Hunting, Fishing and Early Agriculture in Northern Primor'e in the Russian Far East

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Chapter 1

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1. Introduction

Northern Primor'e, in the Russian Federation, is geographically related to the basins of two rivers: the Iman (present name: Bolshaya Ussurka) and the Bikin. The archaeological study of this territory is only beginning. About thirty years ago, eleven archaeological sites were known within the Iman River basin, while no sites had been discovered within the Bikin River basin (Khorev 1978). Since 1988, the authors of the present paper have begun extensive explorations and investigations of the archaeological sites in the Iman River basin, and since 1997 on the Bikin River. During seven field seasons, more than 100 new sites of different chronological periods were identified and investigated.

This paper focuses mainly on research materials from the Iman River basin. Studies in the Bikin River basin were only begun in 1997-1998, and data from this territory will be fleetingly referred to.

2. Population

The Iman River basin contains 92 identified archaeological sites, while there are 26 on the Bikin. The earliest archaeological sites in the Northern Primor'e can be dated to the Early Holocene period (approximately 10,000 BC). Twenty-six (Iman + Bikin) sites have been dated to the Neolithic Age (5,500-1,500/1,000 BC), and sixteen sites to the Bronze Age and Early Metal Age (1,000-500 BC). Thirty-four sites belong to the Early Iron Age (500 BC-AD 300), the period of the Poltse (or Olginskaya) culture. Thirty-one sites date from the Middle Ages. These are sites of the Mohe culture (*malgal*, *makkatsu*) (AD 300-700), the Pokrovskaya archaeological culture (AD 800-1100), and the Chinese Ming and Qing dynasties (AD 1600-1800). The status of the Northern Primor'e local population in the policies of the states of Bohai (698-926), Jin (1115-1234), Tung (East) Hsia (1215-1233), and Yuan (1206-1368) remains unclear at present (Figure 1 and 2).

From the eighteenth to the mid-nineteenth centuries, the Nanai and Manchurian peoples settled in the lower reaches of the Iman and Bikin rivers, whereas the Udehe lived in the middle and upper reaches of these rivers. Their numbers were not great. I. Nadarov

