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ARCHAEOLOGICAL DATA ON THE MARITIME CULTURES OF THE WEST ARCTIC

Abstract

The article discusses the results of recent archaeological research concerning the maritime cultures of the West Arctic regions of the USSR. Special reference is made to materials from Vhodnoy Cape and Karpova Guba sites. Present results indicate that the adoption of elements of maritime hunting can be dated to the second millennium BC. Maritime hunting was practised seasonally within the framework of a nomadic hunting and/or reindeer breeding economy. The situation is marked by the mixing of ethnic component and the inter-penetration of cultures.

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Extensive research literature has been published on the traditional cultures of the circumpolar peoples. It is natural for scholars to be interested in this region, for analyses of human communities operating under the extreme conditions of the Far North provide comparisons and starting points for modelling ancient stages of human history. An important work in this field is I.I. Krupnik's "Arctic Ethnoecology" from 1989, which is devoted to the analysis of various subsistence systems in the circumpolar zone.

The main element of these subsistence systems is maritime hunting, of which the earliest evidence has been found in Northern Norway and in the Southern Arctic in the eastern parts of the Aleutian Islands (Anangula) (Laughlin 1980). A large body of data suggests that by 2000 BC maritime hunting permitted the inhabitation of vast areas of the North, notably the Canadian Arctic. It is to this period that the settlement of northern Greenland by the hunters of the Independence Culture is dated (Eigel 1962). Economic activity of this type has, thus, survived for thousands of years.

In the territory of the USSR the areas of maritime subsistence systems are irregularly represented. A main region is the area of the Bering Straits, characterized by a mostly favourable ecological environment and the traditional cultures of maritime hunting Eskimos, which have a

history dating back some 2,000 years (Dikov 1979). The other main region is the coast of the Kola Peninsula, where, as in Norway, maritime hunting dates back to the first stages of human settlement 8000–9000 years ago (Schumkin 1988).

It has been maintained that the oldest evidence of maritime hunters in the northeastern parts of the USSR disappeared in the Early and Middle Holocene as the result of unstable shorelines. Available data indicates, however, that the assumed utilization of maritime resources most probably dates back to the second millennium BC, although sporadic hunting of sea animals was practised in the northern parts of Eastern Siberia even in the Early Holocene (Pitul'ko, Makeev, Samarsky 1990). The archaeological record shows that in this area the formation of a maritime economy took around 2,000 years, and was carried out within the framework of a traditional subsistence strategy by mobile groups of land-based hunters. Maritime hunting appears to have remained a seasonal activity for a long time, as in the case of the Caribou Eskimos. It is to this period that we can connect the Pegtymel petroglyphs, and settlements on the islands of Aion and Wrangel (Dikov 1979; Pitul'ko 1988). Some scholars maintain that the formation of a hunting economy is related to the ethnic development of the

region (Dikov 1979). The emergence of maritime adaptation systems was most probably caused by a long-term, unfavourable ecological trend that affected the reindeer stock which had been the main item of game. The climate of the Sub-Atlantic and Sub-Boreal periods was largely unfavourable for the survival of reindeer. This is supported by data presented by I. I. Krupnik for the last millennium, during which even minor changes in the natural environment caused sharp reduction in the reindeer stock through shortage of fodder, epizootic factors etc. (Krupnik 1989, 131–133). Arctic peoples are well known for their ability to change their adaptation patterns rapidly. For this reason, the archaeological record displays what are already the "final" forms of maritime hunting cultures.

In the West Arctic regions, archaeological evidence of specialized maritime hunting dates back to the remote past. With the exception of Scandinavia and the Kola Peninsula, such evidence is, however, poorly presented. Travellers of the 14th–17th centuries mention specific features of indigenous cultures relating to house-building and hunting equipment (partly subterranean houses made of wood and the bones of large sea animals, frame boats etc.). These features were characteristic of maritime cultures with a high degree of specialization (Van Linskhotten 1915; Lamarteringer 1912). This problem also has an ethnic aspect, as the well-developed culture of the maritime hunters differed sharply from the traditional Samodic hunting and reindeer herding culture, which by that time inhabited the tundras of the far Northeast of Russia in Europe and the northern parts of Western Siberia. Of note in this connection are the Nenets legends concerning the *sirt'ya* – the ancient inhabitants of the tundra.

Ecology seems to be the most important aspect of the situation. Writing on the ecology of the Western Arctic, I. I. Krupnik notes that, on the whole, it was more favourable for seal hunting and the survival of traditional communities than Northeast Asia (Krupnik 1989, 179). It should be mentioned, however, that this area is divided into two parts: Scandinavia, the Kola Peninsula and the White Sea on the one hand, and the eastern part of the Barents Sea and the Kara Sea on the other. I feel that conditions were not equal in these two areas for establishing developing maritime adaptation patterns. The situation in the western part of the region, where maritime hunting has been practised since prehistoric times, is similar to the Bering Strait area. In both areas hunting concentrated on the

migratory routes where the largest numbers of game concentrated. On the shores of the Kola Peninsula maritime hunting was more prevalent, requiring more work in the long run, with a corresponding lack of efficiency. A completely different situation existed on the Chukot Peninsula, where local ecological conditions permitted laborious but effective specialization in the hunting of walrus, as pointed out in I. I. Krupnik's estimates (1989, 72–75, 169, Fig. 1). According to the author, it was not a chance occurrence that the shores of the Bering Strait were more developed and characterized by the long-term survival of indigenous maritime hunting by permanent inhabitants. The waters of the strait teemed with migratory animals, making sea hunting very effective and permitting the creation of long-term food stocks (Krupnik 1989, 72–75, 81, 169–172).

