## Baby Lyuba - The Ambassador of the Nenets

by Moki Kokoris and Bill Gasperini



Nenets summer camp.

The wind was blowing hard across the vast Russian tundra where reindeer herder Yuri Khudy and his sons discovered a carcass near a bank of the Yuribey River. Although they routinely came across the curved tusks of mammoths in summer months, the Khudys had never before seen a complete animal. Yet after spotting the trunk protruding from its head, they quickly realized what lay on the sandbar at their feet. Yuri had heard stories about these beasts retold in the lodges during gatherings on long winter nights. Nenets elders still believe that mammoths are creatures that wander the spirit underworld, herded by malevolent gods, and that touching them brings bad luck.

Whenever found, mammoth remains are often sold to fossil dealers and ivory traders before scientists can examine them, but un-

derstanding that this was a unique and significant discovery, Yuri went to great lengths to bring his find to the attention of proper authorities. For his efforts, the baby mammoth was named after Yuri's wife, Lyuba (Love).

Since the botanist Mikhail Adams recovered the first woolly mammoth carcass in Siberia in 1806, a dozen or so other specimens have been found, including several calves. Yet no carcass of any age was as perfectly intact as that of little Lyuba. Her body was collected, packed and shipped by helicopter to the Shemanovsky Museum in Salekhard, the regional capital. Alexei Tikhonov, director of

the St. Petersburg Zoological Museum, was one of the first scientists to view the female

baby. Tikhonov invited Dan Fisher, a paleontologist from the University of Michigan, who had spent 30 years studying Pleistocene mammoths and mastodons, to assist in the forensic studies that would shed more light on this extinct species and hopefully unravel the mystery of Lyuba's superb state

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Lyuba, the baby mammoth on exhibit at the Liberty Science Center in NJ.

of preservation. CT scans, showing brilliant blue vivianite crystals growing inside

her cavity, and DNA testing revealed that the baby mammoth had been literally pickled by lactic acid produced by microbes in the heavily silted pond where, at only one month old, she met her demise.

Baby Lyuba, who was featured in National Geographic magazine and a television documentary, is currently the star attraction in the major exhibition: "Mammoths & Mastodons: Titans of the Ice Age," which will be touring the United States for the next four years. The displays not only explore the implications of changing ecosystems of territories the mammoths once roamed, but also focus on the Nenets people of the region where Lyuba had been found.

The Nenets are the largest of approximately a dozen indigenous tribes who herd reindeer year-round across the Russian Arctic. Anthropologically, the Nenets are represen-

tatives of the Uralic race with stronger than average Mongolian characteristics. Of the 40,000 Nenets living within Russian Federation borders, approximately one third is nomadic. Their native territory is the tundra and the forest taiga - a land of permafrost, numerous rivers and wide marshy stretches. Since ancient times, the migratory cycle of the Nenets has been tied to that of the reindeer as they travel vast distances up and down the Yamal peninsula, moving from northern pastures in summer to the more protected sub-Arctic regions in winter. There are approximately 700,000 reindeer spread over 48 million hectares of land in the region (this in-

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Nenets women preparing to drape reindeer pelts over choom frames.

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cludes the entire Yamal-Nenets Autonomous Okrug, of which the Yamal peninsula is just one part).

Like many other indigenous Arctic cultures, Nenets traditional beliefs stress respect for the land and its resources, and the reindeer provide almost everything needed to survive the harsh conditions. Their tipi-like dwellings, or "chooms," are made of reindeer pelts that

are draped over wood frames. The center of life, the choom is as much a place of story-telling, food preparation, eating and sleeping, as it is the beginning and end of all journeys. The chooms are women's domain, while outside on the tundra, men are in charge.

Reindeer pull the rugged winter sleds, onto which the dismantled chooms and other belongings are loaded every few days. Summer sleds are much lighter. During their annual migration cycle, some Nenets travel an average of 1500 miles across the aptly-named Yamal ("back of the beyond") peninsula that lies north of the Ural mountains.

