

**T**HIRTY THOUSAND YEARS AGO, while an ice age chilled much of Europe, a herd of woolly mammoths moved along a tributary of the Danube River in what today is the Czech Republic, in eastern Europe. As the animals advanced,

they may have caught the scent of an enemy and halted abruptly, may have stood with ears held out for the slightest sound, trunks raised above white, curving tusks, testing the air. And perhaps the mammoths trumpeted in alarm when shrieking, fur-clad human hunters brandishing stone-tipped spears suddenly rushed upon them, waving torches to panic the animals into a tight bunch for ease of spearing.

The details of that battle faded from human memory millennia ago, but the bones of the slaughtered mammoths told part of the tale when paleontologists uncovered them in years past. Study of the Czech site and of others around the globe show that ancient peoples used the woolly mammoth, a form of extinct elephant, for food, fuel, clothing and building materials. Bones and tusks were used in weapons, tools, artwork and as frameworks for houses. Some peoples even buried their dead in tombs of entwined mammoth bones. For much of human prehistory, hunting the woolly mammoth was a vital business.

Today, 10,000 years since the woolly mammoth vanished from the Old World at the end of the last ice age, the business of hunting mammoths is still booming. With international trade in elephant ivory closed down, trade in mammoth ivory has emerged as virtually the only alternative acceptable to the international market. And as the hunt grows more furious in the face of increased demand, scientists and profiteers are at odds over the fate of an animal long extinct. Traders

stalk mammoths for tusks, while paleontologists seek them for the secrets their skeletons and frozen carcasses reveal about the past. All parties search Siberia, where the remains of millions of mammoths lie locked in ice beneath the

grasses and forests they once roamed.

On a cloudy summer morn chilled by winds from the Arctic Ocean, paleontologist Peter Lazarev and his boatman motor round a bend in the Adycha River of northern Sakha, a Russian republic in Siberia. Massive cliffs of sand and ice loom ahead. Though only six time zones and 5,000 kilometers (3,100 mi.) from Moscow, the scene seems so remote in time and place that Lazarev can easily imagine mammoths emerging from forests along the river.

The boatman motors up to the cliffs and runs the boat ashore. Lazarev grabs his walking stick and jumps out, combing the beach for prehistoric bones. Within minutes he pries several from the wet sand, nonchalantly ticking off species. "Reindeer, giant bison, pygmy horse. All prehistoric."

He pokes the base of the cliff and hits solid ice just centimeters below its face. "Permafrost. Very close to the surface here." In fact, the capital city, Yakutsk—where Lazarev works as director of the Sakha Republic's World Museum of Mammoths—is balanced on piers driven deep into the ice to hold tall buildings off the ground and avoid melting the permafrost. Ninety percent of Sakha, Russia's largest republic at five times the size of Texas, is underlain by this permanent layer of ice that runs a kilometer-and-a-half thick in places. It is the permafrost that has preserved mammoth carcasses for tens of thousands of years, like a giant freezer, making time stand still and allowing modern people to meet prehistoric

wildlife face to face.

For the Sakha (or Yakut) people, descendants of Mongol and Turkic ethnic groups, the mammoths are buried treasure. During the past 20 years, illegal trade in ivory so decimated the African elephant that an international ban shut

