancient Turki inhabitants, became the homeland of the Buriat nation during the twelfth-sixteenth centuries.

In other respects, the ethnographic map of Siberia from the time of Ghenghis Khan to the arrival of the Russians persistently preserved its basic character which it had formed at the end of the first millennium of our era.

## NOTES

1. Pseudo-textile ceramics, i.e. ceramics which are covered with imprints of a narrow-mesh net in a chess-like pattern, produced by the strokes of a special spatula with a corresponding cut pattern on its surface.

2. Mr. Hsu Cho-yun, formerly research assistant of the Academia Sinica in Taiwan, and now associated with the Department of Oriental Languages and Literatures, The University of Chicago, comments that the Li Ling in question was not the grandson of Li Kuang-li, but of another general named Li Kuang. [Ed. note]

3. Information on the I-lou from "San-kuo-chih" was taken from a translation of the Chinese text made by E. V. Shavkunov and V. E. Larichev.

4. Mr. Hsu comments that the statement is in error owing to the very natural confusion of a barbarian state named Po-hai with a district in what is now Shantung Province known by exactly the same Chinese characters, but an altogether different place. Evidently the barbarian state alluded to never "had among the Chinese the reputation of a country of enlightenment and scholars." [Ed. note]

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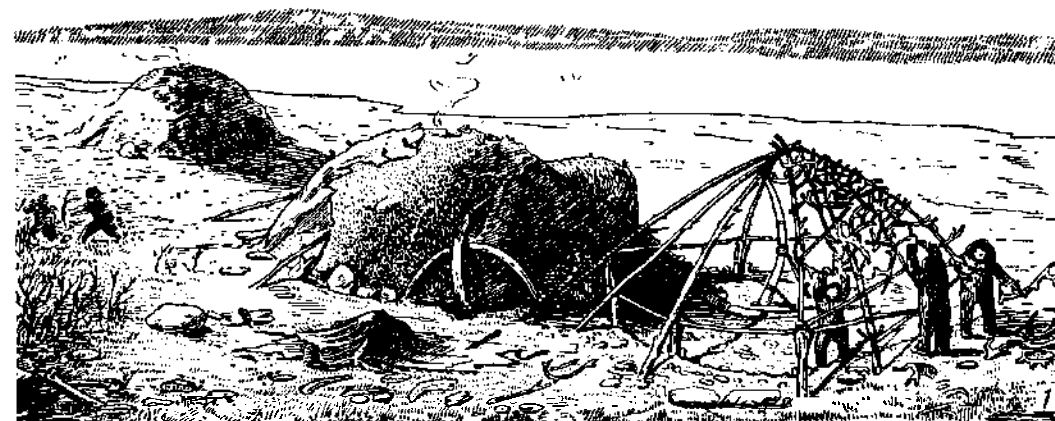


Plate 1. Palaeolithic dwelling at Buret: (a) reconstruction; (b) general view of excavations.



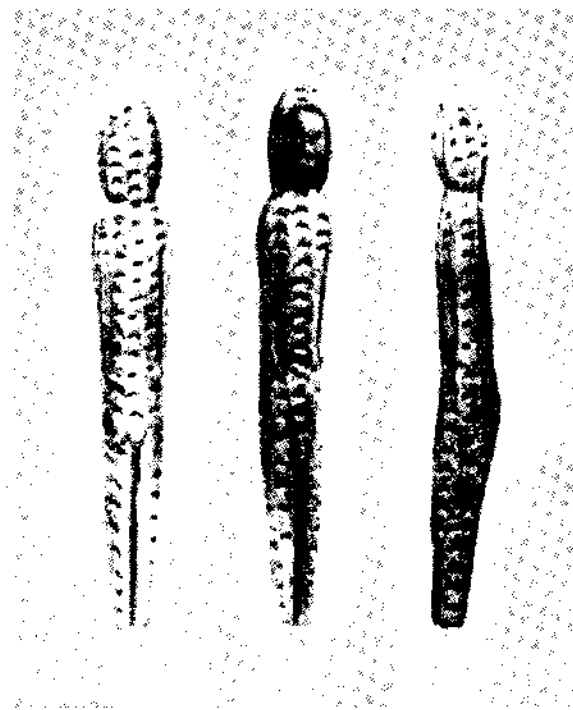
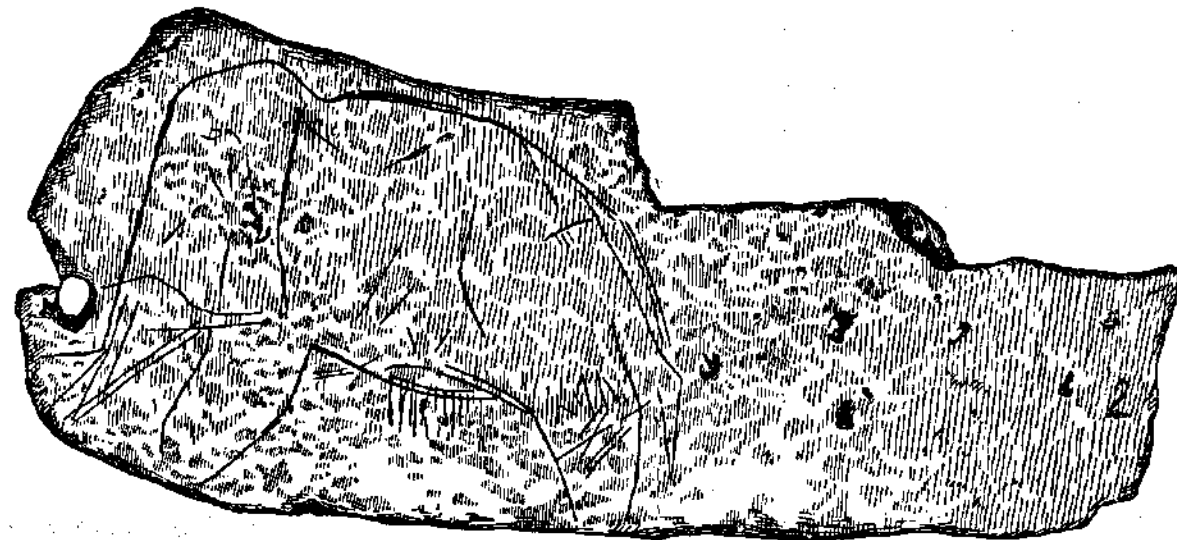


Plate 2. (a) Mammoth engraved on ivory plaque from Malta; (b) statuettes with representations of clothing from Buret.

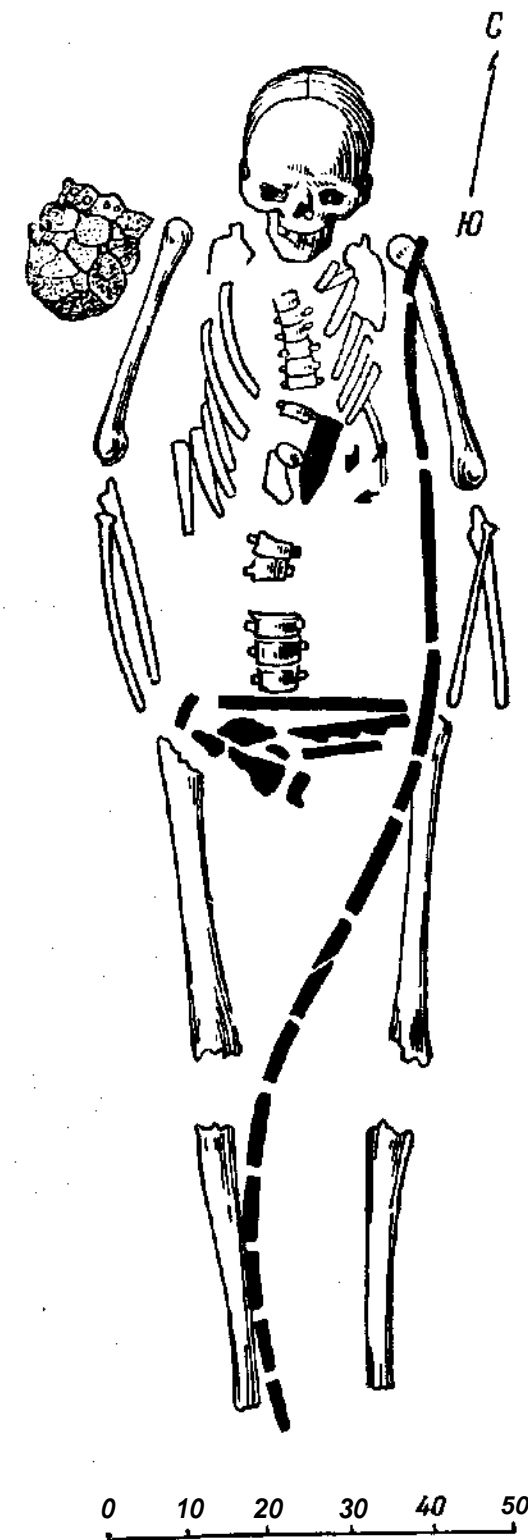


Plate 2. (c) Male skeleton with bow from Serovo grave at Bratskii Kamen on Angara River.

