At Trading Crossroads, Permafrost Yields Siberian Secrets

http://www.nytimes.com/2004/01/06/science/06MUMM.html
by Charles Choi
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Choi notes: There’s a funny story here. I pitched this story at the end of 2002 to the Times science editor at the time, and she accepted, on the reasonable condition that I get a photo of the mummies to accompany the story. The article then languished for nearly a year because the Russian researcher didn’t send over a photo. I finally went to Russia to shoot pictures of the mummies (an ordeal in itself, involving buying a visa, flying into a snowstorm, and a government escort to a vodka bar and Scottish ballet) only to find out the mummies had been moved back to Siberia. However, the researchers did have a CD-ROM of pix of the mummies, which raises two questions: a) Why not just send me the CD-ROM instead of me flying out? b) If they’re files on the CD-ROM, why not just email me the pix? Still, the trip was worth it, as a lot of matters were best discussed with the researchers face to face, given my non-existent Russian and their good but imperfect English. This pitch is unusually long -- I was still feeling out the Times at that point, and I was nervous pitching to the Times, being only in my second year as a freelance.

The pitch

Dear Laura --

The below story pitch I wrote comes from talks this weekend with Smithsonian anthropology chair Dr. Bill Fitzhugh and literature he’s provided me from the lead researcher, Natalia Fedorova. Dr. Fitzhugh tells me that no one has reported on any of these findings yet, which is fairly exciting. I’ve included a picture of one of the mummies for you, and a blurrier picture of the archaeologists excavating near Zeleniy Yar. I still obviously need to find out what new things these finds can say about the past, but I think there’s enough to go on right now to pursue a story.

Best -- C.

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In a medieval necropolis a few miles south of the Arctic Circle, near the village of Zeleniy Yar at the base of a Siberian peninsula named “the end of the Earth” by the Nenets people native there, Russian archaeologists have discovered mummies bound tightly with bronze, the likes of which the scientists say the world has never seen before.
Buried in the permafrost near the shores of the Poluy river, the research team to date has found 27 shallow graves, some more than a thousand years old, a third of which belonged to children. Eleven of the 27 burials suffered deliberate destruction, including shattered or missing skulls and chopped up skeletons.

"This was probably done to render protection from mysterious spells believed to emanate from the deceased," lead investigator Natalia Fedorova said. Other traces of "protective magic" include leather straps bound tightly around the bodies, as well as the use of beads or chains and bronze figures originally humanoid or birdlike in shape that were broken into piece at time of burial. All have traces of coffins made of logs or boat parts, and the legs of the dead all point towards the river, a position Fedorova said may have had religious significance to them.

Five burials are mummies, four of which are bound in bronze plates and blankets of reindeer, beaver, wolverine or bear fur. DNA analysis concluded the mummies genetically resemble modern Europeans. The Russian scientists say that while these ancient burial rites are somewhat similar to those of modern native populations in the region, especially the Khanty, they add that many other finds have no analogies in world archaeology.

Smithsonian anthropology chair Dr. William Fitzhugh said pictures of the mummies "dramatic." Such an appraisal, he noted, brings with it concern as well as excitement. "You have to recognize that some people like to sensationalize this, but we would not agree, nor she," Dr. Fitzhugh said. "There is also rising concern even in Siberia about excavation of human remains."

The expedition from the Russian Academy of Sciences began work at the largely uninvestigated Yamal peninsula nearly a decade ago. Trial digs in the taiga east of Zeleniy Yar in 1997 revealed a human burial dated to between the 7th and 9th centuries AD, a male in a wooden coffin with an iron combat knife, silver medallion and bronze bird figurine.

Over time, the necropolis yielded dozens of burials, with hands alongside their bodies or over their hips and birch back and bedding lining their coffins. The scientists also found roughly cut fragments of copper cauldrons in the graves. Such pots held special festive status in medieval times, and were probably used for ritual ceremonies honoring the dead, Fedorova said, much as the many ceramic vessels found in heaps beside the graves were.

By dating the ceramics, the archaeologists calculate the first burials came between the 6th and 7th century and the latest sometime during the 12th century. Similar utensils play a special role in Zeleniy Yar even today.

The researchers found the first mummy in 2000. "Beneath a blanket of reindeer fur was the head of a mummified child," Fedorova recalled. DNA analysis conducted by scientists at the Institute of Molecular Biology of the Russian Academy of Sciences revealed the child to be a girl, and anatomically she appears seven years old. Unfortunately, her remains were not well preserved because it was buried in a part of a site partially destroyed by a road.
In 2001, they found four more mummies. The first three were of children, whose boat-shaped sarcophagi’s noses were pointed towards the river. These, unlike any found before, were bound by four or five copper hoops, each roughly two inches wide, and each mummy’s face was covered with mask-like copper plates.

Each of their flesh was dark black. One child had a mop of "wonderful hair," Fedorova said, while another had a small hand so well preserved researchers could see the lines in the skin of the bent fingers. Fedorova said some details stunned researchers, "evoking complicated emotions that, in many other instances, are far removed from the sober, cold eye of the archaeologist."

Endless arguments took place on how to preserve the mummies that threatened to lead nowhere, Fedorova said. In the end, the researchers packed each mummy in bandages and foil. "They began to resemble the Egyptian ones," she said. Everything was videotaped and photographed.

On the last day of the 2001 expedition, near the remains of a metalworking shop littered with traces of iron, copper and bronze, they found a wooden sarcophagus in a long, narrow grave. The sarcophagus collapsed when they tapped it, and after they removed the wooden debris they found the best-preserved mummy of all, a red-haired man covered from chest to foot in copper plate and laid out with extremely well-preserved furs, a bronze bear’s head buckle, an iron hatchet and several corroded arrowheads. "We had never observed first-hand such detailed ritual," Fedorova said. "It is impossible to describe what we felt at that moment."

The researchers found it extremely difficult to remove and bandage this mummy. "It was 3 a.m. and everyone was dead tired," Fedorova said. "We were afraid to make mistakes, the result of which could include the loss of such a well-preserved mummy, a factor that was unforgivable. But to our great relief, all went well."

The male mummy and the first child mummy are now at the Scientific Research Center of Biomedical Technologies in Moscow. The other three copper-bound mummies are under study at the Institute of History and Archeology of the Ural Division of the Russian Academy of Sciences, the Institute of Ecology of Plants and Animals, and Ural State Medical Academy.

The archaeologists hope to discover what killed these mummies -- perhaps disease did them in. They have preliminarily dated the four copper-bound skeletons "as belonging to the 8th to 10th century AD, i.e. they are approximately a thousand years old." The furs found with them were unusually well preserved, and not usually seen intact when archaeological finds are made.