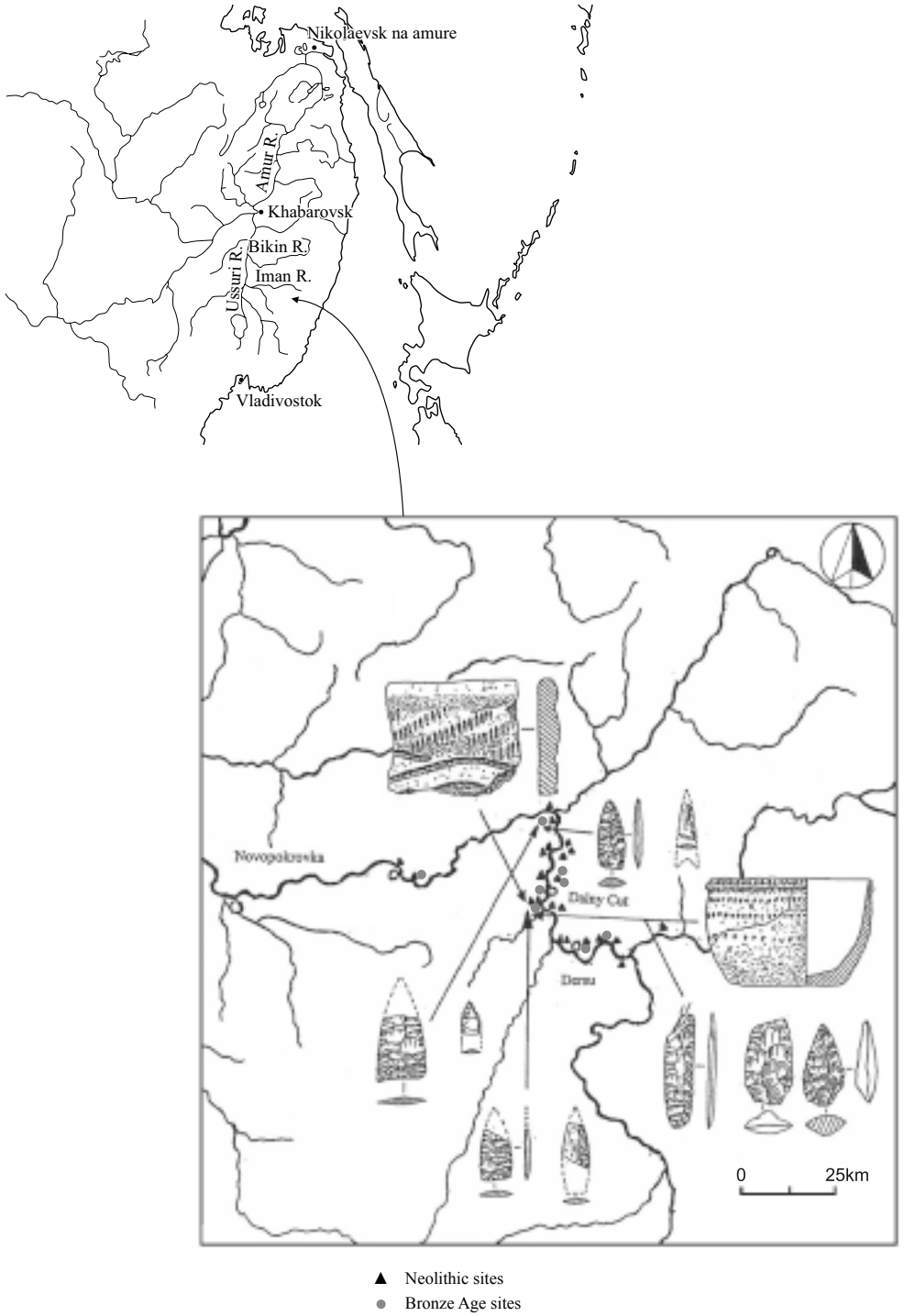

Figure 1 Sites of the Neolithic and Bronze Age in the Iman River Basin.