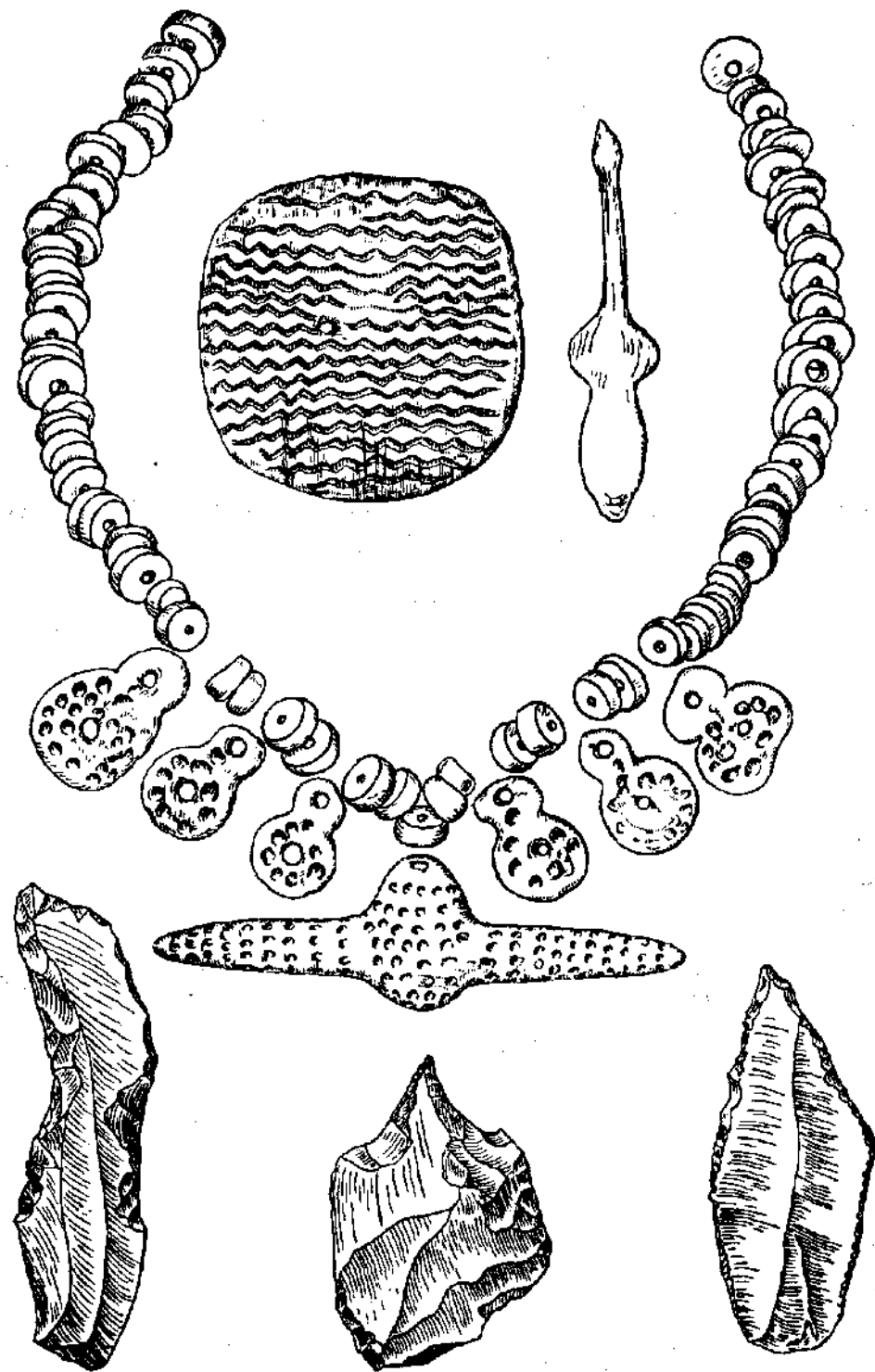


Plate 3. Decorations and stone implements from infant's grave at Malta.

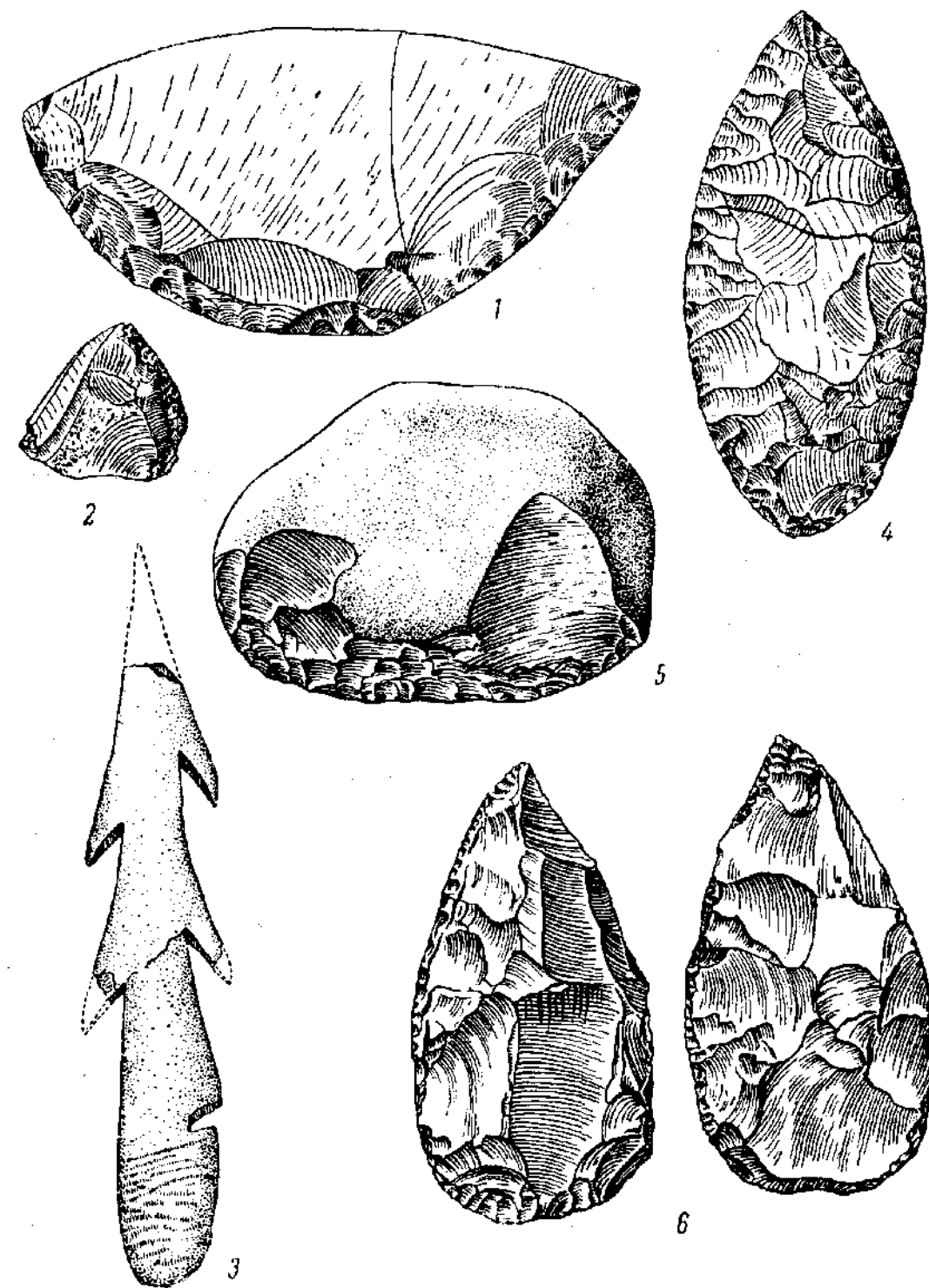


Plate 4. Stone and bone implements: (1) scraper; (2) nucleiform scraper; (3) harpoon; (4) spearhead; (5) bifacial scraper; and (6) points. Nos. 1-4 from Verkholskaia-Gora; No. 5 from Oshurkovo; and No. 6 from Niangi.

