

The way we weren't: U of Minnesota biologist debunks myth that humans peaked in Paleolithic era

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Have agriculture, technology, diet and lifestyle changes put humans out of touch with the way we evolved? And would we be healthier and happier if we lived, at least to some extent, the way our Paleolithic ancestors did?

The abundance of Paleo diet and lifestyle recommendations suggests the answer is yes. But University of Minnesota [evolutionary biologist](#) Marlene Zuk is skeptical. The Paleo ideal is a myth based on speculation rather than science, she says. As a skilled writer with an engaging sense of humor, she does an informative and entertaining job of debunking this myth in her new book, "Paleofantasy: What Evolution Really Tells Us About Sex, Diet and How We Live," to be published by W.W. Norton on March 11.

Paleo proponents claim that humans fully evolved as hunter-gatherers and that the development of agriculture triggered a downward spiral, causing disease and social conflicts. But that, Zuk says, is a paleofantasy without scientific basis.

"There's widespread misunderstanding about how evolution works, particularly how fast it happens," Zuk says. "To think of ourselves as misfits in our own time and of our own making flatly contradicts what science has revealed about the way evolution works; namely, that we can adapt over just a few generations."

Genes continuously appear in and disappear from the [human genome](#). Some remain for millions of years, others for much shorter periods, Zuk says. Evolution is a series of compromises and tradeoffs because genes have more than one function, and interact in complicated ways.

"By focusing on how we were in Paleolithic times, we overlook the ways we've changed since then. [New tools](#) in [evolutionary biology](#) and genetics are helping us understand how change happens, and which parts of the genome change quickly vs. slowly. Understanding that difference in people as well as other organisms is much more interesting to me than trying to hew to a version of how our ancestors might have lived."

Some of the work Zuk and her students have been doing on crickets found in Hawaii shows that a completely new trait, a wing mutation that renders males silent, spread in just five years, fewer than 20 generations.

If we want to learn from evolution, Zuk says, we should study rapid evolution rather than "holding up our flabby selves against a vision – accurate or not – of our well-muscled and harmoniously adapted ancestors" to understand how we have adapted to relatively recent changes in our environment and how we may continue to adapt as our environment changes.

Zuk is a professor of ecology, [evolution](#) and behavior in the University of Minnesota's College of Biological Sciences. Her previous books include "Sex on Six Legs: Lessons on Life, Love and Language from the Insect World" and "Sexual Selections: What We Can and Can't Learn About Sex From Animals." She frequently contributes topical articles about biology to the New York Times, Los Angeles Times, Boston Globe and other mainstream media.

Provided by University of Minnesota

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