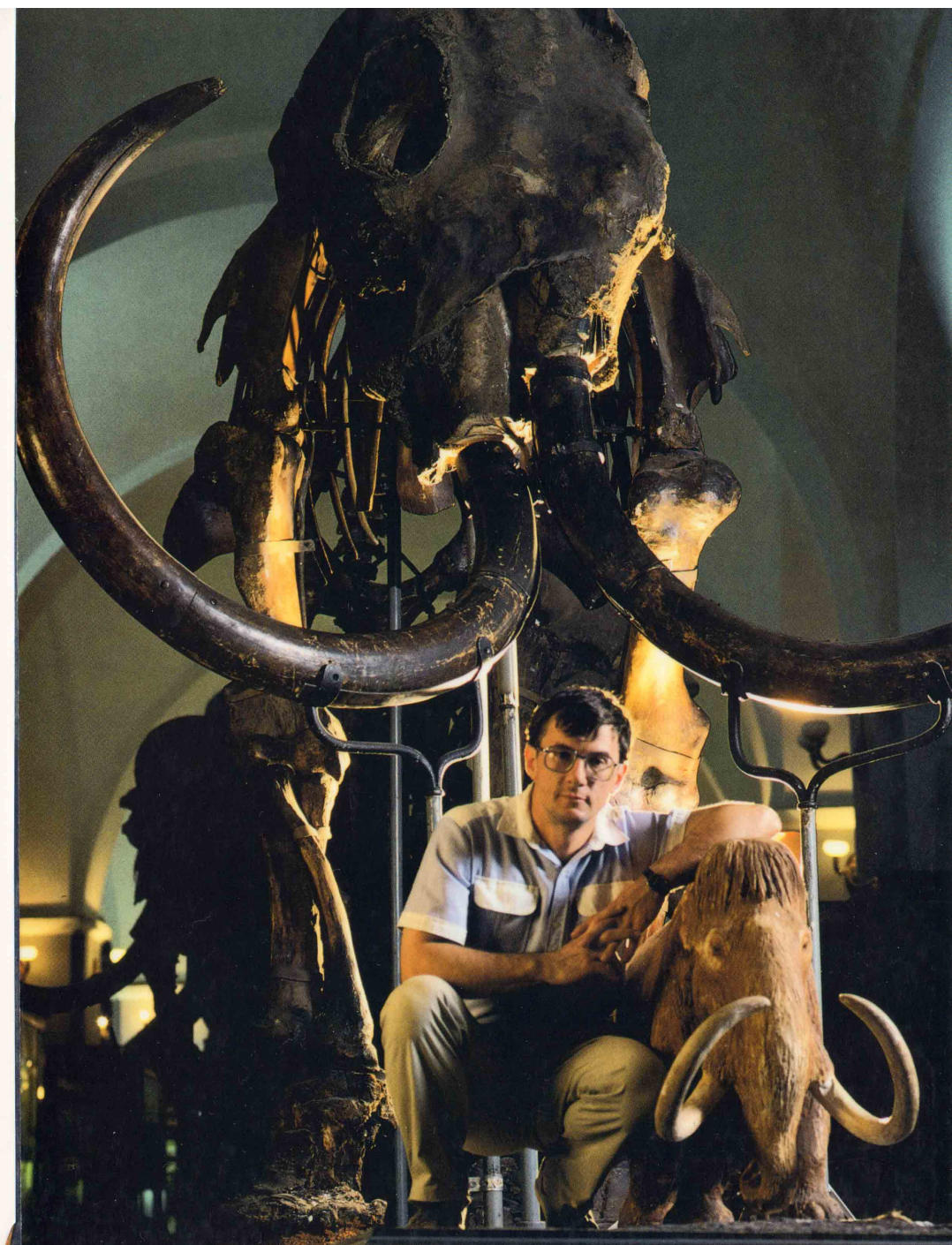
## Open Season on the WOOLLY MAMMOTH



*This Ice Age elephant may be long extinct, but the hunt for its treasured ivory continues*

Story and photographs by Randall Hyman

**In an artist's depiction an ancient hunter stalks a mammoth, once a source of food and materials for humans. Today, Russian scientists such as Alexei Tikhonov, dwarfed by a mammoth skeleton in a St. Petersburg museum, continue the quest for the extinct animal.**



*The permafrost has preserved mammoth carcasses for tens of thousands of years, like a giant freezer, making time stand still*

down all commerce in elephant ivory in 1990. As a result, the value of mammoth ivory has soared from \$6 per kilogram to \$100, equal to one month's income for the average Sakha.

This windfall arrived just as the collapse of the Soviet Union weakened Moscow's regulation of commerce in Yakutsk. While the Sakha have not yet

Unlike gold and diamonds, concentrated in deposits suitable for mining, mammoth ivory is widely dispersed, making discovery a matter of chance. Only hunters and fishermen who trek Siberia's wilderness as a way of life are likely to stumble upon newly exposed mammoth remains. Among those remains, individual bones are common, tusks far scarcer. Whole skeletons are rarer still, and rarest of all are frozen carcasses.