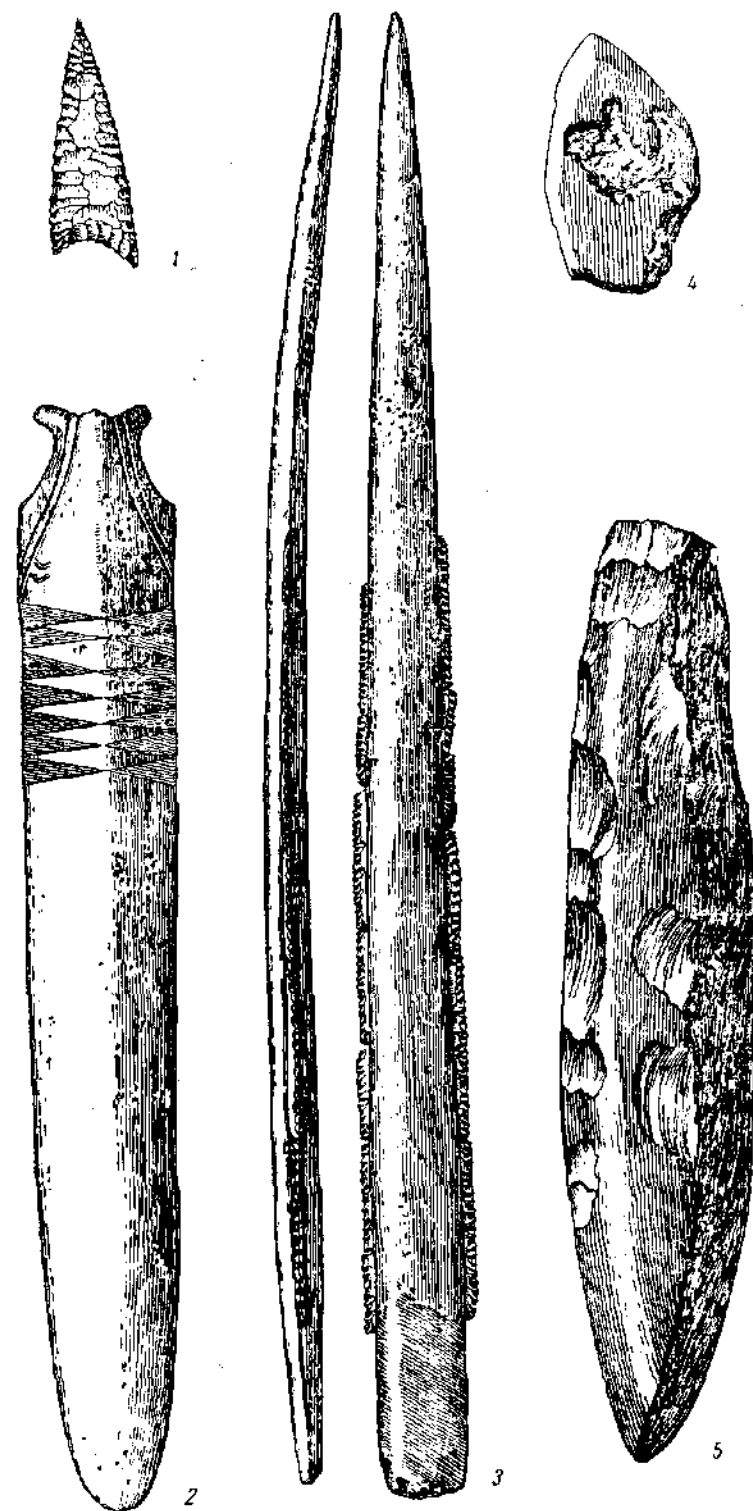


Plate 5. Stone and bone tools from Neolithic graves of Baikal region: (1) flint arrowhead; (2) ornamented bone dagger; (3) spearhead with inserts; (4) nephrite knife; and (5) large adze.

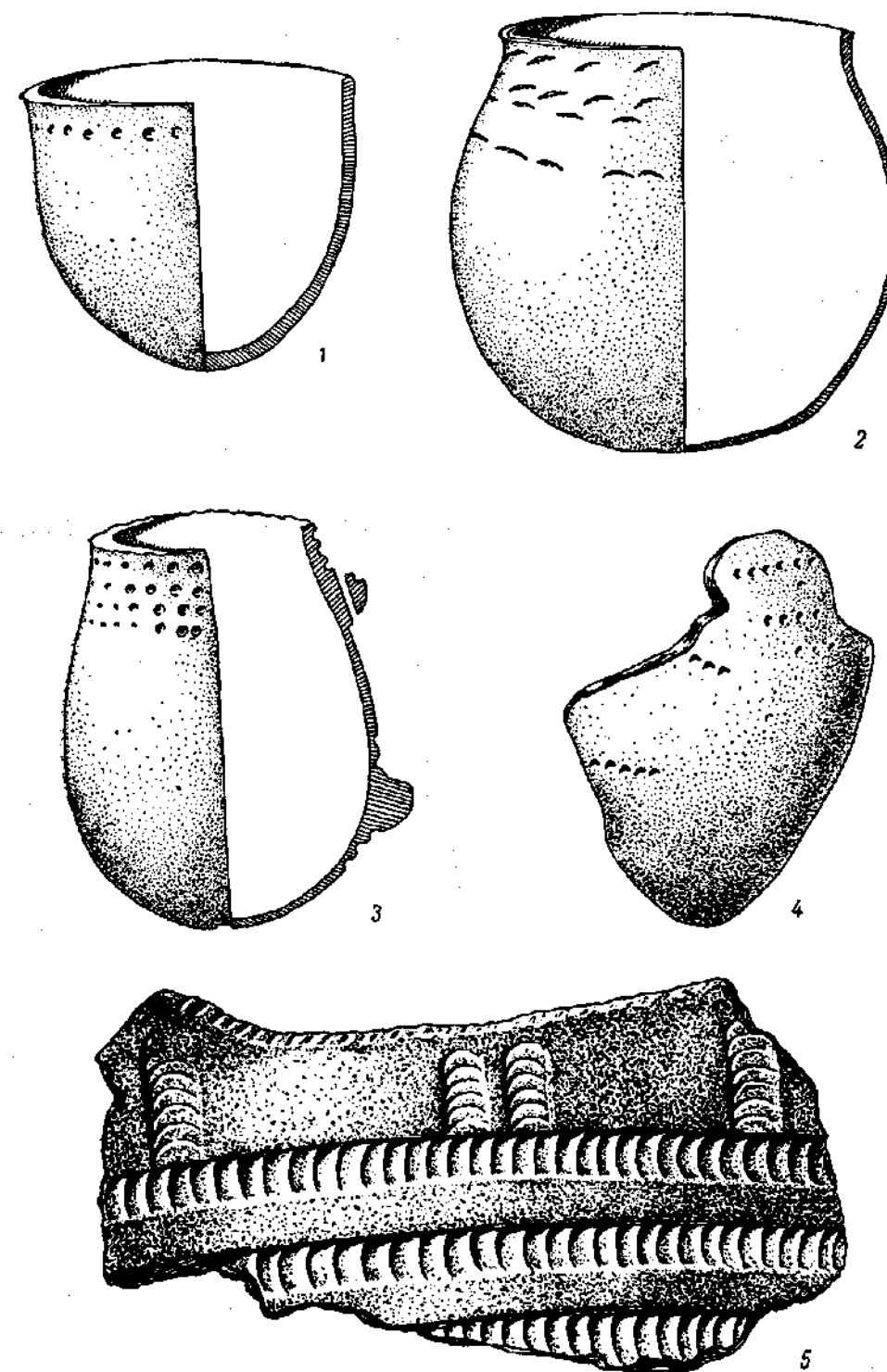


Plate 6. Neolithic pottery from Baikal region: Nos. 1-4, Serovo vessels; No. 5, sherd from Ulan-Khada.

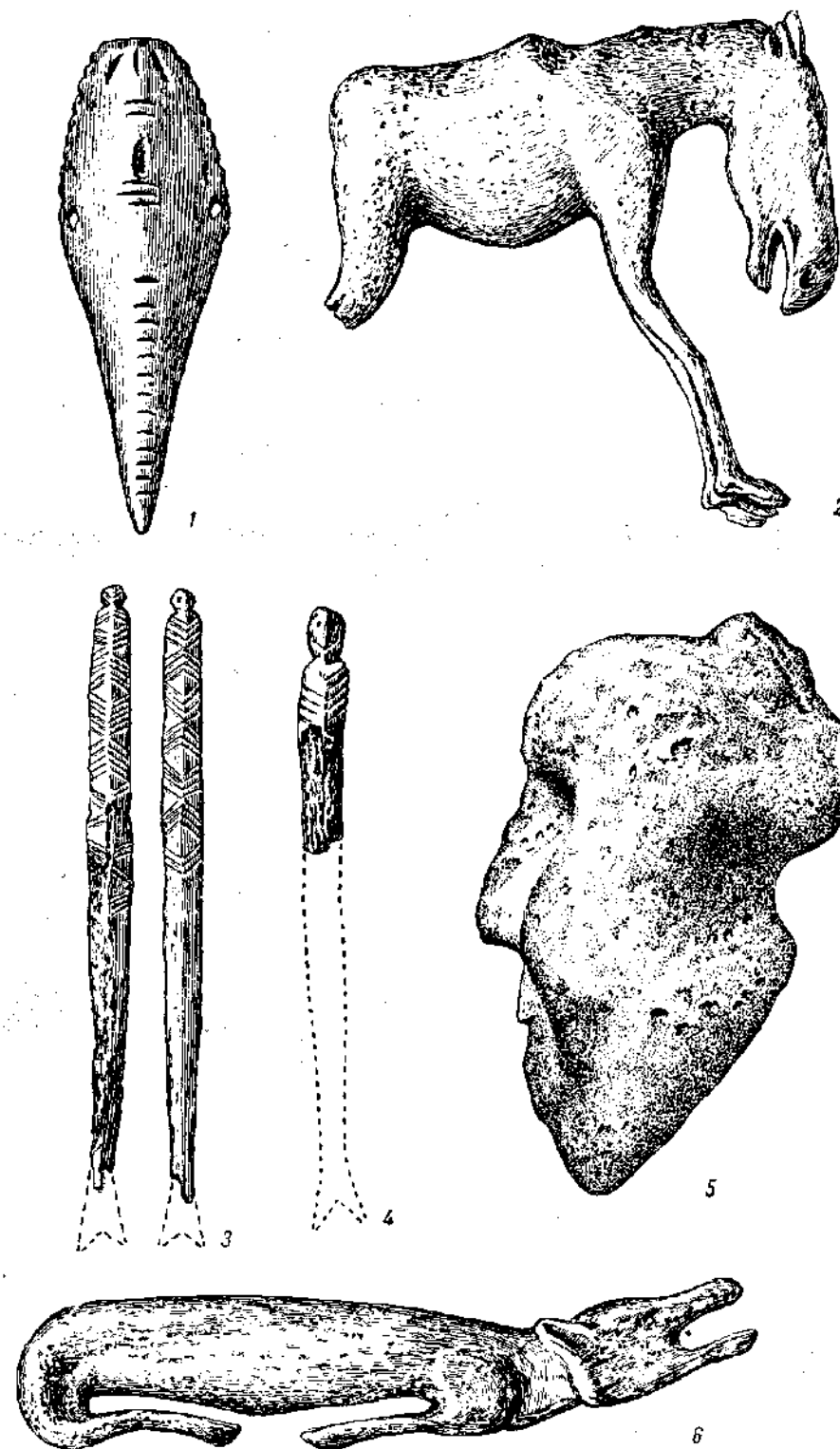


Plate 7. Neolithic stone and bone objects from Baikal region; (1) stone fish; (2, 6) stone elks from Bazaikha; (3, 4) bone figurines from Glaskovo; (5) marble head from Rasputino.