Massive sea fauna was not abundant near the shores of Scandinavia and the Kola Peninsula. According to the archaeological record, maritime hunting remained a seasonal activity until the beginning of the Early Metal Period (3–4 thousand years ago). A culture of settled sea hunters may have existed for some time in the Early Metal Period. This is suggested by the remains of long-term settlements with thick occupation layers containing bones of various sea animals (Gurina 1953; Schumkin 1988). Here, specialized hunting, as opposed to the Eskimo situation, indicates a general instability of conditions not amenable to a permanently settled way of life. The establishing and development of long-term maritime subsistence patterns, where ecologically feasible, were processes apparently linked to "external social factors" (Krupnik 1989, 176), the specific features of local geography, and competition with inland cultures. In this context, the utilization of maritime resources appears to have been an emergency measure.

According to V. Ya. Schumkin (1988), the maritime subsistence systems died out in the first millennium BC on the Kola Peninsula, and in Fennoscandia by the beginning of the common era. This was caused by ecological change resulting from a slight fall in average temperature, and the shifting of the migratory routes away from the shores. At this time, the main hunted species were almost the same as today. The summer habitats of the sea mammals are in the far north, near Spitzbergen, Franz Josef Land, and the northern island of Novaya Zemlya. Walrus, white wale and other species congregated in the shallow waters of the Barents and Kara Seas only in the autumn (Sovetskaya Arktika 1970).

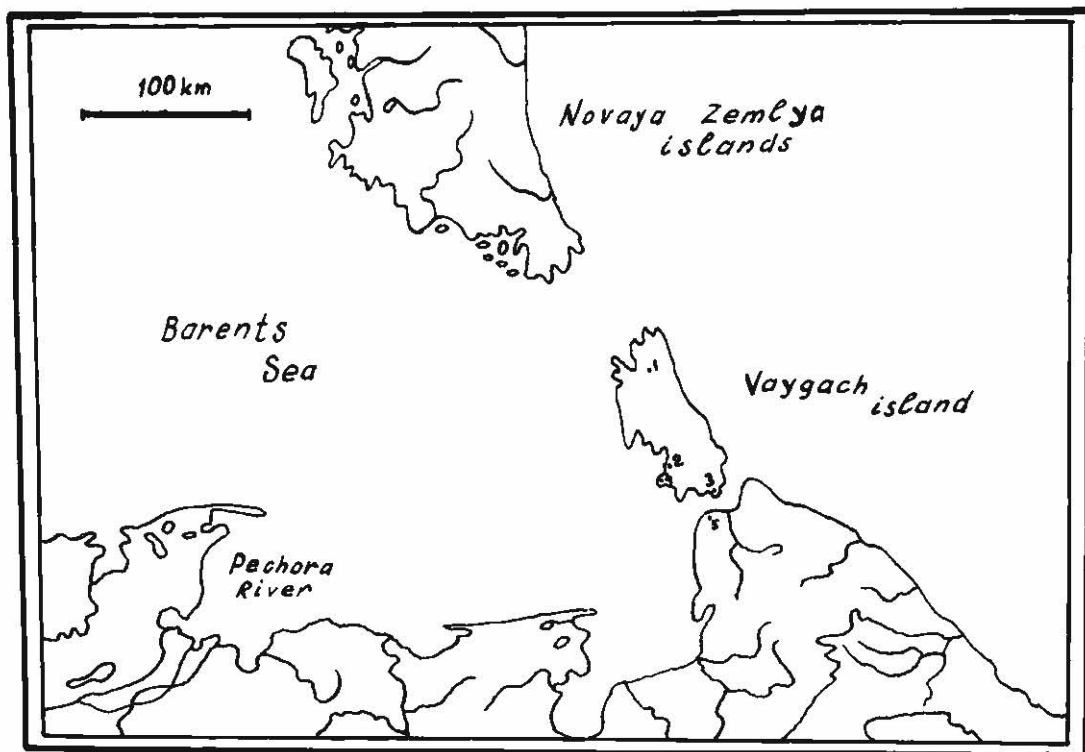


Fig. 1. Ancient sea-mammal and reindeer hunting camps and sacrificial sites investigated by the L. P. Khlobystin expedition in 1984–87.

1. The sacrificial site of Bolvanskaya Gora; 2. The sacrificial site of Sirtya-Sale; 3. The sacrificial site of Bolvansky Nos; 4.–5. The hunting camps of Karpova Guba and Vhodnoy Cape; The materials from Karpova Guba and Vhodnoy Cape are discussed in the article.

Autumnal hunting, and especially hunting in winter in regions with extensive and solid shore ice, could hardly have permitted the formation of settled maritime hunting cultures, although the indigenous economy did undertake these activities to a more or less substantial degree.

Until recent years, archaeological evidence of indigenous prehistoric maritime cultures was limited to material from Yamal, investigated by V. N. Chernetsov and the relics of the Ust-Poluy cultures (Chernetsov 1936; Moshinskaya 1965). With respect to chronology, the most plausible date of the Ust-Poluy material is the 1st–2nd century AD, as argued by L. V. Chindina (1984). This indicates the long development of a local variant of maritime adaptation in the northern parts of Western Siberia. V. N. Chernetsov's results relate to the late period of this culture. These finds have long been compared to Eskimo materials, although the emergence of various elements of maritime subsistence systems in the Far Northeast of Europe in Russia

and the northern parts of Western Siberia resulted from convergent courses of development.

The main questions concerning the regions of the West Arctic under review can be formulated as follows:

- 1) the age of the initial assimilation of the elements of maritime adaptation;
- 2) the role of these elements in traditional survival systems, and the way they were controlled; and
- 3) ethnic processes and their role in the variability of subsistence systems.

