

Linking human evolution and climate change

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It's not a take on climate change we often hear about. But Mark Collard, a Simon Fraser University Canada Research Chair and professor of archaeology, will talk about how climate change impacts human evolution at the world's largest science fair.

The 2012 American Association for the Advancement of Science (AAAS) conference runs Feb. 16 to 20 at the Vancouver Convention Centre in downtown Vancouver.

Collard will give a talk called <u>Environmental drivers of technological</u> <u>evolution in small-scale populations</u> during a seminar called <u>Climate</u> <u>Change and Human Evolution: Problems and Prospects</u>. Collard's talk on Fri., Feb. 17 will kick off the seminar.

Collard will argue, "we need to better understand the ways that climate and related environmental variables have affected historically-documented small-scale societies before we can accurately track the impact of <u>climate change</u> on <u>human evolution</u>."

The director of SFU's Human Evolutionary Studies program, Collard will also present data that his research team is analyzing. Their research suggests environmental variation significantly influenced the number and intricacy of food-gathering tools that historical hunter-gatherers made.

"The basic pattern," explains Collard, "is that people living in harsh, risky environments, such as the Arctic, produced and used many more complex tools than people living in less harsh and risky environments,



such as tropical rainforests. Food gathering tools make up a large part of known early archaeological records. So our findings are providing us with a way to track the impact of climate change on human evolution."

Collard can relate his findings to current thinking about the impact of climate change on the dispersal of modern humans globally and the evolution of their cultures during the last couple of hundred thousand years. Our species, Homo sapiens, evolved during that time period.

As a discussant in another seminar, <u>Constructing a Human World Fit for Nature</u>, Collard will look for common themes in six speakers' presentations. They will flesh out the research behind an evolutionary conundrum that is the central theme of this seminar.

The conundrum — while evolution has enabled ancestral hominins (humans) to adapt well to diverse ecological niches, modern humans are now transforming local ecosystems and the global climate at the peril of their own existence.

Provided by Simon Fraser University

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