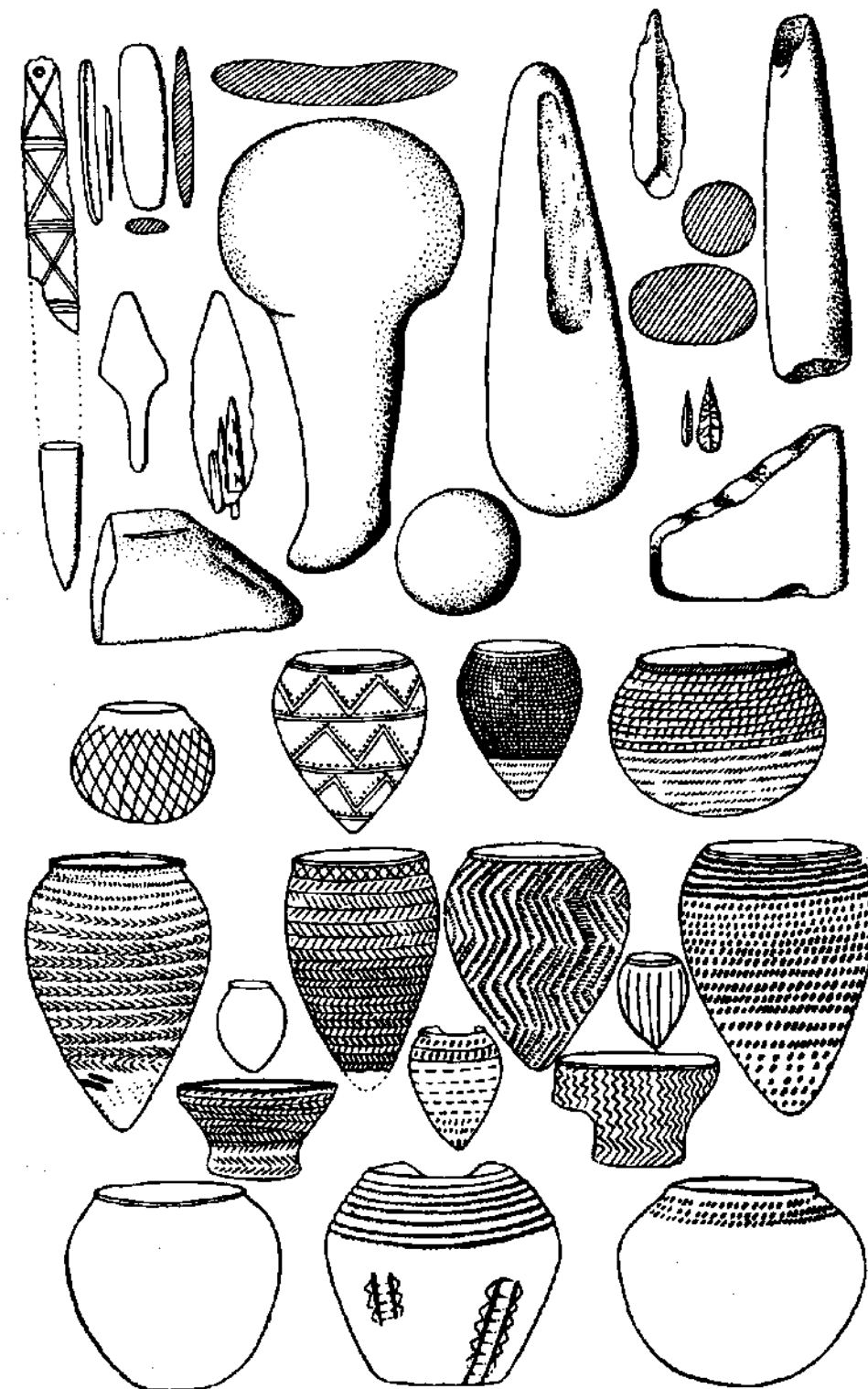


Plate 8. Objects from Afanasiev graves.

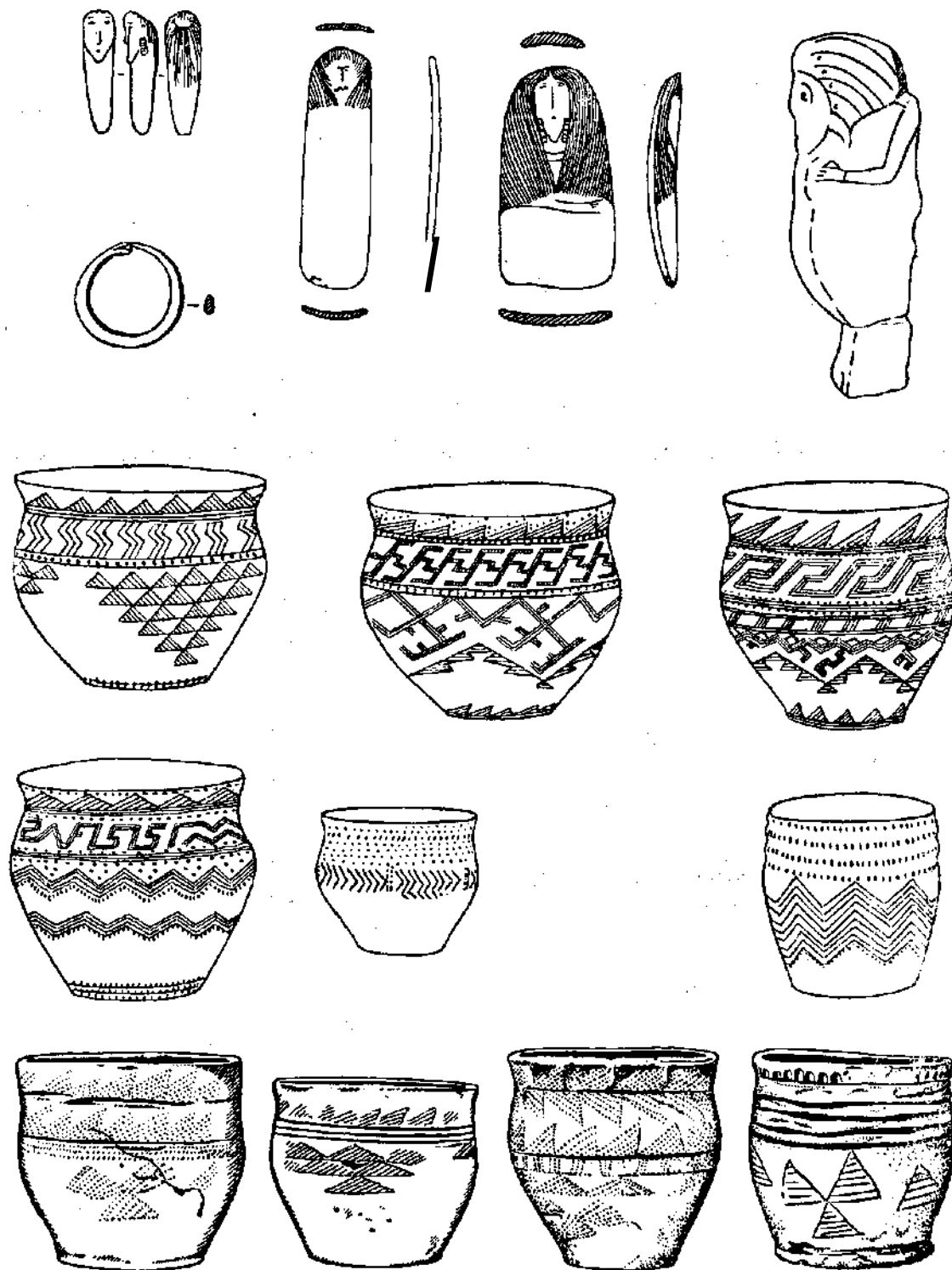


Plate 9. Anthropomorphic representations and pottery from Andronovo and early Karasuk graves.

