

# PREFACE

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Every few decades a revelation about the ancient environment, the appearance of a remarkable artifact, a series of surprising radiocarbon dates, or the discovery of an unusual archaeological site in an unanticipated geographical location can be seen, in retrospect, as a transformative event. Such is the case with the discovery and first two years of excavation of a Mesolithic site on Zhokhov Island. Suffice to say, because of its remote High Arctic location (76° North), its remarkable preservation, and its 7800-8000 B.P. date, Zhokhov can be considered as the most important archaeological site investigated in the Arctic region in the past two decades.

The account presented here is a translation of the original Russian monograph published by Vladimir V. Pitul'ko in 1998. In addition to providing a full account of the Zhokhov site, its geographical and environmental setting, the finds recovered, and its chronology and cultural relationships, this book is also the most comprehensive English language survey of Late Pleistocene and Holocene archaeology and paleoenvironments of northern Eurasia. For this reason *The Zhokov Island Site and Ancient Habitation in the Arctic* is much more than a report on an important Arctic site; it provides readers with a window into the Russian scholarly literature dealing with nearly half of the globe's Arctic lands, places which have been inaccessible physically and intellectually to Westerners for most of the 20<sup>th</sup> century.

The archaeology of the Russian Arctic is less well-known than most other regions of the North, and Zhokhov illustrates the difficulties researchers have encountered in trying to assemble the early history of the Russian Arctic. Its remote location on an 11 km long island in the De Long chain of the New Siberian Islands at the northeastern edge of the Laptev Sea is 425 km from the nearest Siberian coast and 300 km southwest of the continental shelf. Surrounded by a sea floor that is only 50 m deep, during the period when it was occupied Zhokhov would either have been a coastal cape on the New Siberian Peninsula or a newly-created island off a southward-receding Siberian shoreline. The great abundance of drift-wood which is the most salient characteristic of Zhokhov's physical remains suggests that a mouth of the ancient Lena River delta was nearby. In part Zhokhov is important because all of the other archaeological sites that would have been present on the huge expanse of Russia's continental shelf, have been inundated or washed away by rising sea levels.

Today Zhokov is less accessible than it was when Mesolithic caribou and polar bear hunters constructed a cluster of drift-wood houses here and lived for some years or possibly sporadically over several decades. Zhokhov owes its discovery to a Soviet weather and military station that was established on the island in 1955 and existed until 1993. Curious about the volumes of wood emerging from a mound far from the current shoreline, workers sent samples of human-worked wood that reached Leonid Khlobystin in St. Petersburg and were radiocarbon-dated. Expecting

Iron Age dates, researchers were amazed at the prospect of a frozen early Holocene settlement in such an extreme location and organized expeditions in 1989 and 1990. The first publication was issued by Pitul'ko in Russia in 1989, and two years later Pitul'ko and V. M. Makeyev announced the finds to the world in an article in *Nature* in 1991. Since publication of the Russian version of this book, Pitul'ko and a group of natural science colleagues have conducted intensive investigations at Zhokhov for nearly a decade, excavating much of the frozen village site, analyzing finds ranging from artworks to dog feces, and exploring its sediments for clues about climate and paleoenvironment. This volume sets the foundation for that forthcoming more detailed study.

Half of this book reports the Zhokhov site and the finds recovered there. A large series of radiocarbon dates bracket the site's age between 7800–8000 B.P. (8408–8175 B.P. calibrated). Pollen, macrofossils, and other data indicate that 1,000 years earlier, the Yakutian lowlands had experienced its peak Holocene warming, when the forest limit reached the location of the modern coastline and conditions were slightly warmer than today. Even though conditions were somewhat cooler—perhaps more like today's conditions—during Zhokhov's occupation, wild reindeer (caribou) migrated between the forest edge to the south and the Arctic Ocean coast, then around the latitude of Zhokhov. Moose were plentiful in the lowland forests, and seals, walrus, and polar bears inhabited the coastal waters. Birds, fish, and small mammals were also widely available, at least seasonally. Zhokov's fauna—carefully analyzed here—are diverse, but are dominated by reindeer and polar bear. This is a completely unique economic complex, not seen in any other archaeological or ethnographic examples, and it attests to an adaptation focused on intercepting the northward seasonal migration of reindeer during the summer and hunting polar bears, probably by intercepting them, with the aid of dogs, in their dens in spring. The site gave little support for a maritime adaptation, either in settlement pattern, faunal remains, or technology. The latter demonstrated a Sumnagin Mesolithic assemblage that is dominated by a distinctive core and blade technique directed at producing microblade insets for antler knives and spear points, and ground stone axes for wood-working and butchering. Stone scrapers and bifaces are absent, and domestic implements included wood and bone bowls and troughs. Use of mammoth bone was widespread, though evidence for mammoth hunting was absent, suggesting scavenging as the means of supply. A wooden sled runner is the earliest example of this technology in the Arctic; these sleds were probably pulled by humans rather than dogs because no trace buckles were found.

Despite excellent preservation of lithic and organic artifacts due to the site's pervasive permafrost (only the upper 10 cm thaws in a given summer), cryogenic processes had destroyed all traces of the site's original habitation structures. Logs used to frame dwellings had been splintered into shreds by solifluxion and other cryogenic processes; living floors and middens were churned together with splintered logs and artifact remains, and these twisted deposits ended up being cross-cut by ice lenses, ice wedges, and ground ice derived from the summer snow-melt and the seasonal creek that runs past the site. As a result the actual settlement plan, house sizes and shapes, and other features could not be ascertained. Nevertheless, in appreciating such a rich slice of life at the top of the world at 8000 BP one has to accept some imperfection.

This book also illuminates a world beyond Zhokhov by establishing the site's environmental context, its likely climatic scenario, and Zhokhov's place in the culture historical framework for northern Russia and northeastern Siberia. Although this text is dated to the early 1990s the discussion of the typology and periodization used for the Russian north helps us realize how rapidly the field is changing and how closely Soviet/Russian archaeologists worked with their environmental colleague in the discovery and interpretation of archaeological finds and cultures. Piltul'ko's discussion of the Zhokhov "Mesolithic" helps clarify divisions in the Russian ranks about this use of this stage term. His wide-ranging comparisons, from Scandinavia to Alaska and Greenland, adds to the international discussion about circumpolar culture, illustrates the importance of the adaptation to migratory reindeer, and shows how early Holocene hunters' use of polar bear demonstrated a step towards developing a more stable economy that caribou alone could offer.

As in most things archaeological, Zhokhov owes its existence to a series of lucky breaks: choice of a site location far from the 8000 BP shore; geomorphic and cryogenic processes that preserved the remains despite the flooding of hundreds of kilometers of Russia's Continental shelf; curious station workers who thought to send samples to scientists; researchers who bothered to date a piece of wood that seemed likely of recent origin; and perhaps we even have to thank Soviet military policy for maintaining an extremely forward Cold War base (if Perestroika had been five years earlier, the Zhokhov base would have been abandoned before knowledge of the site reached archaeologists). Zhokhov deserves a special place in the history of Arctic archaeology along with Ipiutak and a few other landmarks of culture history. As we shall see in future publications documenting more recent research, Zhokhov is a bright beacon in the still-dimly lit archive of Northeast Siberian culture history.