

ogy? Or what can be said about the conclusion of Paleolithic scholar A.N. Rogachev (1969:185): “In the hand axe and crude stone knife of Archanthropus, archaeologists see a complex apparatus of material culture created by these earliest people They had a family-clan, and not a troupe form of life.” How, for example, does Paleolithic specialist A.P. Okladnikov’s (1986:16) conclusion correspond to the anthropological data when he states “It is important in principle that approval of the Levallois technique signified a great progressive shift not just in working stone It also defined substantial changes in the physical structure of man himself, the restructuring of his brain, and the whole intellectual activity ...”?

Successful development of Russian archaeology is impeded by the lack of data banks on all subjects that archaeologists are occupied with in various institutions. This frequently results in duplicated work and the futile expenditure of intellectual activity and financial means. At the same time, this contributes to a “flourishing” in archaeology due to the compilation and plagiarism of random people incapable of independent creative work. Owing to unscrupulousness and pushiness, such “scientists” sometimes occupy leading administrative posts and, remaining innately detrimental, expose our science to great danger. They try most often to mask their incompetence with a large quantity of printed works, usually “written” in coauthorship with their subordinates.

Attempts to politicize our science have significantly discredited it. Along with politicization, the striving by some archaeologists to overestimate the significance of the facts for resolving the ethnogenesis of particular peoples also contributed to a distorted interpretation of the archaeological data. V.S. Titov (1982:89) speaks of this: “In recent years, in world archaeological literature can be observed ... a strong tendency to reduce to the minimum the importance of the movements of populations in antiquity Some nationalistically disposed archaeologists consider it specifically valiant to demonstrate that their people lived in this territory, at least from the time of the Paleolithic.” This tendency in our archaeology is clearly manifested in the works of Okladnikov, who, though not a Tungus nationalist, “clearly” connected their origin with the Paleolithic population of Pribaikal’e.

Blank spots on archaeological maps of various periods and epochs, the incompleteness of the archaeological chronicle, and other weaknesses of archaeology can be explained, in addition to the above-stated reasons, as well as by the absence of a clear understanding of the significance of problems and questions with which, in the first instance, archaeologists should occupy themselves.

II. Paleogeography of the North

Problems of the initial stages of man’s settlement of northern Eurasia and America and the subsequent development there of various human populations are the most important problems, which in maximal degree can contribute to an understanding of the principles of human evolution. What explains the significance of these problems and what kind of relationship to them does the Paleolithic of Northeast Asia have? Before attempting to answer these questions, we must clarify the idea

of “north.” “North,” when we look at it as a habitation site of man, must basically be approached not from the geographic point of view (by the direction of the compass arrow, which indicates direction of the geographic or magnetic meridian) but as a special natural zone that differs from other natural zones by the distinctive conditions for the existence of all life. The most indicative natural factor of the “northern zone” is the subzero average annual temperature. If high mountain regions with glaciers are excluded, all remaining regions for which complete permafrost is characteristic will basically belong, according to this index, to the “northern zone.” The southern boundary of these regions in the Northern Hemisphere, except Northeast Asia, does not extend below 60° north latitude at the present time (Figure 4).

Subzero annual average temperatures and the distribution of permafrost are important indices not only for determining the modern northern “living zone” but also for clarifying when and where it existed in the past. For reconstruction of past (or “fossil”) cold living zones that, based on modern analogies, can be called “northern”—besides the presence of fossil permafrost—no less important are fossil traces of continental glaciers. The earliest of these are presently recorded at the level of 2.3 billion years ago and belong to the “Huronian Glacial Epoch.” It is further believed that they were repeated every 150 million years.

Most studied and important for the problem of the origin and evolution of humanity are the glacial and interglacial “climatoliths” or “climatochrons,” as I.I. Krasnov and K.V. Nikiforova (1973:164) propose to call them, of the last 3 to 2.5 million years. At present it has been established, as Nikiforova et al. (1984:24) note, that “glacial-interglacial fluctuations of the earth’s climate have been characteristic for the last 3.2 million years. Before this time a period of relatively stable climate existed, close to an interglacial. The scale of the glaciers grew, beginning 2.5 million years ago, that is, approximately at the end of the Gauss Paleomagnetic Epoch.”