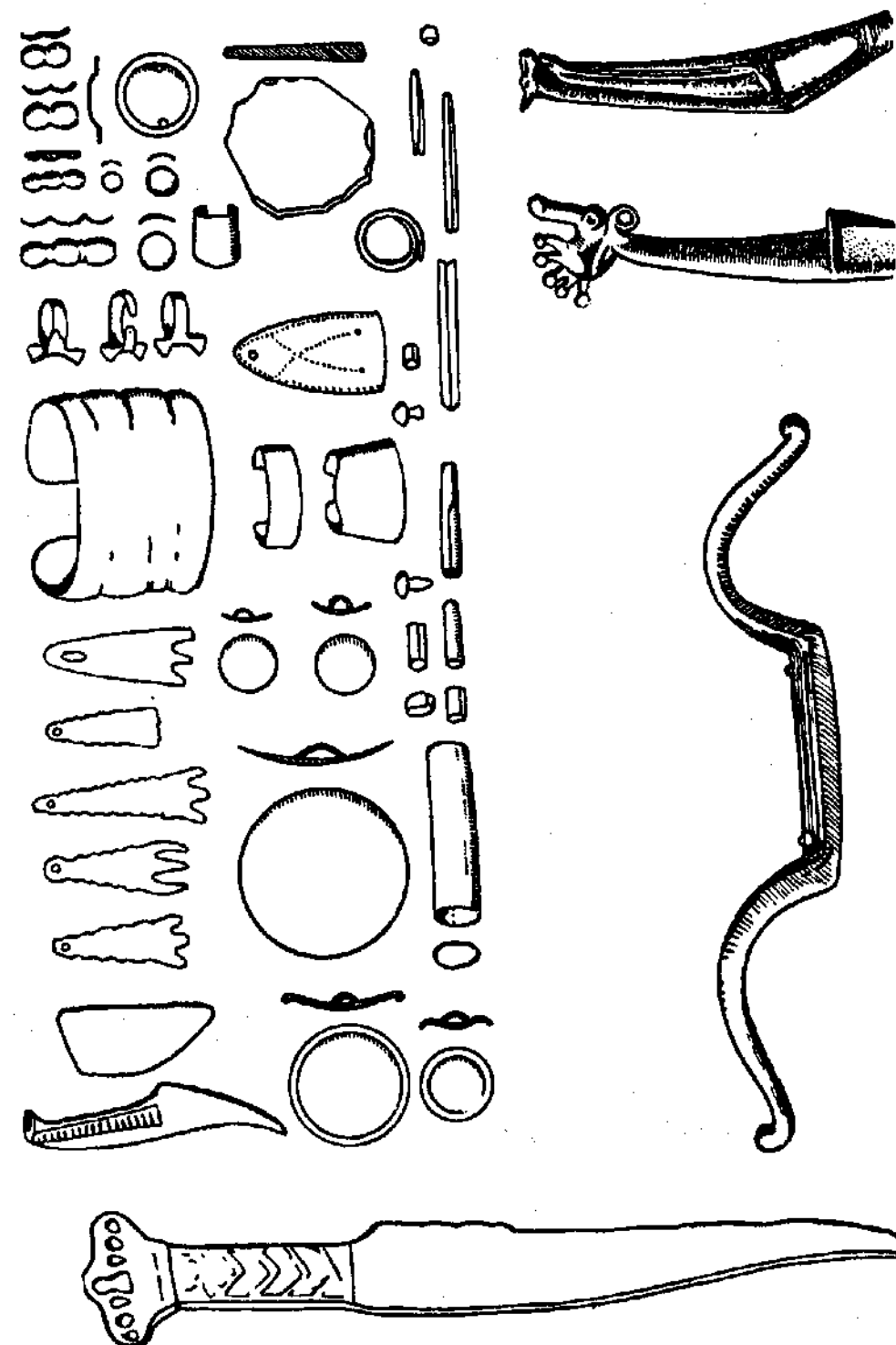


Plate 10. Objects from Karasuk graves.

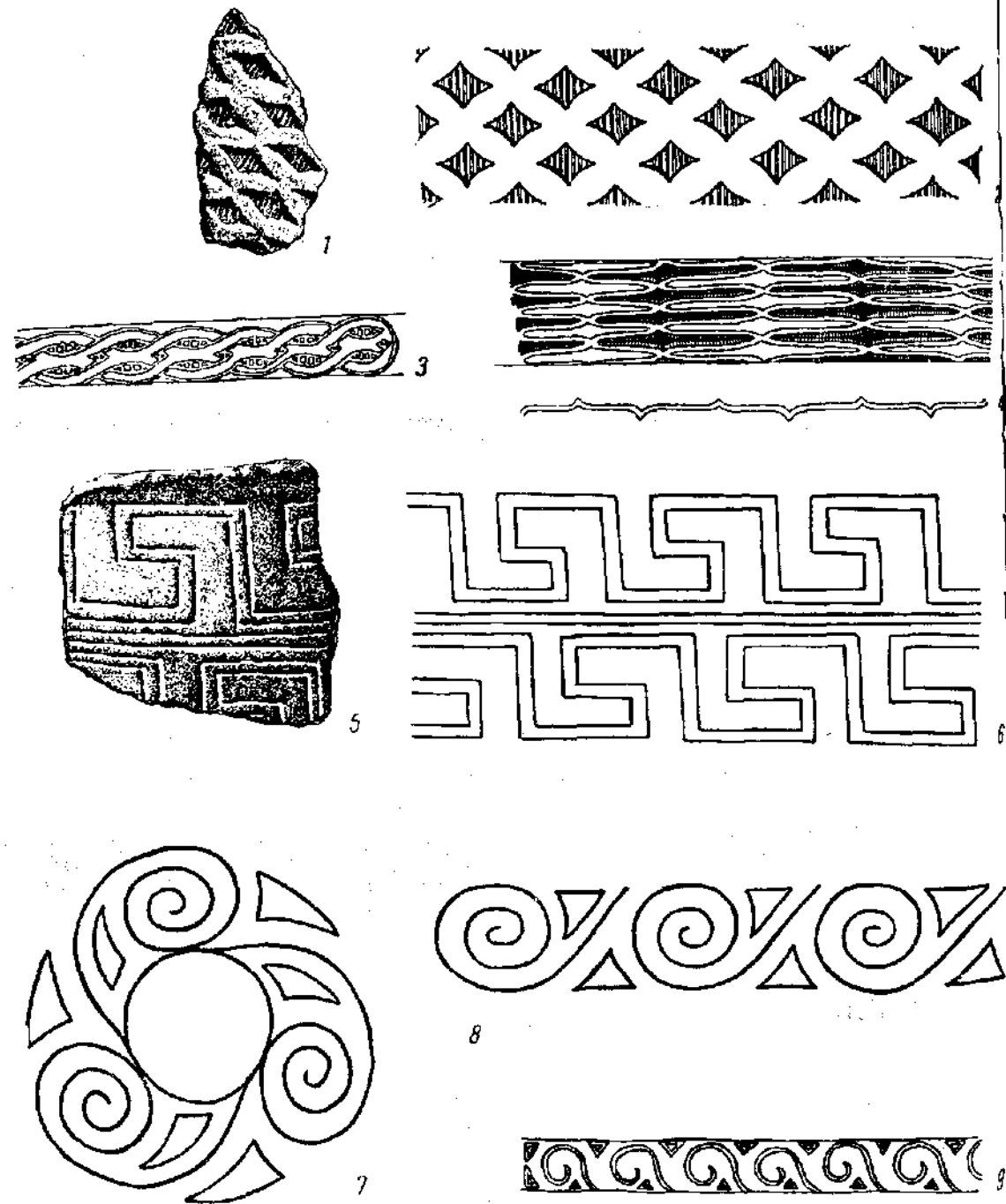


Plate 11. Neolithic ornaments (Nos. 1, 2, 5-8) compared with those of contemporary Amur peoples (Nos. 3, 4, 9).

