Anthropologist unravels 10,000-year-old climate change mystery

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A University of Alberta (Canada) anthropologist is heading up an international research team that will investigate why an entire Siberian culture of hunter-gatherers vanished between 7000 and 6000 BC.

On Tuesday, Social Science and Humanities Research Council (SSHRC) announced $2.5 million for the project that will examine human remains from ancient cemeteries in the Lake Baikal region of Russia. It is thought that climate change could be a key factor in the disappearance of people from this area, as it might have dramatically affected culture, diet and migration.

Lead researcher Dr. Andrzej Weber explained that the project will involve several months of field work in Siberia this summer, followed by extensive analysis of the collected data back at the U of A. The work will include DNA analysis, radiocarbon dating and climate modelling to help uncover the daily life within the culture, the environmental conditions of the time and whether groups that appeared a millennium later were genetically similar to the first peoples.

"There is a very interesting basic research problem: a history of a human culture in this particular part of the region that's very different from other parts of the world and similar to only a few other parts of the world. From these comparisons you can draw conclusions about why human cultures evolved in certain ways," said Weber.

Weber added that while the project will uncover information about a

culture that existed many thousands of years ago, the research is relevant now.

"We're looking at climate change back 5,000 years ago which is very similar to what the north is experiencing today," he said. Weber explained that the research could help predict how places in the north, like Siberia and northern Canada, will change with regard to "animal distribution, habitats, and the potential for traditional lifestyles to continue."

Weber's research team will include 29 anthropology, archaeology, geography, genetics and climate change experts from universities in Russia, Britain, Canada and the United States, as well as more than 50 graduate students.

"While our project is based in Siberia, we have collaborators from so many countries, that it provides an excellent platform for the flow of ideas, hypotheses, interactions, networking," he said. "This is what international research is really all about - to provide the scientific environment for people to interact, and our project is very friendly in this regard."

The project will also provide an excellent training opportunity for budding scientists, Weber noted.

"We're not just training undergraduate students, we're training everyone: from undergraduate students to graduate students to post-doctoral fellows. We're also helping young scholars to build their careers."

In the end, Weber hopes to discover a great deal about how these ancient people lived and, despite the new technology available, there are always limits to what can be known.

"In archaeology you never get to see the full story, as there are these small pieces to the puzzle. In the best case scenario, most of the picture's still missing - for the rest you need to use your imagination."

Source: University of Alberta, By Caitlin Crawshaw