In Europe, glaciation of this time is called Pretigelsk or Bibersk. For northern Asia it presently has no established name. It is possible that it should be called, at least for central Yakutia, “Diring,” based on the stratotypical cross-section of the Paleolithic Diring Yuryakh site. It is no accident that in recent and very fundamental, work in permafrost studies (*Regional and Historical Geocryology of the World*. Moscow, 1998), it is noted that “veined bodies,” found in profiles of the Diring Yuryakh site, are, the “earliest traces of frozen strata in central Yakutia” (Baulin and Danilova 1998:106).

During the cold climatolith of the anthropogene, the “glacial zone” was increased in comparison with that of the present day. The maximum distribution of glacial cover in the Northern Hemisphere—together with glaciation of the Southern Hemisphere, based on data summarized by A.S. Monin and Yu. A. Shishkov (1979:290–292)—was three times that of the present day and covered 30% of the dry land, or 45 million km². In the Northern Hemisphere the area of glaciation was 13 times that of the present day. During the glaciations the sea level was lowered substantially. It is believed that during the last glaciation (the Wurm in Europe and the Zyryansk-Sartan in northern Asia), when sea level was lowered 130 m below the present mark approximately 20,000 years ago, about 27 million km² of mainland shelf was laid bare. Part of this shelf was covered by an ice sheet, bringing the total area of continental glaciation to approximately 55 million km².

Based on the data of many researchers (e.g., E. Derbyser [1982:129]) the “glacial zone” reached 50° north latitude in Eurasia and 40° north latitude in North America (Figure 5). “Outside of the glacial zone,” writes Derbyser, “a subpolar and periglacial zone of tundra-steppe vegetation penetrated to central Italy.” The penetration of a “wave of cold” to the south, into the Mediterranean region, is attested to by the presence of the arctic fox in the Middle Paleolithic cave site of Geula B with a date of about 42,000 years. I.I. Korobkov (1978:65) notes that this “speaks of a cold (even severe) climate” for Palestine south of 35° north latitude. In light of this fact, the finds of mammoth remains in Middle Paleolithic Crimean sites (Kolosov 1986) are not at all surprising. V.P. Lyubin (1984) writes about “traces of early glaciations” and “frost-cleaving action” on the surface of Paleolithic tools from southwestern Turkmenistan. The distribution of the cold zone during glaciations in southern East Asia is convincingly attested by fossil finds in China of the mammoth and the woolly rhinoceros, whose distribution is clearly noted to 35° north latitude, and according to some data even to 32° north latitude. In North America, finds of mammoth remains are known in large quantity in the Great Plains. B. Schultz (1973:11) notes: “The woolly mammoth (*Mammuthus primigenius*) spread as far south as southern Nebraska during the glacial epoch.”

Most often, finds of “northern fauna,” whose upper Pleistocene complex is usually called “mammoth” (though Kal’ke [1986:5] notes that within the “framework of association of *Mammuthus primigenius/Coelodonta antiquitatus*” it is often “impossible to distinguish” early [Riss] from late [Wurm]), are connected with territories where permafrost is recorded. N.N. Romanovskij (1980:20) writes about the distribution of permafrost in the Anthropogene: “Of the whole region of the globe, approximately 25% of the dry land [including high-mountain regions.—Yu. M. & S.F.] was constantly in a frozen state. And during this epoch of great glaciation and cooling of the climate, the area occupied by permafrost increased nearly twice.” In Europe the southern boundary of the ancient permafrost is recorded to the Black Sea, Carpathians, and Alps (Figure 6), and in Asia almost to the Caspian Sea, northern Kazakstan, and at least to the right bank of the Yellow River.

Many paleogeographers and paleontologists believe that the formation of the so-called periglacial zone, a characteristic feature of which is tundra-steppe landscape, is connected with glacial cover and permafrost. However, M.N. Karavaev and S.Z. Skryabin (1971:29) note: “The previously widespread opinion of scholars, that periglacial regions allegedly represented immense expanses of forestless tundra and steppe, turns out to be unreliable. Researchers have recently pointed out that, with the exception of the most northern regions, forests grew everywhere, even in the mountains near the edges of glaciers.”