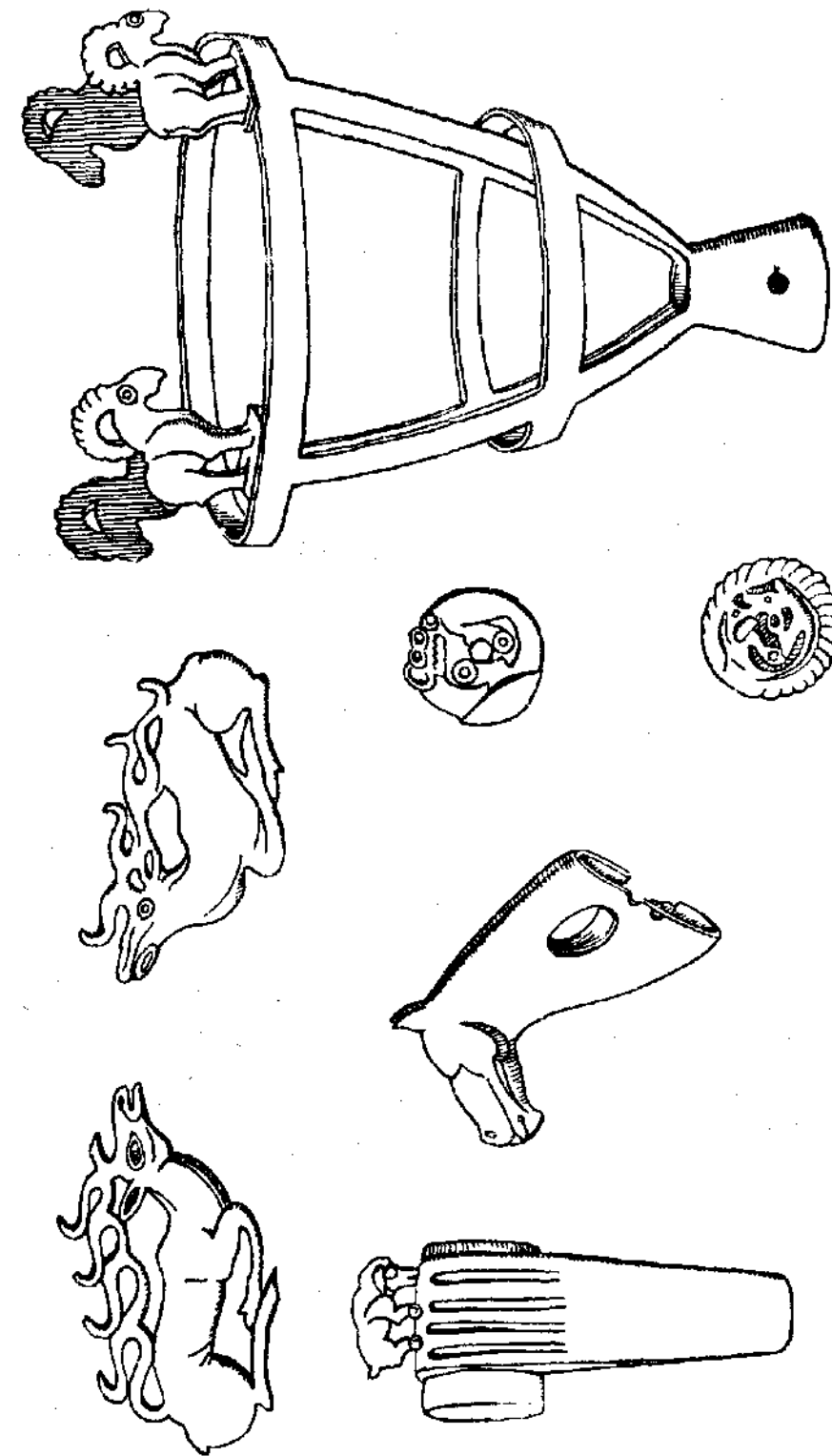


Plate 12. T-gar representations of animals from Minusinsk basin.



Plate 13. Ornaments (5th-2nd centuries B. C.) from **West** Siberian kurgans in Hermitage: (1) gold ring ornamented with **panther's** head; (2) copper neck collar.

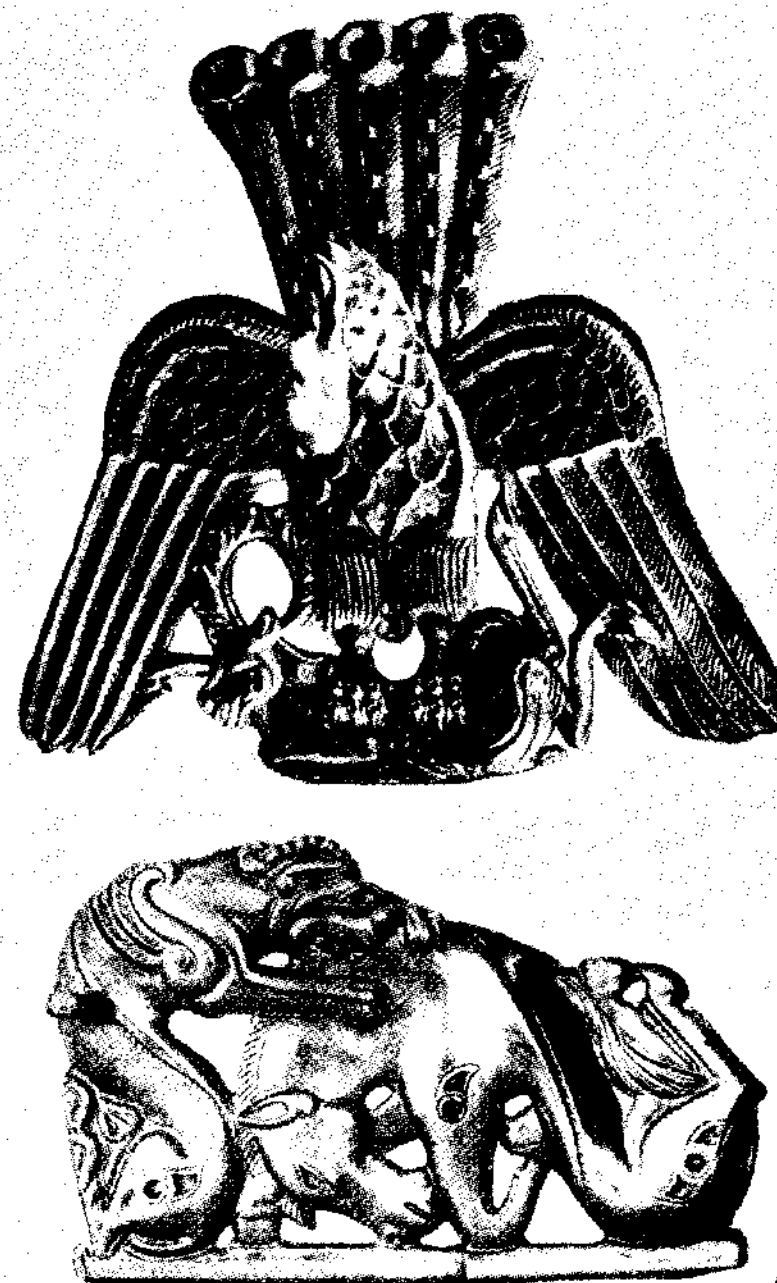


Plate 14. Gold plates (5th-2nd centuries B. C.) from West Siberian kurgans in Hermitage: (1) griffon; (2) winged lion attacking a horse.



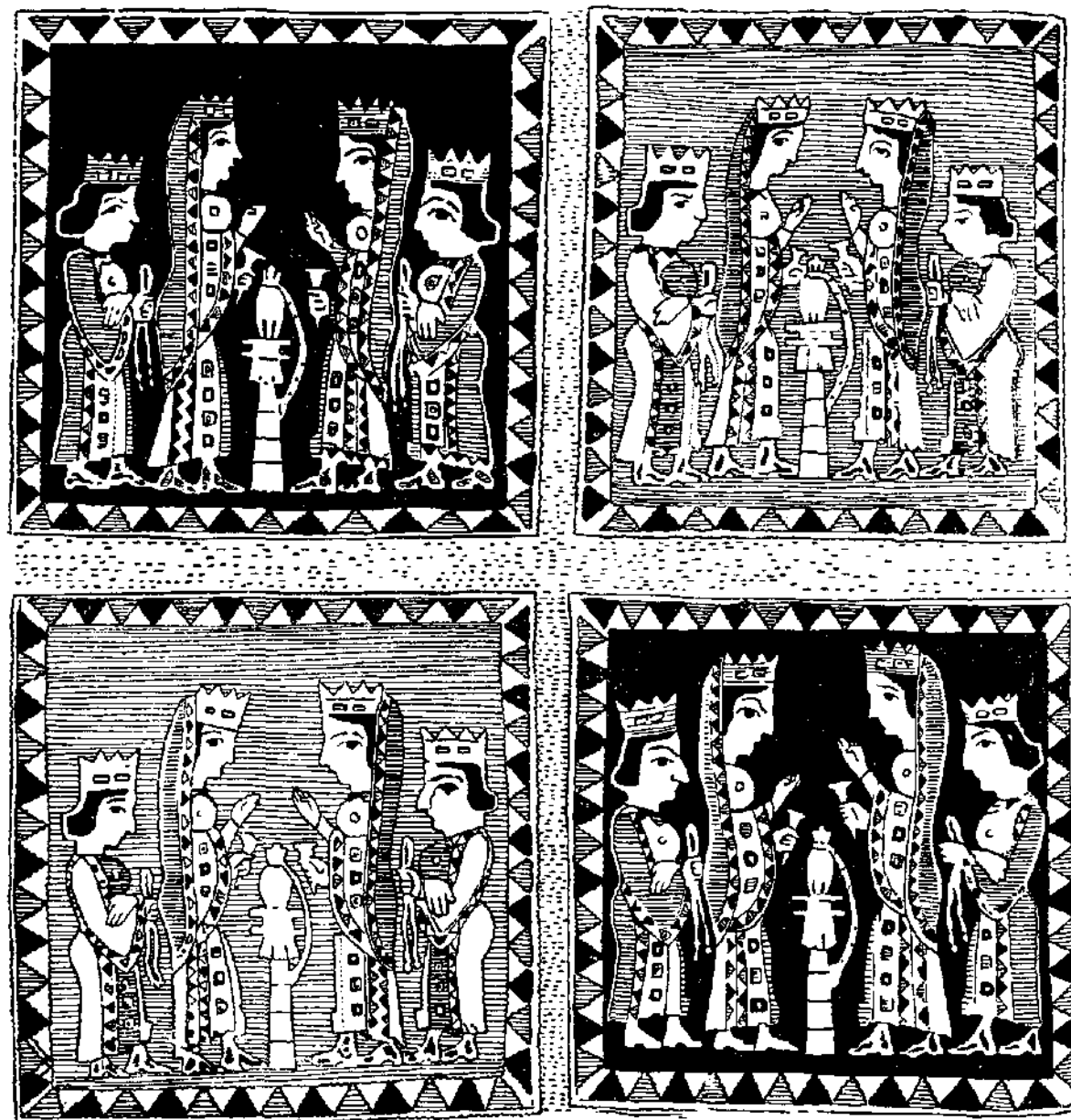


Plate 15. Fragment of Near East fabric from Pazyryk.