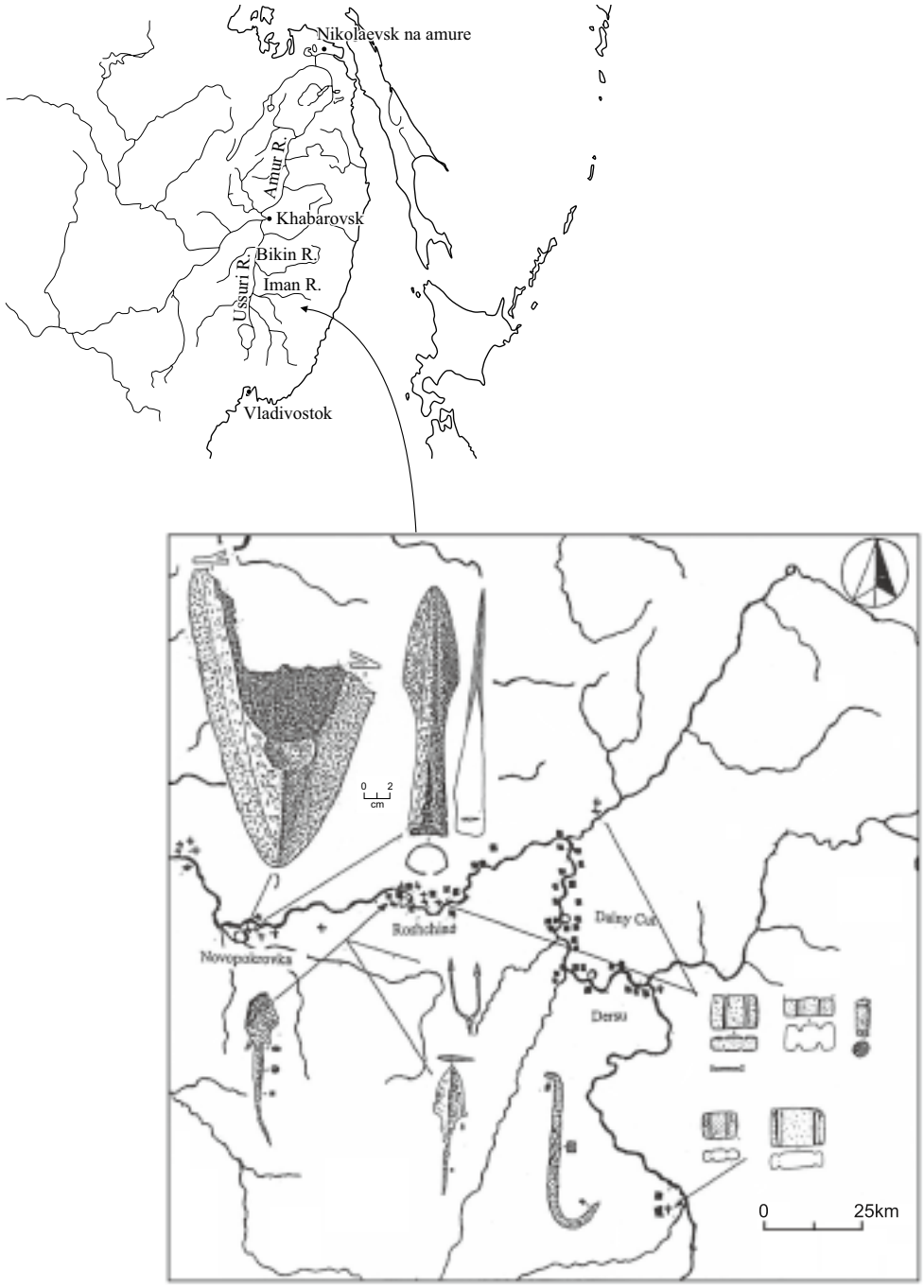

Figure 2 Sites of the Iron Age and Middle Ages in the Iman River Basin.

reported that about 400 people were residing on the Bikin in the early 1870s (Nadarov 1877). According to data of the 1897 census and other evidence from the same time, 150-300 people were then residing on the Bikin (Patkanov 1906, 1912). Since the second half of the nineteenth century, Primor'e was actively colonized and opened up by Russian settlers. Since this time considerable growth in the population of Northern Primorye has been observed, owing to migrants from the central areas of Russia.

3. Climatic Transitions

In accordance with physico-geographical regionalization (zonation), the intermountain valleys of the Bikin and Iman form an independent province. From the orographic point of view, they form a transitional landscape zone from the Sikhote-Alin taiga to the Priussuri plain. The east part of this zone is occupied by elevations with maximum heights of up to 1000 m, which are covered with broad-leaved-Korean pine and dark coniferous forest. The west part is lower (300-700 m). It is covered with multi-species broad-leaved forest, with meadows in the river valleys and willow-beds in association with birch-oak forests (Svinukhov 1990: 184).

According to data from spore-pollen analysis (spreading landscapes), climatic changes in Primor'e can be reconstructed in the following way.

The Bronze Age began with an insignificant climatic change. Initial signs of forest expansion connected with climatic wetting have been recorded in the cultural layer of the Bronze Age in the Novoselische-4 site near Hanka Lake. This trend has been more clearly defined in the cultural layer of the Dersu-4 site at the Iman River. Judging by the pollen spectra, alluvium covering the cultural layer may be related to the transitional period between the Bronze and Early Iron ages. It probably corresponds to the Subboreal/ Subatlantic boundary of the European Holocene stratigraphy. At the beginning of the Early Iron Age, warming occurred. This caused the spread of coniferous-broad-leafed forest (Verkhovskaya et al. 1994: 513).