In this regard, the following conclusion of one of our greatest geographers, I.P. Gerasimov (1985:175, 176), is important:

We want to emphasize and develop the view of central Yakutia as a territory that, unlike other regions located at this same latitude, preserves up to the present time a postglacial character in many of the features of its present climate, geomorphology, soils, vegetation, and so on. From the historical-geological point of view, this territory should be seen as an exceptionally interesting paleogeographic relict Apparently, all the remarkable features

of nature with a postglacial character (permafrost and icing, solifluction and thermokarst formation, cryophilic larch taiga and open steppe) were preserved in northeastern Siberia in significant degree by virtue of the preserving role of the severe climate of these territories.

Gerasimov adds to this conclusion: "During the first publication of this book (1952) the coldest region on earth was thought to be that part of northeastern Siberia located 'near Oimyakon village. Later, the global cold point was 'shifted' to Antarctica, but within Eurasia it continues to be located in the indicated region."

Regarding the location of the cold point of the Northern Hemisphere, so important for the understanding of the possibilities of man's mastery of a cold adaptive zone, it is necessary to make several additions. N. Ya. Filippovich (1972:53) writes: "It is more correct to consider that possibly several cold points existed (not just one or two), which were located in the large region between the upper reaches of the Yana and Indigirka Rivers and the lower reaches of the Aldan River. It is in this region that a core of high pressure occurs during the winter period, called the Verkhoyansk minimum Often this region of high pressure also embraces Yakutsk, causing especially low temperatures there."

One more important addition is needed for a reconstruction of paleogeographic conditions in Yakutia: "The shift of the arctic coast far to the north during the course of the cold stages," writes A.A. Arkhangelov et al. (1996:100), "led to a change of the relatively mild local maritime climate to a severe continental one similar to today's climate of the interior regions of Yakutia, According to reconstructions by I.G. Aveharius, M.V. Muratova, and I.I. Spasskaya, the average January temperatures for Yakutia 18,000 years ago were 10 to 15° colder than today."

With the examination of the position in Yakutia of the northern cold point, and this natural phenomenon's significance for studying the problem of a nontropical homeland for humanity and the earliest stages of man's settlement of Northeast Asia and America, it is necessary to note briefly some connections to these circumstances. First, of course, this question must be answered: When were natural conditions formed in Yakutia that contributed to the appearance there of the northern cold point? Geologists, permafrost specialists, and paleontologists believe that the cooling in Northeast Asia, and in Yakutia in particular, is already well recorded for the Pliocene. For example, Yu. P. Baranova and S.F. Biske (1968:110) note: "The northeast was the region of the earliest development of a temperate, later cold-stable arctic, in particular of a tundra flora, from which it spread into periglacial zones of Eurasia."

G.I. Lazukov (1973:73–76) writes even more assuredly,

The most distinctive paleogeographic event to exert great influence on the flora and fauna occurred at the end of the Neogene. This was a time of great regression. As a result, the continental shelves were dry. A huge, high-latitude landmass was formed, its coastal zone spreading 1,000 to 1,200 km north of the present one The climate over the vast expanse north of the continent must have been continental and severe at this time (especially in northern Asia, the continental nature of which must have been maximal). Under the conditions of high latitude, the icy nature of the basin, and the presence of a huge landmass

with a continental climate, perennial permafrost must have been formed. Its appearance must have greatly influenced the flora and fauna, and the landscape in general . . . The time of formation of arctic flora and fauna must be considered the second half of the Pliocene—beginning of the Pleistocene.

Paleontologist A.V. Sher (1976:239) has devoted much attention to the paleogeographic conditions of Northeast Asia. He notes that from the Taimyr to the mouth of the Mackenzie, beginning with the Pliocene and throughout the whole Pleistocene, during cold climatic stages a “huge mass of level dry land” existed, which—along with the present skirting lowlands of Eastern Siberia and Alaska—should in his opinion be called “Beringida.” “Over the extent of the whole Pliocene,” he writes, “a cooling developed in high latitudes, resulting by the late Pliocene in the formation of tundra vegetation and fauna of subarctic type.” In connection with the progressive cooling of the Holarctic climate in the late Cenozoic, “Beringidan” animal species are able to move to temperate latitudes. Sher concludes:

The most recent data on the fossil fauna of Beringida corroborate A. Ya. Tugarinov’s hypothesis of the autochthonous formation of cold-stable fauna in this vast northern land. Beringida is an independent zoogeographic entity, the fauna of which had a long and distinctive history and played the most important role in the development of fauna of the whole Holarctic in the late Cenozoic. Therefore, it is necessary to view Beringida not as a land bridge, across which mammals passed from Asia to America, but rather as the region of formation of a distinctive fauna, whose representatives moved into both the Old World and the New.