Plate 16. Wooden harness decorations from Pazyryk: (1) bridle with representations of griffon heads; (2) pendant in form of mountain ram's head.



Plate 17. Sphinx on felt rug from Pazyryk.

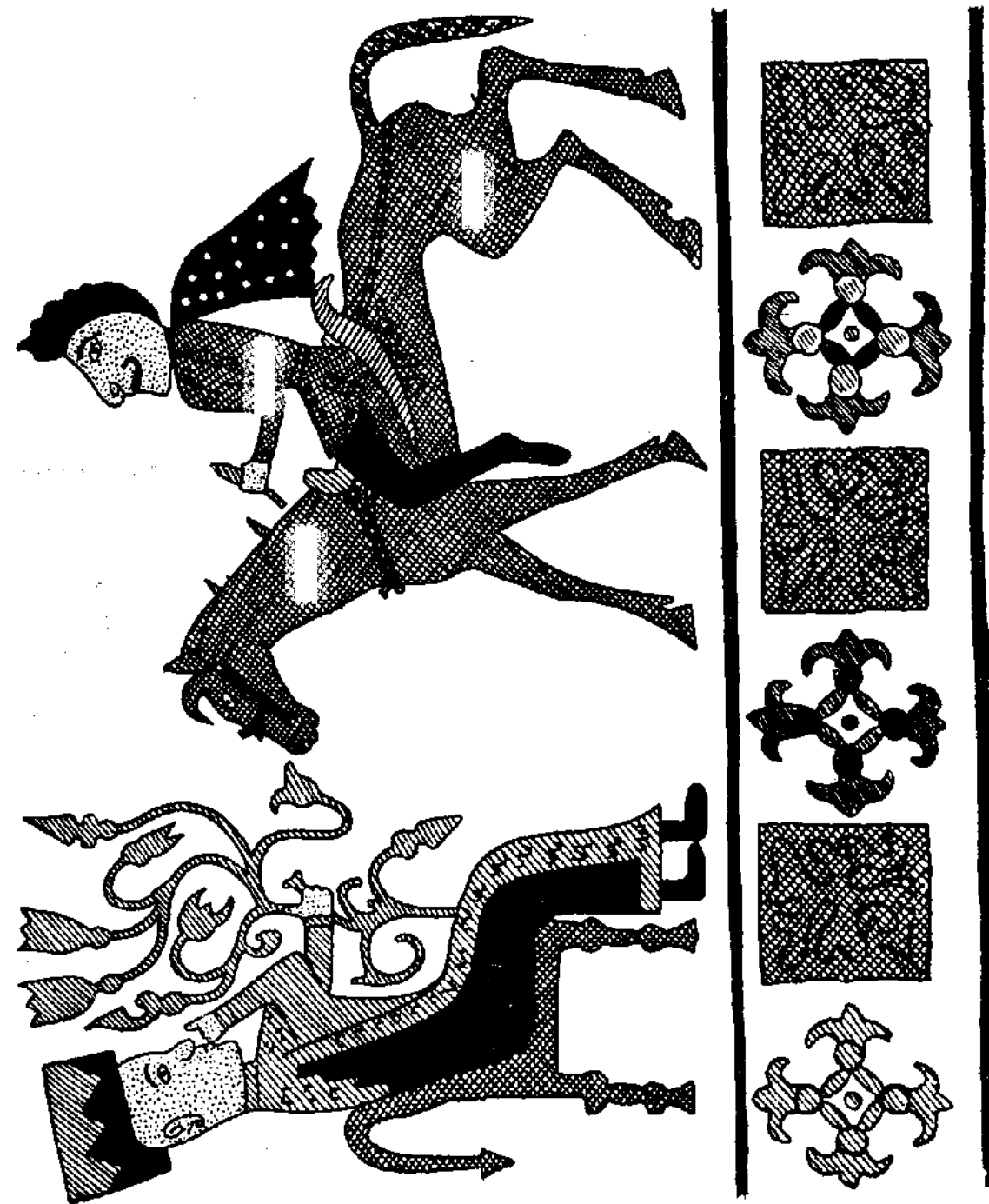


Plate 18. Ooddeas and horseman on felt rug from Pazyryk.



Plate 19. Objects from Chinese house at Abakan,



Plate 20. Bronze Age bone arrowheads, metal objects and vessel from taiga, Eastern Siberia.

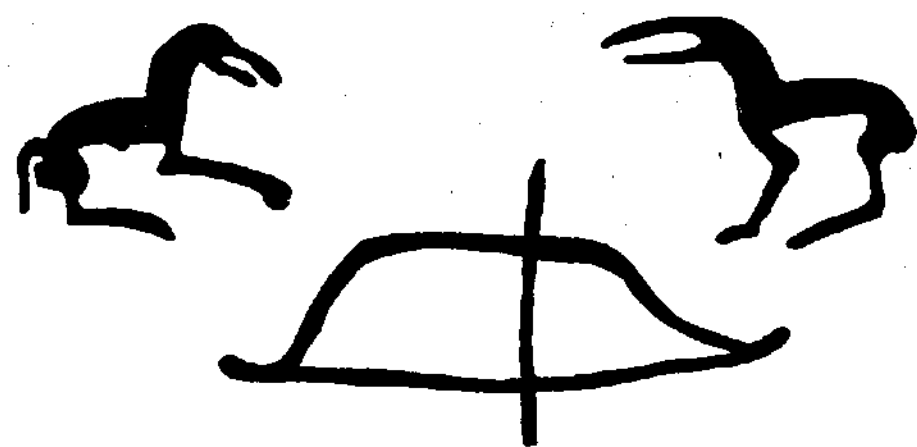
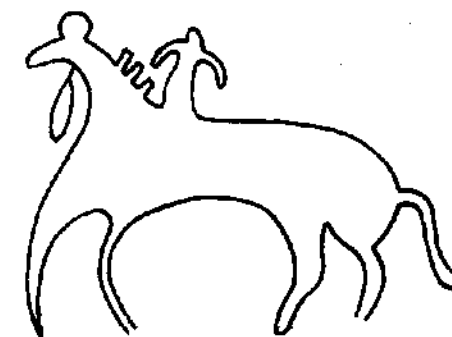


Plate 21. Bronze Age petroglyphs on deer stone from Ivolga River.



1



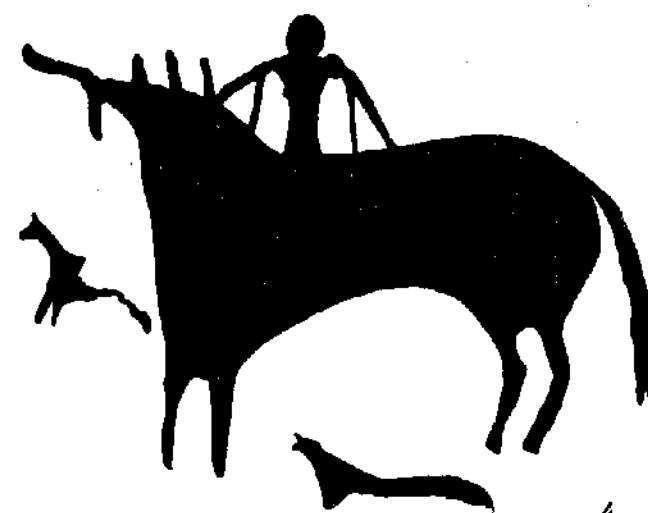
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4

Plate 22. Petroglyphs: (1, 2) Minusinsk krai (7th-9th centuries); (3-5) Shishkino, Baikal region (6th-10th centuries).



Plate 23. (a) Statue of official (8th-11th century) from Voroshilov-Ussuriisk; (b) Bronze Age clay tripod from Aginskoe, Trans-Baikalia; (c) Bronze mirror ornamented with dragon (11th century) from Maritime Province, Suchan.



Plate 24(a). Bronze Age slab graves on Uda River.