4. Hunting

The fauna of the Iman and Bikin river basins is typical of the taiga zone of the Russian Far East. The different species of fauna—elk (*Aleca alecs bedfordi* Lud.), Manchurian deer (*Cervus elaphus xauthopigis* Milne), roe deer (*Capreolus capreolus bedfordi* Thos.), reindeer (*Rangifer tarandus valentinae* Florov.), musk-deer (*Moschus moschiferus parvipes* Holl.), Asiatic black and brown bears (*Ursus tibetanus ussuricus* Heude., *Ursus arctos mandchuricus* Hende.), wild boar (*Sus sefora continentalis* Nehr.), fox (*Vulpes vulpes* L.), sable (*Martes zibellina shantaricus* B. Kusnetz.), squirrel (*Scinrus vulgasris mandchuricus* Thos.), hare (*Lepus mandchuricus* Radde, *Lepus tinidus mordeni* Goodwin), racoon (*Nyctereutes procyonoides* Gray.), and badger (*Meles amurensis* Schrensk.)—were the prey of hunters in the Northern Primor'e (Zolotukhin 1997).

Evidence of hunting in the Northern Primor'e is known from many archaeological sites dated to the Neolithic as well as to the Bronze Age. Excavations at the sites of Tri

Sestry-3 (Three Sisters-3), Dalny Kut-2, 9, 14, 15, and Ostrovnoye-5 (Laulinskaya Rock-2) revealed stone implements related to hunting activity and processing of hunting products: retouched and polished stone arrow-heads (fairy stones), scrapers, chisels, notched tools, points, knifes and knife-like plates. At the sites from the Early Iron Age, stone (Ostrovnoye-5 [Laulinskaya Rock-2]) and iron arrow-heads were found. Since this time, textual sources concerning the peoples of Primor'e and Priamurie have been discovered. They report that the Ilou (Yi-lou挹婁) people have been resident in this territory. The Chinese chronicles mention the Ilou's skill at using the bow as well as their trapping of sables (HHS 1958, chapter 85).

At archaeological sites of the Northern Primor'e that have been dated to the Middle Ages (the urban site of Novopokrovskoye-2, the Roshchinsky burial ground and other sites on the Iman, and Fedoseevka-1 on the Bikin), both spear-heads and a great quantity of iron arrow-heads of different shapes specially intended for hunting have been discovered. The medieval Chinese chronicles confirm the significant role of hunting in the Mohe's economy. The Mohe (Mo-he靺鞨) hunted large animals (tiger, leopard, wild boar, bear, etc.), small animals (sable, hare, etc.), and birds. The same sources also report that the Mohe learned to make traps for wild animals and bows with plates of horn (SS 1958, chapter 81; JTS 1958, chapter 219).

A tendency toward a seasonal distribution of temporary hunting (fishing) sites is seen in the archaeological sites. We can guess that sites on the floodplain terraces and terraces above the floodplain might have been used during the winter season, and those on the first and second terraces above the floodplain during summer. This is probably related to the seasonal migration of major game animals.

A more detailed conception of hunting in the region can be obtained from ethnographic materials. The Nanai and Udehe people have already begun to hunt as juveniles. They hunted with bow and arrows, made arbalests and dug holes to trap large wild animals, and manufactured traps for capturing small animals with trading value (sable, squirrel, fox). To transport bags of game, a special barrow called a *shina* was used. The Nanai (Goldy) hunted only in addition to their other spheres of economy (primarily fishing). They focused particularly on hunting furry animals (Schrenk 1899: 146-147; Lopatin 1922: 100). For the Udehe, hunting was of greater importance. The Udehe hunters caught large animals such as elk, wild boar, Manchurian deer, bear, and musk deer (Lar'kin 1958). With the development of trading relations with the Manchurian Qing Empire and the Russian state, the procurement of furs expanded extensively. According to the ethno-historical data, a single hunter would catch, on average, one deer, three elks, one or two otters, one fox, and up to ten musk-deer, sables and squirrels a year (Patkanov 1906: 114).