Recent data indicates – within certain limits of reliability – the emergence of elements of a maritime subsistence system in the second half of the second millennium BC. Specifically referred to in this connection are the Maliy Bolvanskiy sites I and II in the northeastern part of Vaygach Island; the topographic locations of

these sites can only be explained by the utilization of maritime resources (Pitul'ko 1988). Maliy Bolvanskiy I and II are linked to the Orfino culture of the circumpolar Trans-Ural area, which in its final stage was influenced by the Garin-Bor culture (Khlobystin 1973). There is also evidence of earlier settlement on the island, but its connections with maritime hunting are still problematic.

Systematic research directed by L. P. Khlobystin resulted in the discovery of sites dating to the first millennium AD, where maritime hunting was a prominent feature of the economy (Khlobystin 1985, 1986; Khlobystin, Vereschagina, Schumkin 1986). According to Krupnik, this material constitutes definite evidence of the wide distribution of maritime subsistence systems in the region, and the prehistoric existence of an original centre of maritime adaptation (Krupnik 1989, 179–182). Together with A. M. Murygin, he places in the same broad context the materials of the sacrificial site of Heibidja-Peddart, with which the present author strongly disagrees. Murygin claimed that this site belonged to a people involved in maritime hunting, citing as evidence pictures of "sea animals" scratched on a bone mirror and a flat cast zoomorphic figure (Krupnik 1989, 181). Unfortunately, I cannot share Murygin's optimism concerning these pictures (Murygin 1984), as it is quite obvious that the images are of fish and the zoomorphic figure depicts a small furry animal, most probably a lemming. The latter feature finds an explanation in ancient indigenous beliefs.

Archaeological material obtained by Khlobystin in his excavations of the sacrificial sites at Sirtya-Sale and Bolvanskiy Nos do not in any way confirm the notion that maritime hunting had a central role in the indigenous economy – Samodic or Pre-Samodic – at least in the last millennium. Bolvanskiy Nos most probably existed at an even earlier stage, but there are no depictions of sea animals, nor any finds of maritime hunting equipment. Of the faunal remains, 60–70 % represent reindeer, although bones of sea animals have also been found. In any case, these sacrificial complexes belonged to mainly reindeer hunters, who later turned to reindeer breeding.

Of major importance for the subject at hand are Khlobystin's results from his excavations of the Karpova Guba site on Vaygach Island and the Cape Vhodnoy site on the shore of Yugorsky Shar Strait (Fig. 1; Khlobystin, Pitul'ko 1991; Khlobystin, Pitul'ko, Stanyukovich 1991). A

brief description of these materials is presented in the following.

The Karpova Guba site

This site was discovered and excavated in 1985. It is situated on the western shore of Vaygach Island in the Bay of Lyamchin. The occupation layer of the relatively small site is located on the raised surface of a small rocky cape, and it most probably represents a single dwelling. The ancient inhabitants made use of rocks providing natural cover and a foundation for building. The finds were located among the rocks.

Two occupation layers were discovered in the excavations. The radiocarbon age of the lower (second) layer is 1180 ± 40 years (LE- 2844). The samples were of charcoal from an earth-covered hearth. With the exception of ceramics, the finds are mostly homogeneous, including hafts of bone and antler (sometimes with remains of iron blades). These objects were smooth or decorated (Fig. 2:2,3,4,5). Also found were bone and antler spikes of uncertain function (Fig. 2:6,7,8), perforated antler plates belonging to a sledge runner, the antler handle of an awl (Fig. 2:9), a rough sandstone scraper (Fig. 2:11), and fragments of a pot for smelting metal (Fig. 2:10). Most of these objects display broad chronological and spatial distributions. The pots can be reconstructed as wineglass-shaped or conical. Artefacts of these types were widespread features of the Lomavotovo (500–800 AD) and Rodanovo (1000–1400 AD) cultures in the Upper Kama region. The closest parallels to the ceramics are from the Vanvizdino culture.

The most interesting feature of the bone material is a small, unfinished lamellar object (Fig. 2:12), measuring 1.8 x 5.8 cm. On one side of the object are two flanges, intended for two holes of which only one was bored. Bone plates of similar size and appearance have been found at Ust-Poluy, and V. I. Moshinskaya suggests that they were ice-shoes. Similar objects are also known from ethnographic sources on the Chukchees, and from archaeological finds relating to the Eskimo culture (Moshinskaya 1965). These finds indicate a relatively high level of equipment for maritime hunting, which was clearly a consistent undertaking. The aboriginal population of Karpova Guba apparently hunted on the solid shore ice in winter or early spring. The western coast of Vaygach Island is on the warmer waters of the Barents Sea, and the ice melts