As Lazarev travels downstream, he finds neatly piled on a sandy beach a trove of bones the village children collected along the river last fall and left behind. For them, gathering the bones was a game, like hunting for seashells, but for Lazarev, their collection is a treasure. Among the pygmy horse hooves and reindeer fossils lie the massive bones of mammoths.

Lazarev picks up a leg bone and fits it perfectly into the socket of a shoulder blade. He admires the

long graceful arc of another mammoth bone, one of several ribs in the pile. From previous trips he knows that this region is peppered with bones, but this is better than he expected. After an hour of careful sorting, he crams two canvas sacks full of specimens and sets them in the boat for the long ride back to the village.

Lazarev has spent 30 years in the field, and without question the greatest prize of his career is Dima, an animal he recalls with wistfulness and pride. It was a six-month-old baby mammoth found completely intact near this very region, frozen in the Siberian ice for 40,000 years. Lazarev and scientists from St. Petersburg excavated the animal in 1977. Its body is still on display in St. Petersburg at the Russian Academy of Sciences' zoology museum, and scraps of its wool are stored at Lazarev's World Museum of Mammoths.

Sakha legend warns that mammoths

should never be disturbed, and many say Dima brought bad luck. In the years following its excavation, some of the locals who helped on the expedition were plagued by illness and misfortune.

Perhaps this legend started with confusion over the source of mammoth ivory. As little as 200 years ago, no one suspected that hairy elephants once roamed frozen lands. Traders in mammoth ivory speculated that the tusks

came from giant rodents that had dug their way from the underworld and died from exposure to light near the surface. As messengers from below, the animals, according to legend, brought death.

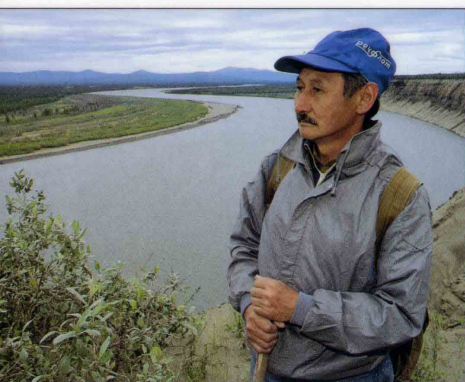
Fear of mammoths nearly deprived the modern world of its first great mammoth discovery in 1799, when an entire cadaver materialized from the Ice Age to dispel myths about the origin of the ancient tusks. The discovery occurred when

a Sakha chieftain hunting for ivory along the Lena River delta near the Arctic Ocean noticed a massive dark object embedded in a huge block of ice. He was uneasy about his discovery and kept a wary eye on it for two years. By the second summer thaw, he could see that he had stumbled upon the dreaded rodent his people so feared.

Uncannily, as legend predicted, he soon fell seriously ill. When he finally re-

covered, the tremendous value of the great beast's tusks drew him back. He returned to the site in 1804 with a Russian trader and sold the tusks for 50 rubles.

In 1806 the trader's story reached the ears of a Scottish botanist, Mikhail Adams, who happened to be visiting Yakutsk. He bought the tusks from the trader and immediately launched an expedition to retrieve the carcass. By the time he reached the site with sherpas and