5. Fishing

Fishing has been one of the most important branches of the economy for the pre-historical and traditional peoples of the Northern Primor'e. The most basic catch has been the highly productive salmon, chiefly Siberian salmon (*Oncorhynchus keta*). The salmon have been caught in the course of the spring (late spring to early summer) and autumn (October) mass

spawning runs. During the short run, a catching of the salmons provided the population with a large quantity of high-calorie food. I. A. Lopatin has described the period of the salmon spawning runs in the Goldy (Nanai) territory as follows:

> In these few days, the Goldy should carry out fishing in such vigorous way as to provide themselves with fish for the whole year. Therefore, the fishing implements and methods and laying-in rely on haste. During the period of the spawning run of Siberian salmon, the Goldy have a true busy season: nobody thinks about taking a rest at that time because every young and old person works round the clock. Success or failure is a matter determining life or death, because the Siberian salmon is the most important food, a true "daily bread." (Lopatin 1922: 128, authors' translation).

In addition to salmon, other species of fish have also been caught in Northern Primor'e: lenok (*Brachymustax lenok*), grayling (*Thymallus arcticus grubei*), taimen (*Hugo taimen*), sturgeon (*Acipinser schrencke* Brandt), kaluga (great Siberian sturgeon [*Hugo dauricus*]), crucian (*Carassius auratus gibelio* Bl.), sazan (*Cyprinus carpio viridivi olaceus* Lac.), sheat-fish (*Silurus soldotovi* Nik. et Soin), sig (*Coregonus ussuriensis* Berg.), and pike *(Esox. reicherti* Dyb.) (Zolotukhin 1997).

For the Neolithic Period, we have only few eco-facts that suggest the catching of specific species of fish. However, materials (fish bones and scales) found in excavations testify that the populations on the Iman and Bikin engaged in fishing.

During the Bronze and Early Iron ages, fishing was also of importance for the social economy. Within the Early Iron Age layer at the Dalny Kut-15 site, a stone net-sinker was found. It is a pebble with two chopped-off hollows on each side for tying to a fishing net. On the Bikin River bank, multilayered, probably, seasonal sites (Alchan-1, 2, 3, 4) have been discovered in Pereval (the point at which the distance between the Bikin and Alchan rivers is the shortest). The artifacts found there demonstrate that these sites have been used from the Early Iron Age to the ethnographic period. In all likelihood, salmon have been caught here during spawning runs. The high right bank of the Alchan River may have been a residential location. At present, only one site from the Early Metal Age (Alchan-5) has been found.

In the Middle Ages, the population of Northern Primor'e continued to exploit the rivers' bounty. It is not by chance that in the Chinese chronicles the Amur (Heishui) Mohe (**黑水靺鞨**) are quite often said to be the "river people." Clay net-sinkers for fishing nets have been found at several sites on the Iman River (Roshchino, Sarovka, and Glubinnoye). Fishhooks and a miniature leister head have also been found around the village of Roshchino. Many fish bones have been discovered at the settlement of Verkhny Pereval-1 on the Bikin. The next site in this area (Fedoseevka-1) was a seasonal site for fisherfolk of the Pokrovsky culture period. It is located near the Iman River. According to local informants, traditional sections of fishing were located in these parts. Here, many fragments of ceramics (pottery), arrow-heads, Chinese Tan'g dynasty coins, and post holes of temporary cabins have been found.

For the Nanai people of Northern Primorye, salmon fishing has been of great

importance for all branches of their economy (Sem 1973: 105-106). Russian ethnologists believe that for the Udehe of the Bikin and Iman in the ethnological period, fishing has played a less important role than has hunting. They usually explain this as owing to the remoteness of the Bikin and Iman from the lower reaches of the Amur River (Ivashchenko 1989: 32). We think they underestimate the potential of fishing. Before the mass catching of salmon in the Amur River by the Russian Government and contamination of the ecosystems of the Amur River during the Soviet period, the quantity of fish reaching the Iman and Bikin was very great. Data exist regarding salmon resources in Primor'e territory. When it is considered that not less than 1.5 tons of fish per capita a year were needed for a family of fishers (Slyunin 1908: 58), then a population of several times the number of Nanai and Udehe residing here could inhabit the territory of the Bikin and Iman river basins only through the sacrifice of fishing.