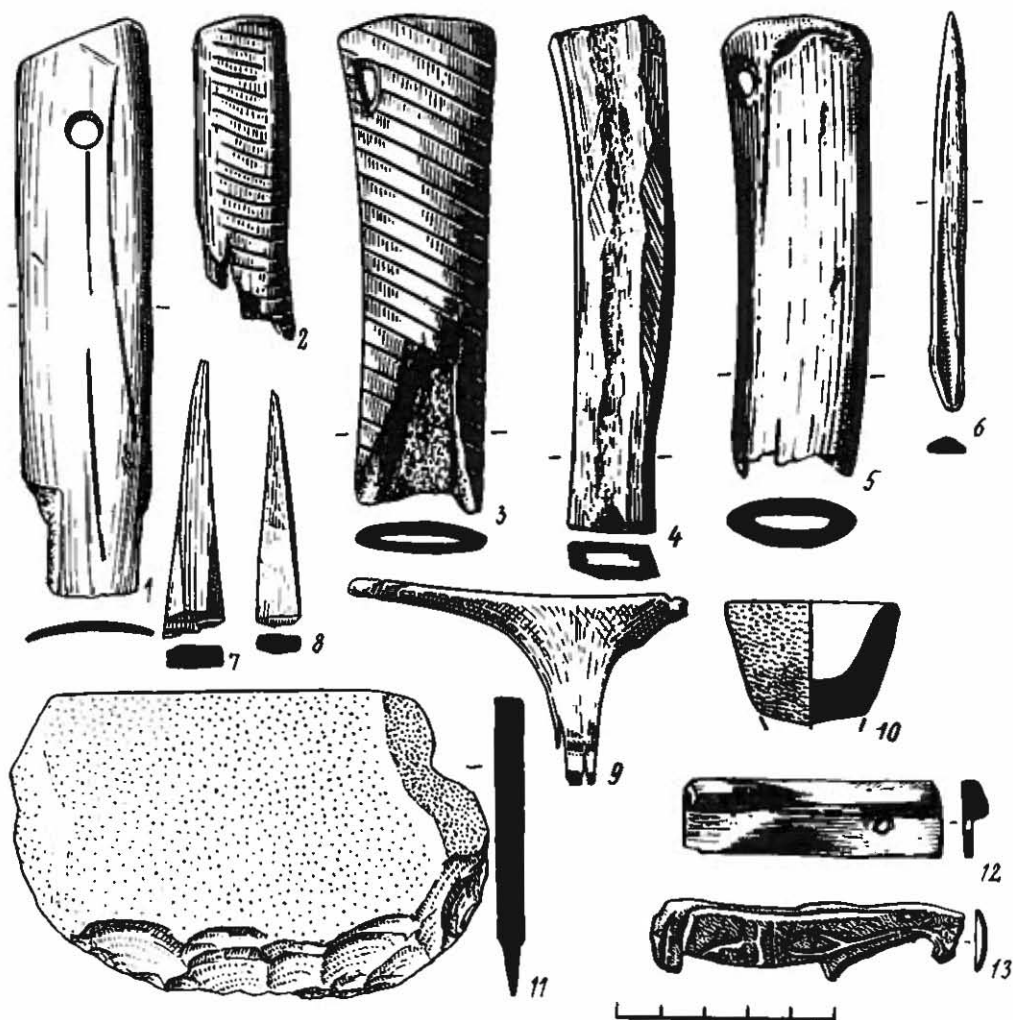


Fig. 2. Finds from the Karpova Guba hunting camp: 1-5. Knife-handles of bone; 6-8. Bone points; 9. Awl handle of antler; 10. Wineglass-shaped pot for smelting bronze; 11. Quartz-sandstone scraper; 12. Ice-shoe; 13. Zoomorphic bronze figure.

early (in May or early June). It is possible to apply data on modern conditions in reconstructing the period, for the Arctic climate of 500-900 AD was to a certain extent similar to the present one (Borisov 1970). It was possible to hunt ringed and bearded seal in the vicinity of the island on a permanent basis, and also grey and Greenland seal, Atlantic walrus and white whales which came near the island in the spring (Sovetskaya Arktika 1970; Ivashin et al. 1972). Faunal remains show, however, that this type of hunting was substantially supplemented by reindeer hunting and fowling (goose, duck).

One of the most interesting objects from

Karpova Guba is a small zoomorphic figure of bronze which was found near the hearth. It is a flat cast figure of an animal of indeterminate species (Fig. 2:13). The elongated proportions (length 7.1 cm) suggest the impression of a massive animal figure. The piece was cast in a one-sided open mould. The edges are rough, and the image is outlined by contours. Marked on the surface is a "life line" showing the ribs, gullet, stomach and genitals. A point represents the eye. (A bird figure, executed in similar technique with a "life line" was found at the nearby Sirtya-Sale sacrificial site.) The only known stylistic parallel is the image of a horse