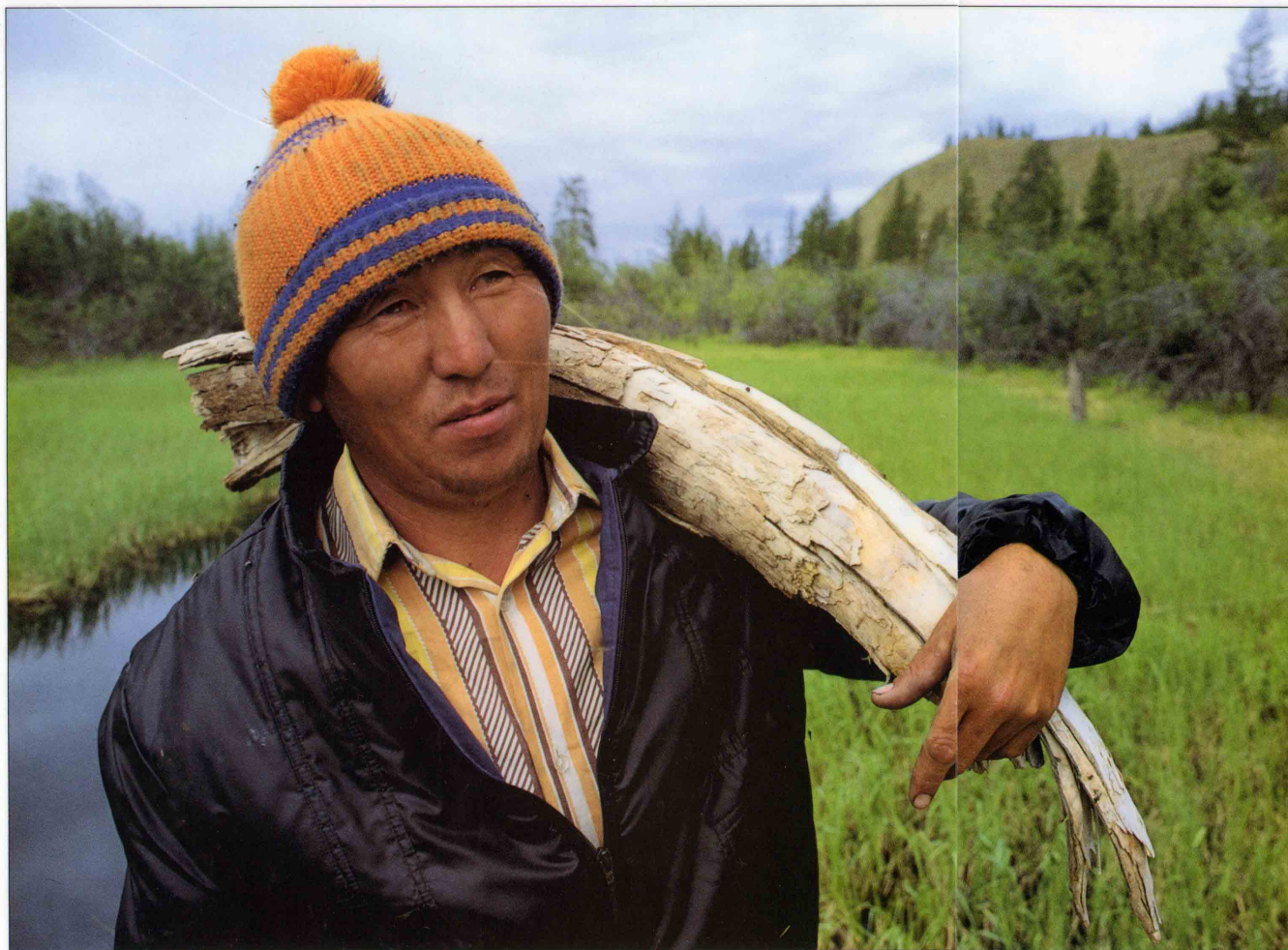


**Paleontologist Peter Lazarev scans the Adycha River in northern Sakha, a Russian republic in Siberia. Mammoth remains that erode out of the permafrost often turn up on the river's banks.**

**Lazarev (at left of group) and his boatmen rummage through prehistoric bones along the Adycha River. The stack includes the remains of extinct horses and bison as well as woolly mammoths.**

gained full control of their gold and diamond mines, they have won control of the ivory trade, which dates back 2,000 years to commerce with Chinese merchants. In the nineteenth century, Yakutsk was the world capital for trade in mammoth ivory, putting roughly 25 tons of tusks on the market yearly. Today the trade is worth millions of dollars annually to this semi-autonomous republic.





sleds, part of the 37,000-year-old corpse had been gnawed clean by wolves, bears and foxes. After retrieving the entire skeleton and much of the hide, he turned the specimen over to the Russian Academy of Sciences, which paid him 8,000 rubles for the expedition.

"Here it is," says paleontologist Alexei Tikhonov at the academy museum in St. Petersburg. "This is the famous Adam's mammoth." He approaches a massive

skeleton prominently displayed in the center of a long, cavernous exhibit hall. Behind it march the progressively smaller skeletons of elephants and other related species in a parade of evolution. The skeleton resembles that of a jumbo elephant with impossibly long tusks that curve toward the high arched ceilings like giant hooks. It stands more than 3 meters (10 ft.) tall, and its bones weigh a ton. Alive, the animal weighed nearly 5 tons,

comparable to an adult African elephant.