We are in complete accord with Sher’s view, with but one reservation. It is definitely necessary to include the continental region of Yakutia that was not covered with glaciers, was not trampled down, and possessed the lowest temperatures in the region of Beringida. It is this region that also could have been the primary center for the formation of the distinctive “Beringidan” faunal complex.

At the present time fairly reliable data have been obtained regarding when natural conditions similar to the present day were developed in Northeast Asia. Geocryologists A.A. Arkhangelov, D.Y. Mikhalev, and V.I. Nikolaev (1996) have established that, at least in Northern Yakutia, the permafrost has an age of 3 to 3.4 million years and that, beginning at this time, here existed no less severe climatic conditions than the extreme conditions of Zyryansk and Sartan times.

Upon examination of the location of the northern cold point, many archaeologists often ask the question: “Was it always found in Yakutia throughout the Anthropocene?” This question was answered long ago by K.K. Markov (1965:262): “If wandering of the cold points occurred,” he writes, “then it did not exceed 5 to 10° during post-Eocene time. Therefore, the position of the northern cold point in the quaternary period, somewhat different than it is now, could not have influenced very sharply the physical geographic conditions of the northeast or other regions.”

Based on the data of various sciences it has been clearly established that, as Markov writes (1965:238), “the most continental climate on earth” was characteristic for Northeast Asia, especially

for Yakutia. He also notes: “Eastern Siberia has the warmest summer in these latitudes, the coldest winter, the lowest precipitation, and the highest annual amplitude of temperature.” It is very interesting, though it might seem paradoxical, that precisely in Yakutia, with the cold point located there, a few distinctive natural phenomena are noted that aid in the understanding of how man could have existed under these conditions.

Yet at the beginning of broad-scale work in the study of nature in Yakutia, the outstanding Russian biogeographer and zoologist A. Ya. Tugarinov (1927:225) notes: “In the meridian of Vilyui we observe one of the most interesting occurrences of the distribution of animals in all of northeastern Siberia, namely the increase in the northern borders of their habitation.” He thought that this could be explained “by deep penetration to the north along the Lena valley with areas adjacent to it of conditions not typical of the surrounding regions, which create in the circle of the taiga oases of a steppe character” (Tugarinov 1927:229). The following conclusion by botanists M.N. Karavaev and S.Z. Skryabin (1971:69) about the vegetation of the “Yana-Kolyma mountain country” also contributes to understanding the adaptation of man to super cold conditions: “At these latitudes (63° north latitude),” they write, “nowhere on earth are forests encountered so high on mountains.”

For an explanation of all the factors that influenced the life of man under the conditions of Northeast Asia and contributed to or hindered the advance of people from there to America, the shelves surrounding this region are very significant. They were dry during cold climatic periods and provided the dryland connection between the two continents. We have already gone over the necessary facts about the northern shelf, which extended from the Taimyr to the mouth of the Mackenzie. Now it is necessary to examine some facts about the Pacific Ocean shelf located in the Bering Sea region (Figure 7).

Many archaeologists, physical anthropologists, and ethnographers assign precisely to this periodically dry region, called Beringia, “the resolving role” on examination of the problem of the settlement of America by people. However, they completely ignore the conclusions of several researchers that do not suit them. We will cite some of them. S. Ya. Seregin and M.S. Shcheglov (1973:69) note: “In southern Beringia, close to the Pacific Ocean, cool summer, an abundance of precipitation, and deep snow cover was observed [during the Pleistocene.—Yu. M. & S.F.]. In combination with a deficit of solar radiation and with strong winds, this was not favorable for the appearance of forests, productivity of cereals, or the existence of animals and man.” M.G. Grosval’d and Yu. I. Vozovik (1982:82), also write about this:

Based on our hypothesis of global cooling in the Pleistocene in the southern part of Beringia, complex glacial cover of an area of about 2.8 million km² repeatedly emerged; it consisted of a 1.25 million km² glacial shelf, as well as of land and ‘sea’ glaciers of the surrounding dry land and shelves, including chains of icecaps in the Aleutian and Commander Islands The primary areas of ice-free land north of the Bering Strait and were separated from the Pacific by three rows of icy ranges. These protected the extreme dryness and other features of the paleoclimate of Beringia.