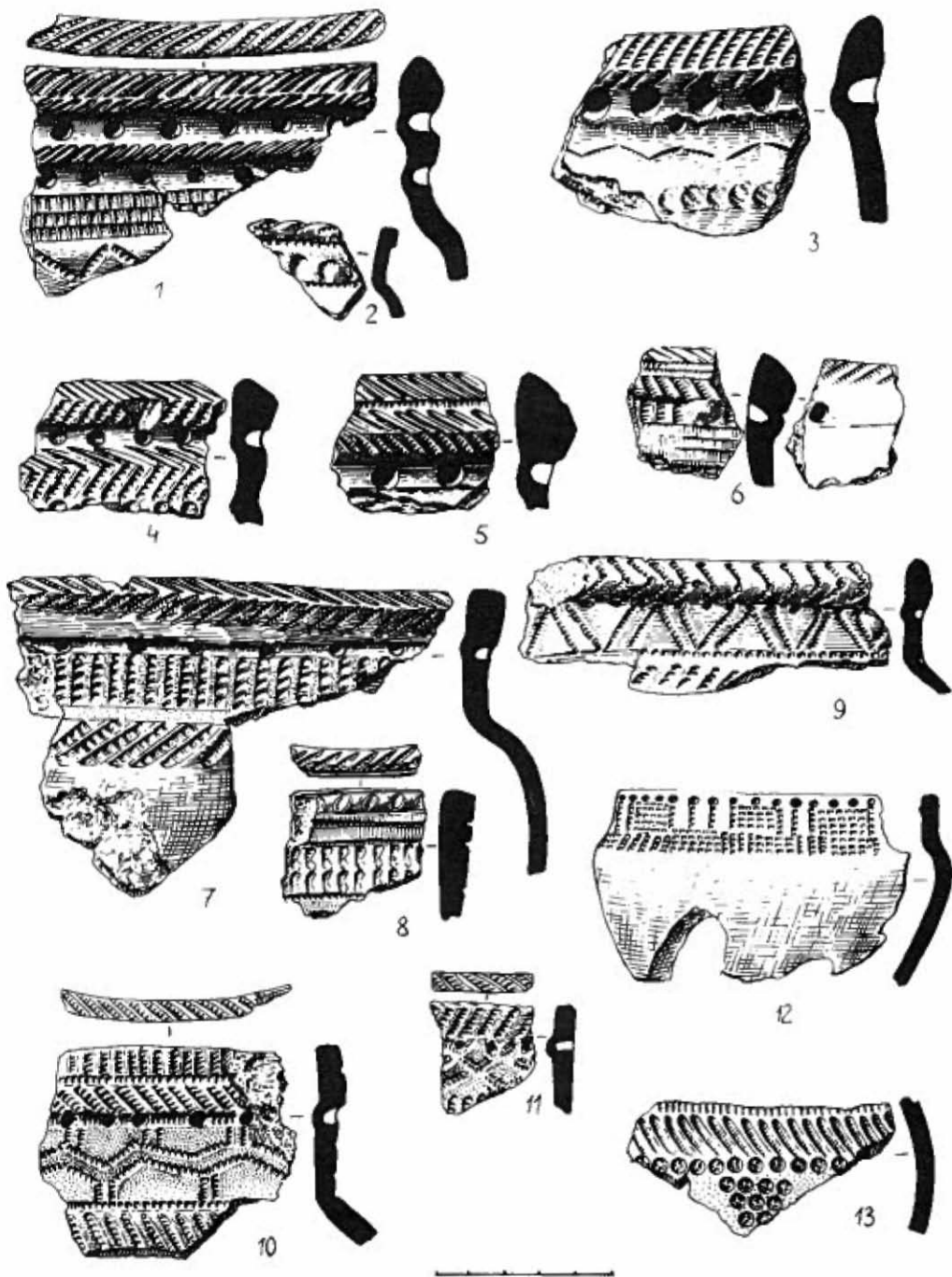


Fig. 3. Pottery from Karpova Guba:
1-6. Pre-Samodic ceramics; 7-13. Early Samodic ceramics (post 900 AD).

on a sacrificial coverlet from the Ob River (Ivanov 1954). Small flat-cast zoomorphic figures are typical of the Lower Ob region (Cher-

netsov 1953). The "life lines" have close similarities with West Siberian finds. We may also point out that figures of animals and people with such

elements are common in both archaeological and ethnographic materials. Examples include petroglyphs from Norway, the Urals and Siberia, materials analysed by V. N. Chernetsov (1971), and modern depictions and Samodic reindeer brands (Simchenko 1976).

The most important finds category is ceramics (Fig. 3). The analysis of this material demands detailed discussion, but for the purposes at hand we may mention that the pottery finds from the first (Fig. 3:1,4,6) and the second layer (Fig. 3:5,7,13) clearly differed in profile and ornament, although a number of common features can be demonstrated (Fig. 3:5). The material from the second layer of the Karpova Guba site is similar to corresponding Ugrian material of the Far Northeast of the USSR (Khlobystin, Pitul'ko 1991; Khlobystin, Pitul'ko, Stanyukovich 1991), which is dated to 500–1000 AD. The ceramics of the first layer corresponded to West Siberian materials of a wide chronological range, for example from sites of the Vozh-Pay culture (Khlobystin 1985) and earlier finds from the Relka burial ground (Chindina 1978). These have been ethnically attributed as Samodic. Available data clearly shows that the first layer of the Karpova Guba site establishes the influx of Samodic population into the northeastern parts of Russia in Europe at the boundary of the first and second millennia AD (Khlobystin, Pitul'ko, Stanyukovich 1991). Faunal remains from both layers show that the indigenous economy was characterized by a combination of maritime and reindeer hunting and fowling.

The Vhodnoy Cape site

Important information on prehistoric indigenous maritime culture is also provided by the Vhodnoy Cape site, excavated by L. P. Khlobystin in 1984–88 (Khlobystin 1985, 1985; Khlobystin, Vereschagina, Schumkin 1986; Khlobystin, Pitul'ko 1991). Like the Karpova Guba site it is situated on the upraised surface of a small rocky cape jutting out into Yugorsky Shar Strait which separates Vaygach Island from the mainland. The location is convenient for sea hunting and for crossing the strait at its narrowest part. Excavations revealed six cultural layers. The materials are homogeneous, indicating the static nature of material culture over a period of c. 1,000 years.

Charcoal samples provided the following radiocarbon ages:

Index	Layer	Age (B.P.)
LE 4052	V	1840±40
LE 4053	IV	1250±40
LE 4054	III	1080±40

The radiocarbon datings were carried out by Yu. S. Svezhentsev at the Radiocarbon Laboratory of the Leningrad Branch of the Institute of Archaeology of the USSR Academy of Sciences.

The layers were rich in finds. A point worth noting is that, despite the long occupation of the site, the same species of faunal remains reoccur. All layers contained numerous bones of reindeer, walrus, various seals, polar bear and fox. Canine bones were found in layer IV, and fox in layer II. Bones of willow grouse, ducks, geese and swans were common.

The ancient indigenous economy is evidenced by finds of hunting equipment. These include arrowheads of various forms, darts and spearheads, and harpoons of split bone or antler (Fig. 4:1,9). Also found were needle-shaped points (Fig. 4:5,6), possibly the prongs of a fowling dart, handles of various tools (Fig. 4:11; Fig. 5:1), bone spikes (Fig. 4:10), a needle container of bone (Fig. 5:2), and a small bone spoon of ritual character (Fig. 4:16). Of special interest are remains of transport equipment. Fragments of bone sledge-runner covers were found, similar to those from the Karpova Guba site (Fig. 1:1), as well as bone clasps or handles (Fig. 4:12,13,14) and a swivel (Fig. 4:15). The excavations also revealed the fragments of a wineglass-shaped pot (Fig. 5:14). As at Karpova Guba, lithic artefacts are represented by primitive sandstone scrapers, typical of sites in the circum-polar region of Eurasia over long periods. Parallels to the pottery are to be found in the Lomovatova culture of the Upper Kama region and Vanvizdino culture (Goldina 1985; Burov 1966; Stokolos, Korolev 1984). Similar pottery has also been found at the site of Podchevash (Moshinskaya 1953). These finds date back to 500–1000 AD, corresponding to the radiocarbon age obtained for layer IV.