Skeletons such as this, exhibited in traveling shows throughout Europe and America in the early 1800s, attracted great crowds. As extinction and evolution were unknown concepts, these monstrous objects bore the allure of moon rocks today. Mammoth fever became rampant. During this time the animal's Siberian name, *mammut*, was popularized in English as "mammoth" and came

to mean anything of gigantic proportion or size.

The Adam's mammoth revealed the source of the ivory and showed what mammoths looked like. Its woolly hide explained how an animal that resembled elephants from the tropics could survive Siberia's bitter cold. The cause of the animal's extinction, however, remained a mystery, as it still does.

Today in Yakutsk, the ivory trade is

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booming as it has not since the nineteenth century. The recently founded National Mammoth Fund is eagerly doling out rubles and bartering with anyone who stumbles across Siberian tusks. Instead of being channeled through warehouses in Moscow, as required under Soviet rule, ivory now goes directly from Yakutsk to foreign customers. "We have over 20,000 kilos of ivory here," says Grigory Fiodorov, the main stockkeeper at the four-year-old depository. "And that's just from one year."

For now, the warehouse is nothing more than an oversized garage on the outskirts of town, nestled among an assortment of concrete buildings. Few people suspect it contains ivory worth in excess of \$2 million on the international market. Fiodorov and his boss, Vladimir Popov, vice president of the Fund, fiddle with the hefty padlock on the big doors with an air of secrecy, uneasy about revealing the building's contents.

Inside lies dust and darkness. Crates stacked on racks line the walls, and two large pens filled with sawdust occupy a side storage room. Fiodorov and a couple of helpers disappear into the room and return carrying an enormous tusk almost too heavy for the three of them. Moments later they bring out two more complete tusks.

"These two tusks were brought to us in perfect condition," says Fiodorov. "They weigh 60 kilos each and are from one mammoth. The third one here weighs 90 kilos. We gave a snowmobile and an outboard motor to the man who brought us that one."

Under Sakha law, mammoth ivory cannot be exported legally until it has been worked. The process begins in a third-floor shop closer to the center of town. There the tooth-aching whine of a high-speed air drill mixes with the acrid odor of burnt dentin to conjure images of

a dentist's hall of horrors. This is Kudai Bakhshi, a private ivory-carving company recently founded on the idea that finished ivory is more profitable than raw ivory. Mammoth tusks are carved here with expensive, state-of-the-art Italian drills mounted on workbenches white with ivory dust.

Miniature mammoths and horses line



**Craftsmen in Yakutsk, the capital of Sakha Republic, carve figurines like this one, valued at about \$500, from woolly mammoth tusk. The elephants became extinct 10,000 years ago.**

**A fragment of mammoth tusk may prove a treasure for a Sakha resident. After a 1990 world trade ban on elephant ivory, the price of mammoth tusk jumped from \$6 a kilogram (2.2 lbs.) to \$100.**

the benches in various stages of emergence from ivory blocks. One piece features a caravan of mammoths carved from a long sweep of tusk. Decorative earrings worth \$20 a pair, about a week's salary in Sakha, fill the carvers' drawers.

While Fiodorov and Popov prosper, their counterparts at the Charnex Foreign Trade Company in Moscow have given up on mammoth ivory. Hidden amid a series of high-rise tenements in