During the ethno-historical period, fish have been caught with nets of different lengths and configurations, leisters, and fishing rods, and dikes and traps have also been constructed. There were many methods for preparing different products from fish (Sem 1973: 105-116; Startsev 1996: 101-107). The preparation of sun-dried fish has been considered to be the most important. The Russian traveler V. K. Arsen'ev wrote about the Udege:

> Without the sun-dried fish they suffer from a poverty identical to that of the Russian ploughman in the years of bad harvest. The Udehe himself feeds on the sun-dried fish, feeds it to his family and all his dogs. Even though the best and common food is available, they miss the sun-dried fish and always prefer it to rice." (Arsen'ev 1926: 97-98, authors' translation).

6. Early Agriculture

Agriculture appeared in Northern Primor'e during the Early Iron Age. Stone slabs for grinding grain have been found at a site from this period (Dalny Kut-3). We have not only archaeological but also textual sources regarding the agricultural system of peoples of Northern Primor'e and Priamurye during the Early Iron Age. The Chinese chronicles report that the Ilou people grew "five cereals," i.e., rice, wheat, *kaoliang*, millet, and soy beans. They also bred pigs (HHS 1958, chapter 85). According to the chronicles, the medieval residents of this region—the Mohe—sowed wheat and millet and used horses to plough the land (SS, chapter 81; JTS 1958, chapter 219). They also bred pigs and horses (SS 1958, chapter 81; JTS 1958, chapter 219). This is confirmed by the archaeological data. At the site of Verkhny Pereval-1 on the Bikin, many bones of domestic animals (cattle) have been found. An iron plough was discovered near the village of Kedrovka. Stone mortars are often found. One such mortar was found by us in 1998 in the course of our investigation of the town of Novopokrovskoe-2, which we identified as having been a major administrative centre in this region around the twelfth-thirteenth centuries.

Many of these agricultural skills were later lost. This was related to the crisis and fall of the medieval civilizations of the Far East after their conquest by Mongols. It is also

possible that a cold spell and forest expansion during the Late Jurchen period could have influenced the disappearance of agriculture (Verkhovskaya 1990, 1996).

More recently, the Nanai people used rudimentary forms of agriculture that they adopted from the Chinese. They planted rice, millet, green bristle grass, beans, corn, and other crops. In the mid-nineteenth century they began to plant cereals and vegetables. However, they purchased most of their agricultural products from Chinese and Manchurian merchants (Sem 1973: 111-112, 117). The Udehe also used primitive agriculture. They grew potatoes, corn, and *budu*. Their kitchen-gardens were of small size, however (Patkanov 1906: 115).

7. Conclusions

The Northern Primorye territory has rich natural resources that have enabled human beings to develop hunting, gathering and fishing. Investigations of archaeological sites have shown that during prehistoric times humans principally occupied and utilized the middle and upper reaches of the Bikin and Iman rivers. In the Middle Ages, they began to settle in large numbers in the lower and middle reaches, where the resources were available to engage in plowing agriculture. There, many settlements were formed. Near the village of Novopokrovka, three large towns were established.

The distribution of the sites of the Early Iron Age demonstrates a more complex picture. At this time the population began to be engaged in agriculture and to develop resources suitable for this purpose. Nevertheless, hunting, gathering and fishing continued to play an important role. A tendency toward expansion mainly in the middle reaches of the rivers is characteristic of the sites of this period.

For the ethno-historical period, the natural division of the river valleys into lower-middle and upper-middle areas remains. Cultures connected with primitive agriculture and fishing have settled in the former, whereas cultures of hunters-gatherers and fishers have existed in the latter.

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