The array of bone artefacts includes a number of simple types with a broad geographic distribution. These include various handles of iron-bladed knives, and the points of darts and spears. Needle-shaped arrowheads of bone with flattened bases (Fig. 4:5,6) found in layers III–V are similar to material from the site of Nizhneye Veret'ye, the Shigir bog site, and a number of other sites of a wide geographic and chronological distribution beginning from the Mesolithic (Foss 1952). These objects may be

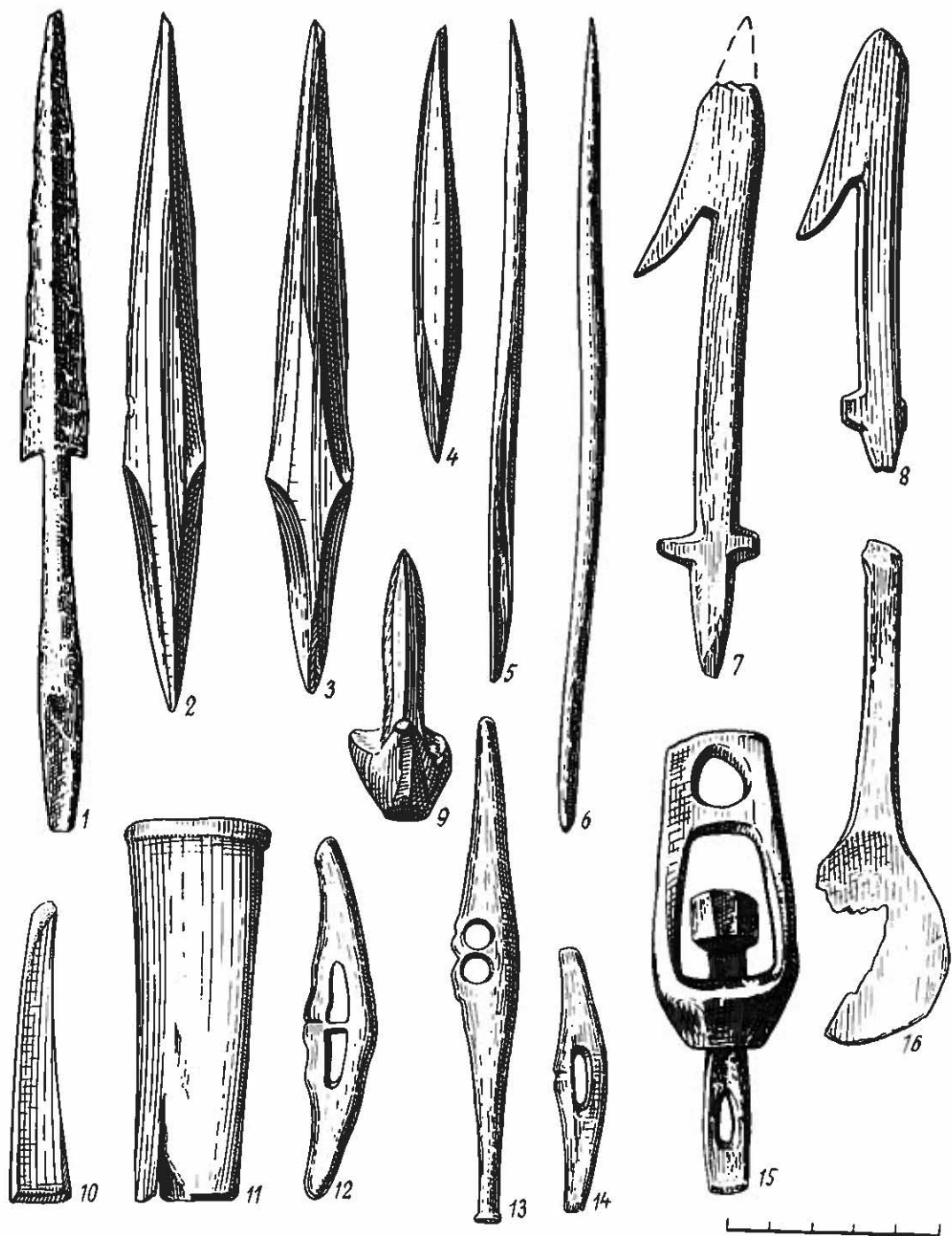


Fig. 4. Finds from the Vhodnoy Cape site:

1. Spearhead for fishing; 2-3. Spearheads; 4. Dart point; 5.-6. Needle-shaped arrowheads (fowling-dart prongs?), bone.; 7.-8. Antler harpoon points; 9. Socketed arrowhead of antler; 10. Bone point; 11. Knife-handle of bone; 12.-14. Buckles for reindeer or dog harnesses; 15. Swivel block for dog or reindeer sledge; 16. Bone spoon of possibly ritual significance.

the prongs of fowling darts, and there are also similarities with hafted missile points (Fig. 4:1) (Oshibkina 1983). Harpoons (Fig. 4:7,8) are of an extremely simple and common type, well-known from Siberia as a whole (Everstov 1988) and the Ust-Poluy culture in particular (Moshinskaya 1965). They have also been found on the Kola Peninsula. The darts and spearheads from layers II, IV and VI (Fig. 4:2,4) appear to belong to primitive types occurring convergently with a wide distribution in other regions. At this site, these artefacts were common at least in the first millennium AD, as shown by the radiocarbon dates. The finds from the site are very similar to material from the Upper Kama region (Gening 1988), and Ust-Poluy in the Ob region (Moshinskaya 1965) in terms of chronological and geographic distribution. The West Siberian character of the parallels is evidenced by a socketed arrowhead (Fig. 4:9) and small flat spoons of bone (Fig. 4:16). Objects of these kinds were found at Ust-Poluy (Moshinskaya 1965), and similar spoons have been found at sites of the Sarov culture, which played an important role in the formation of the Ust-Poluy culture (Chindina 1984).