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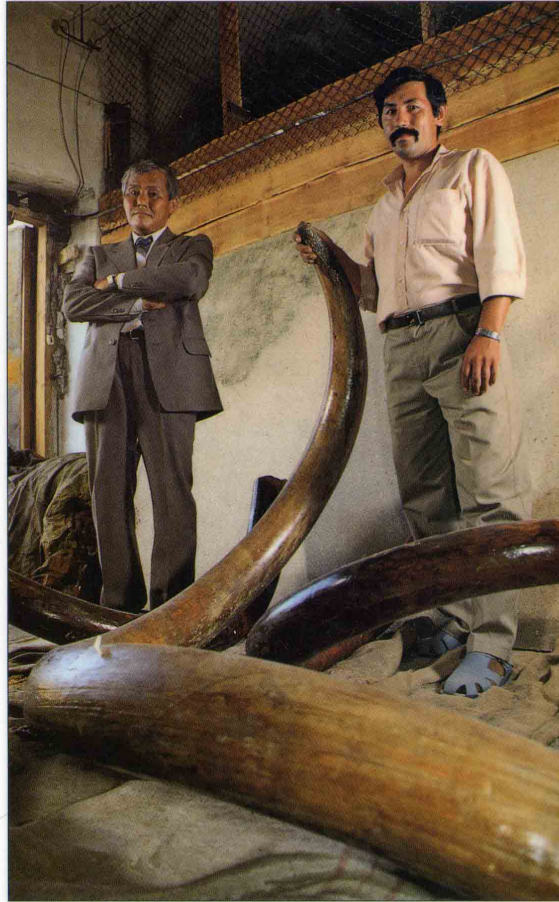
a dingy Moscow suburb, Charmex is a jewel in a dustbin. Its humble entrance, tucked around the side of a drab concrete apartment building, is an inconspicuous steel door. Guards with machine guns stand inside. At the end of a long paneled hallway lies an enormous room filled with sparkling gemstones and minerals.

“We have no more tusks,” explains Charmex sales executive Arcady Sinitsyn. “We sold them all. These are all that is left.” Two mammoth tusks lie on the floor curving around a display of huge rock crystals that would take several men to move. An assortment of ivory carvings sits nearby.

Charmex was once the main clearinghouse for the tons of tusks shipped from Yakutsk each year. Since Yakutsk cut Moscow out of the trade, Charmex now deals only in gemstones. Millions of dollars of the rarest stones on Earth are stored here, but ivory seems to be the hottest ticket overseas. Sinitsyn has just returned from trying to sell his wares in New York. “It didn’t go so well there,” he says with a shrug, lamenting his inability to score a sale.

Though Charmex faces serious problems in the tusk trade, the big losers in the Yakutsk ivory boom may be scientists. Some paleontologists worry that Sakha ivory hunters are looting the permafrost with no regard for the scientific record. Though ivory flows rapidly into the Yakutsk warehouse, few major scientific discoveries have been reported in Siberia since the uncovering of Dima in 1977. Experts will never know to what extent the tusks at the National Mammoth Fund represent archaeological sites now lost to science.

Russian scientists strapped for money



**Vladimir Popov (in suit), vice president of Yakutsk’s National Mammoth Fund, and stockkeeper Grigory Fiodorov display mammoth tusks weighing more than 60 kilograms (130 lbs.) each. The fund conducts commerce in fossil ivory.**

make poor competitors in the search for mammoth remains. Alexei Tikhonov, for example, watches time slip away in St. Petersburg as he desperately seeks research funds in a nation on the verge of bankruptcy. “We have no money, and no

way to mount expeditions,” he explains. “We wait in St. Petersburg for more bones, but no one sends them. Ivory collectors may be ruining what is out there.”

As a native Sakha who has traveled and lived throughout the vast republic for all of his 58 years, Peter Lazarev disagrees. “Ivory collectors are no problem at all,” he insists. “Much of the ivory they find is in pieces and is not found with complete skeletons.”

As Lazarev speaks he sits in his office at the World Museum of Mammoths, no more than a large room on the top floor of the Academy of Sciences building in Yakutsk. There he stores the bones he brought back from the Adycha River trip. He has amassed a respectable collection that includes the greatest prize of his career.

To show this prize, he leads the way to a small room across from his office, where he pulls a cardboard box from a shelf and ceremoniously removes the lid. “This is Dima,” he says. When he takes out clumps of chestnut wool and marvels at the enigma in his hands—the 40,000-year-old fur of a six-month-old

animal—he is united in spirit with those ancient peoples who hunted living mammoths so long ago.

In all the millennia that Dima lay locked in ice, humans never gave up the ancient mammoth hunt. Outside Lazarev’s museum, as icy cliffs of sand crumble, and wildlife emerges from another age, it is still open season on woolly mammoths. □

*Photojournalist Randall Hyman reports that woolly mammoths are the most elusive wildlife he has covered yet.*