In warmer months, the deer graze on protein-laden tundra grasses, while in winter, the animals must dig under the snow to find carbohydrate-rich mosses and lichen. Reindeer hides are also used to make the bulky parkas and leggings that allow the Nenets to endure temperatures that reach minus 50°F.

Although the herders use some outside items such as tea cups, radios, rubber boots and ponchos, most everything else is made by hand: the women make the fur clothing while the men build the sleds and tools such as cross-bow wooden drills and reindeerleather lassos with which they capture individual deer when needed. The Nenets' diet consists predominantly of deer meat, but is supplemented with fish, tea, jam, and bread that is obtained on the rare occasion they travel past towns or settlements.

Many Arctic experts consider the Nenets' lifestyle to be one of the most traditional in the world, largely the result of isolation out on the tundra. To an outsider, a Nenets camp might appear very similar to a 19th century Native American camp on the American plains. Yet the nomadic Nenets are fully aware of the

## Caring for a 42,000-Year-Old "Baby"

he "Mammoths and Mastadons: Titans of the Ice Age" exhibit will be traveling across the United States over the next four years, but for part of the tour, a fiberglass replica of Lyuba will be on display while the real Lyuba makes appearances in Russia during special events. With oversight by a Shemanovsky Museum staff member, a highly specialized team from Chicago's Field Museum has been charged with moving the baby mammoth. After each "deinstall," Lyuba is carefully checked by a conservationist for signs of deterioration or changes in her condition.

Because the young mammoth was preserved using a special drying technique, she does not need to be kept frozen nor does she require an otherwise specialized case. Since the drying process continues even while she is on display, any slight shifting in her legs must be carefully measured (see photo) so that the custom-made metal mounts keep her stable in the trotting position in which she was found. Her pose, along with her excellent state of preservation, makes it seem conceivable that this ancient "baby" could suddenly spring back to life and walk right out of her case.

The real Lyuba is scheduled to spend most of 2011 on view in Anchorage and St. Louis. For exhibition highlights and more information: http://www.fieldmuseum.org/mammoths/



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outside world, particularly because all Nenets men are required to serve two years in the Russian military.

While visitors may assume that such a rigorous and austere existence might drive the Nenets into towns to seek a more conventional lifestyle, the majority will say that "the tundra is our home," and that they wouldn't want it any other way. Conversely, the Nenets often ask outsiders why it is considered normal to live out of touch with the natural world, dependent on a money-based system, which they believe leads to social ills.

Some Nenets have indeed tried town life. Sasha Serotetta has been there and back. "I went to teach in Tyumen (the capital of a region to the south) for four years, and could see that life certainly has its comforts," he says, "but soon I tired of being inside all the time, like living in little boxes. Out here we are totally free and living with nature."

Given that Yamal lies on one of the largest natural gas deposits in the world, the Nenets face challenging times as they cope with inevitable industrial development that threatens their very existence. While trying to believe the promises from Russia's gas monopoly, Gazprom, that their distinct lifestyle will be

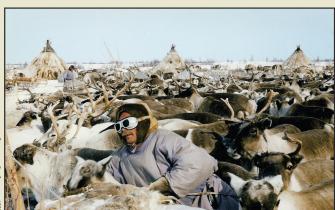


Baby Lyuba after removal from display case. The brilliant blue crystals of vivianite were likely formed as a result of phosphate leaching out of her bones.

preserved, these hardy people continue to trundle their belongings across the landscape in one of the harshest environments in the world, living in a way that completely sets them apart from "that other world."

Little Lyuba has unsuspectingly become a truly unique ambassador for the indigenous Nenets as she travels around the world, telling both her own story as well as that of the people who still live where she had died 42,000 years ago. If all are lucky, baby Lyuba may very well be a harbinger of good fortune.

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Nenets herder capturing reindeer.

To an outsider, a Nenets camp might appear very similar to a 19th century Native American camp on the American plains. Yet the nomadic Nenets are fully aware of the outside world, particularly because all Nenets men are required to serve two years in the Russian military.



Choom frame structures prior to being covered with reindeer skins.

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