Interesting details are the socket parts of swivels used in dog or reindeer sledges. They are of accomplished form and similar to corresponding modern-day objects. Swivels from Ust-Poluy, on the other hand, were mainly of lamellar, sometimes tubular and primitive design, and similar to artefacts widely used by the Eskimos. The bone artefacts from the Vhodnoy Cape site are largely homogeneous despite the long occupation of the site, and are also highly similar to sites of the Ust-Poluy culture.

Pottery from the Vhodnoy Cape site (Fig. 5) are in certain respects similar to finds from the second layer of the Karpova Guba site. This material provides important data for understanding ethno-cultural processes in the area in the first millennium AD. Also of importance is the fact that along with parallels in the Glyadenovo culture (Kanivets 1965), the pot sherds from layer V are similar to material from Ust-Poluy (Moshinskaya 1953, 1965). A number of sherds are similar to ceramics of the Sarovo period of the Kulay culture (Chindina 1984). Typical of layer IV were vessels with a low ring-shaped base-part, possibly a local variant of vessels introduced by the Ust-Poluy culture (Moshinskaya 1965). Ceramics of this kind was widely distributed throughout the coastal tundra to the east of the Pechora River.

The Medieval culture of the areas to the

northeast of the Bol'shezemel'skaya Tundra (east of the Pechora) was for a long time influenced by an influx of population from the Lower Ob and the Yamal regions. This process is indicated by numerous similarities in ceramics at sites of the second half of the first millennium AD (Murygin 1984; Chernov 1986). These influences came to an end with the migration of Samodic peoples into the area at the beginning of the second millennium AD, as shown by pottery from the first layer of the Karpova Guba site. The indigenous subsistence pattern was in fact complex, and A. M. Murygin suggests that seasonal changes of the economy were characteristic of the first millennium AD (Murygin 1984).

The correlation of various economic activities is confirmed by materials from the excavations at Karpova Guba and the Vhodnoy Cape site. The local topography and the hunting implements (e.g. ice-shoes and harpoons) point to the ancient maritime hunting activities of the indigenous population. Faunal remains include considerable amounts of sea-mammal bones (walrus, bearded seal, white whale), as well as numerous remains of other animals such as reindeer, bear, polar fox and birds. It must be pointed out that the surveys and investigations of maritime hunter settlements, carried out in 1984–87 under the direction of L. P. Khlobystin and with his active participation, centred on the ecologically most favourable region, i.e. Vaygach Island and Yugorsky Shar Strait. Even today, sea animals congregate in large numbers in the waters around the island. The results of fieldwork were, nevertheless, modest; only two sites were found as well as seasonal hunters' camps occupied for short periods. Finds from the Vhodnoy Cape site show that, in one form or another, maritime hunting played a definite role in the indigenous economy of the first millennium AD. This activity maintained its importance even after the arrival of new settlers, as shown by the results from Karpova Guba. But we do not know how important this role was, or the actual success or efficiency of maritime hunting. Did it provide a permanently settled way of life in the coastal areas of Northwest Siberia and the far northeast of the European part of the USSR? Some authors find affirmative answers to this question (Krupnik 1981; 1989). Krupnik distinguishes two variants of maritime hunting in the West Arctic, viz. the culture of settled hunters, and the seasonal sea hunting of the nomadic tribes of the tundra (Krupnik 1989, 181). Archaeological results, however, show that the Far Northeast of Russia in Europe and the nor-