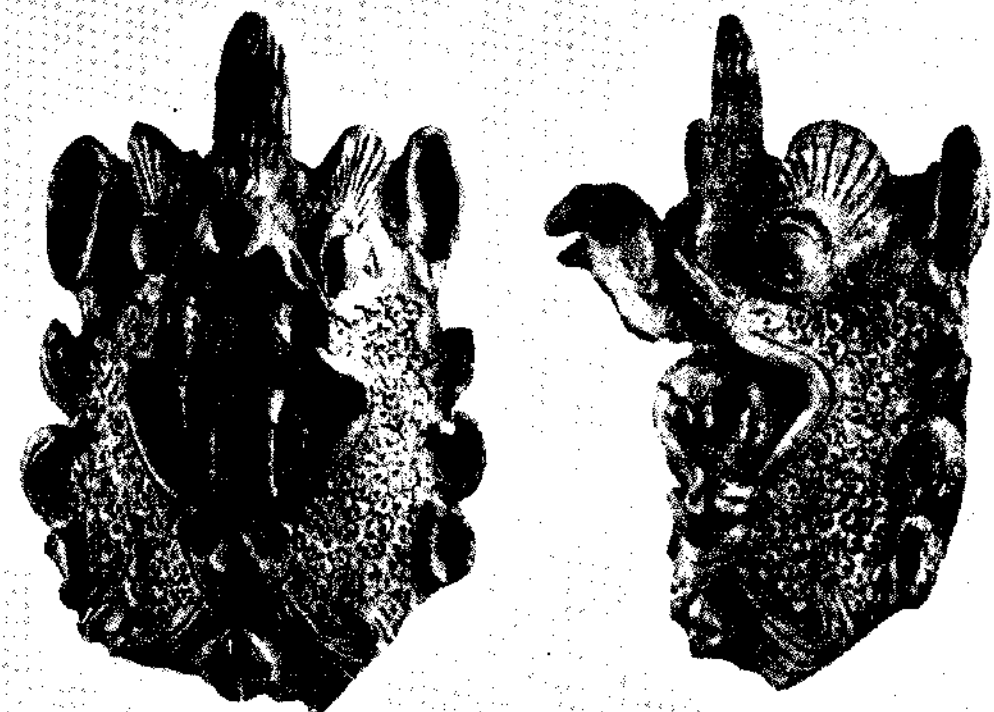
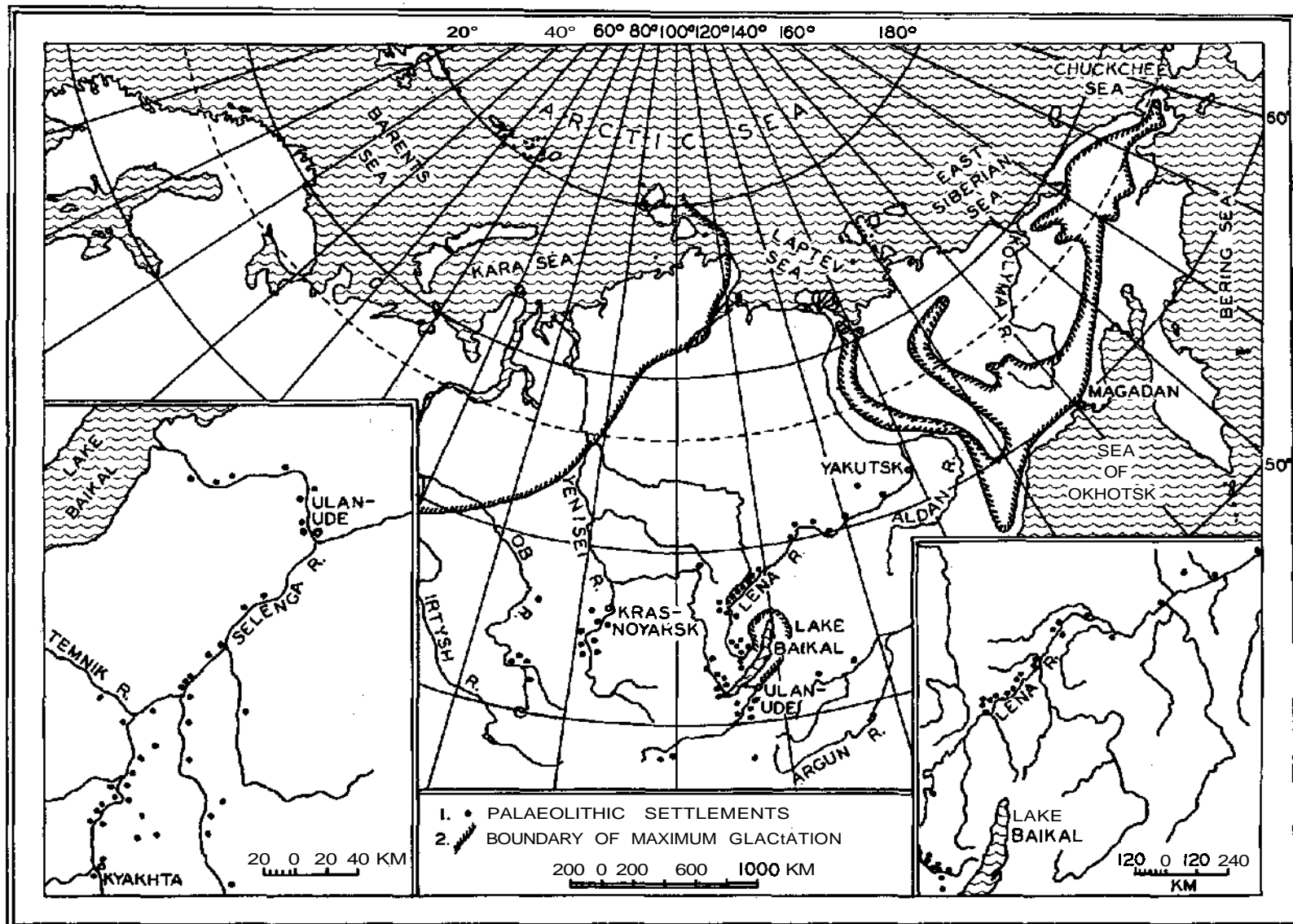
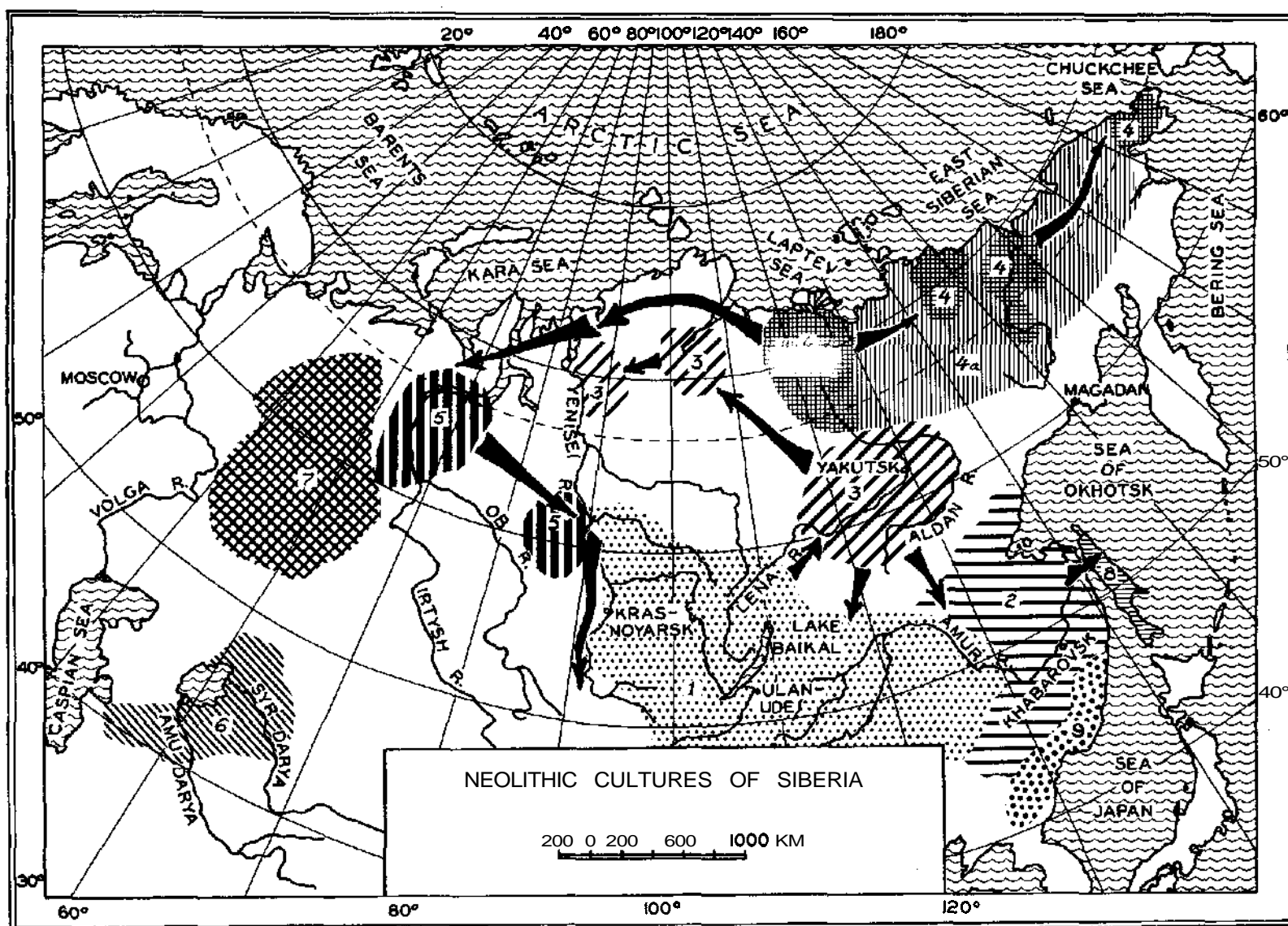


Plate 24(b). Dragon's head (8th-12th century) used as roof decoration from near Voroshilov-Ussuriisk.



MAP I



MAP 2





MAP 3