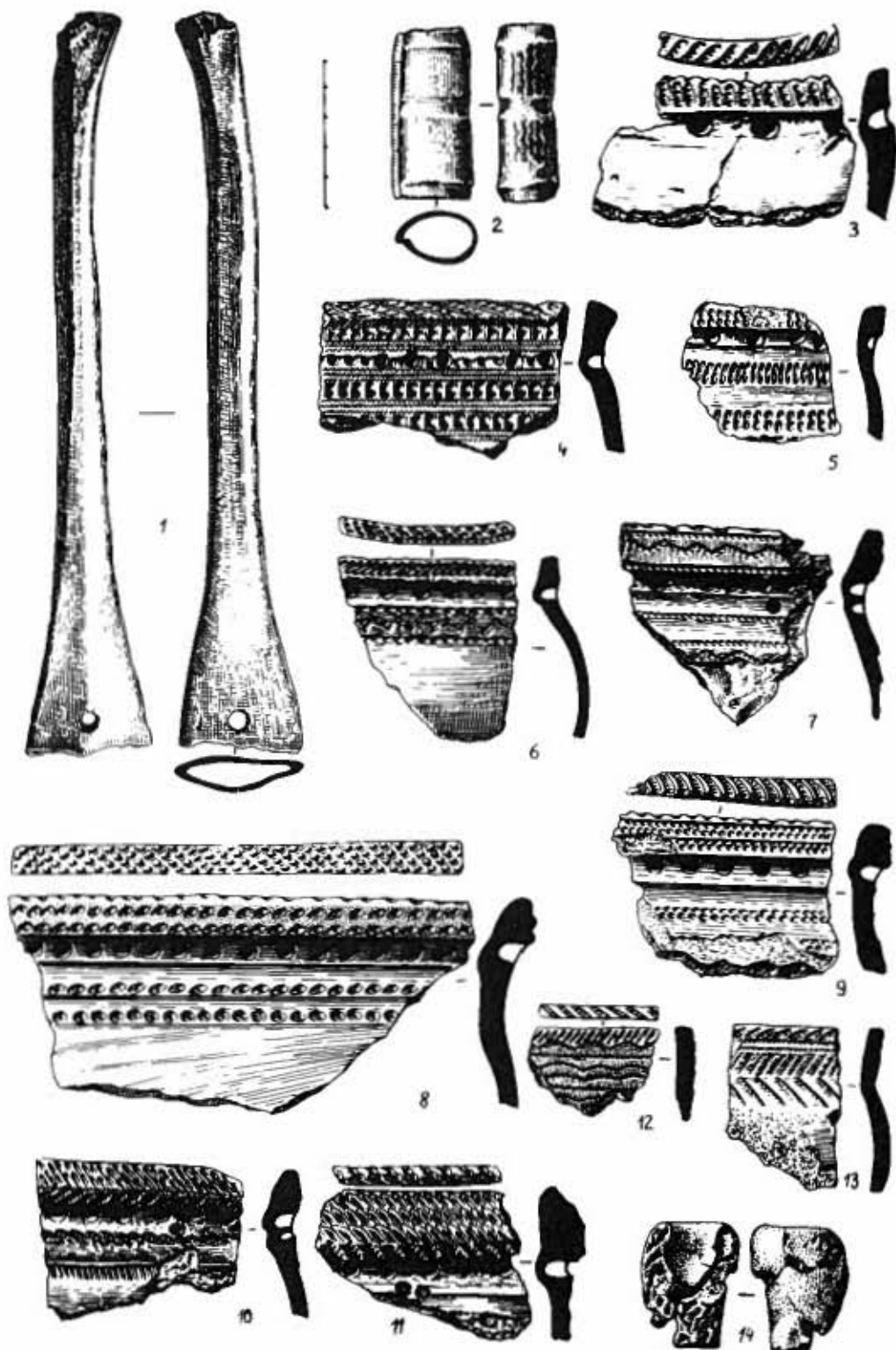


Fig. 5. Finds from the Vhodnoy Cape site:
 1. Adze handle of antler; 2. Needle container; 3-13. Ceramics; 14. Fragment of a wineglass-shaped pot.

thern parts of West Siberia never attained a level permitting the formation of settled maritime cultures. It is more probable that, throughout the history of the area, maritime hunting was mainly seasonal, and correspondingly more or less successful. It seems that, where maritime hunting was constantly effective, permanent seasonal hunting camps came into being, such as those with earth houses discovered by V. N. Chernetsov, and the settlements of maritime hunters mentioned by various travellers of the 16th–17th centuries (Van Linskhotten 1915; Lamartinger 1912; Chernetsov 1935). Settlements of this kind have existed in the Arctic regions since prehistoric times (Khlobystin 1972, Pitul'ko, Makeev, Samarsky 1990; Pitul'ko, Makeev 1991). Recent results offer precise evidence of the seasonality of maritime hunting. As far as the Ust-Poluy site is concerned, it is more likely that its long-term occupation was due to successful fishing activities supplemented by the hunting of sea animals coming to the mouth of the Ob river.

M. F. Kosarev has much the same approach in his evaluation of the role of indigenous maritime hunting in the northern parts of Western Siberia. Citing P.S. Pallas and V. F. Zuev, Kosarev (1984, 79–80) refers to the incidental nature of maritime hunting activities. With reference to the so-called "followers" of maritime hunting among individual Nenets families mentioned by Krupnik (mainly the Yaptic family), it is evident that we are dealing with nomadism along the coast where maritime hunting was naturally developing.

It is clear that the dying out of maritime hunting was not due to any changes in ethnic tradition between the first and second millennia AD, for this activity played a definite role in the Samodic culture (and was significant for trade in the 10th–13th centuries), as shown by ethnographic sources and the results of research. Krupnik is correct in attributing the end of sea hunting to unfavourable ecological change in the middle of the second millennium AD, and to the large-scale utilization of sea animals by the Scandinavian countries and Russia. It is clearly obvious that indigenous maritime hunting never resulted in the formation of settled cultures, similar for example to those of the Eskimos.

Summary

In summary, the questions outlined at the beginning of this paper can be answered as follows:

1) According to available sources, the adoption of elements of maritime hunting can be dated with some reliability to the second millennium BC. Archaeological data from the Arctic may also indicate an even earlier date for the formation of these elements.

2) Available archaeological results indicate that, despite the relatively significant role of maritime hunting in the indigenous economy, it was pursued within the framework of a nomadic hunting (or hunting and reindeer breeding) economy, and was practised seasonally. Both short-term (Vaygach Island and Yugorsky Shar Strait) and long-term (Yamal) settlements were associated with this activity in the regions where hunting was most effective.

3) The ethnic situation in this region was determined by a continuous influx of people from Western Siberia. The process whereby Samodic elements penetrated the indigenous Ugrian culture lasted c. 1,000 years. In the final stages, the influx of Samodic people increased, and the process resulted in the formation of bi-component ethnoses. The inter-penetration of cultures helped preserve maritime hunting as an integral element of the indigenous economy.

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ABBREVIATIONS

- AO = Arkheologicheskiye otkrytiya
KSIA = Kratkiye soobscheniya Instituta Arkheologiy
MIA = Materialy i issledovaniya po arkheologii SSSR
SAI = Svod arkheologicheskikh istochnikov