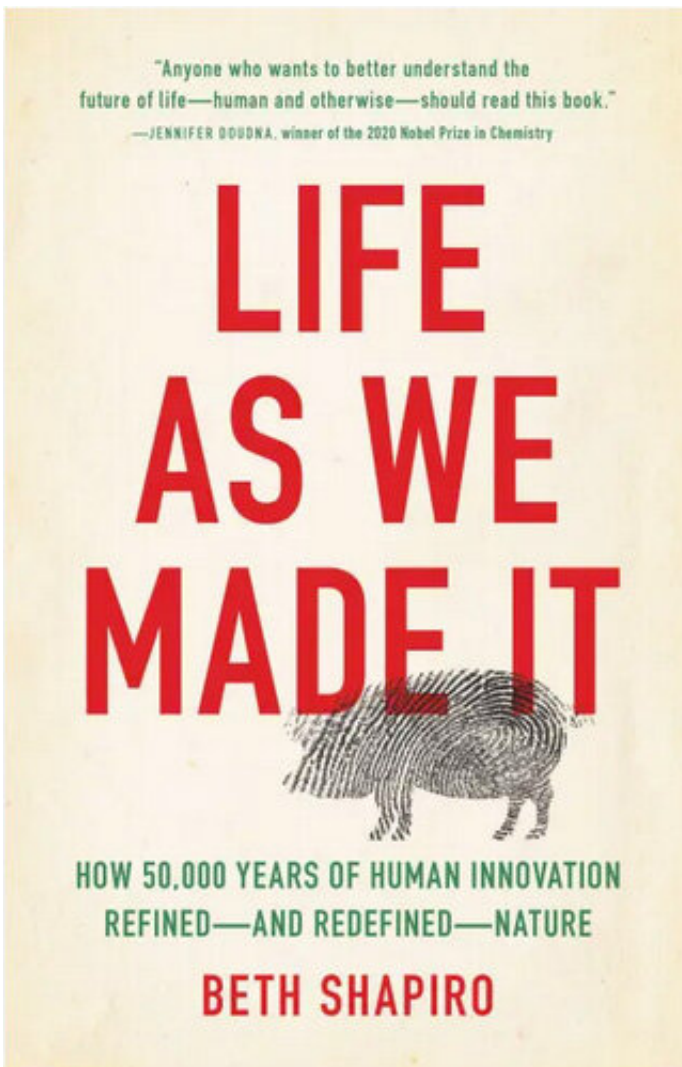


Biologist's new book explores how humans have shaped life on Earth

October 20 2021, by Tim Stephens



In her new book, UC Santa Cruz biologist Beth Shapiro argues that while gene-editing technology is giving humans remarkable new powers, we have been manipulating other species for as long as we have existed.

["Life as We Made It"](#) explores the genetic modification of living things in the context of history, archeology, paleontology, and genomics. Subtitled "How 50,000 Years of Human Innovation Refined—and Redefined—Nature," the book gives readers a solid grounding in the history of human interventions in nature, as well as the promise and pitfalls of how we might use new technologies for editing the genomes of other species, and ourselves.

"It's about all the ways we humans have been messing with the species we interact with for the entire time we have existed," said Shapiro, professor of ecology and [evolutionary biology](#) at UCSC and a Howard Hughes Medical Institute investigator. "All the things people are afraid of that we're doing today with [genetic modifications](#) are just an extension of what we've been doing for the past 50,000 years."

The CRISPR gene-editing tool, whose inventors won the 2020 Nobel Prize in Chemistry, enables scientists to make precise changes to an organism's genome. In addition to being a powerful tool for [fundamental research](#), precise gene editing has a wide range of potential applications in agriculture and medicine. But its ease of use also raises concerns about potentially dangerous or unethical uses of such [technology](#).

In exploring the ethical and moral issues surrounding new technologies for genetic modification, Shapiro argues that blind opposition to the technology is naive and that the potential benefits are enormous if it is used wisely.

CRISPR pioneer and Nobel laureate Jennifer Doudna called the book "a brilliant combination of science, natural history, and first-person

experience.... Anyone who wants to better understand the future of life—human and otherwise—should read this book."

Provided by University of California - Santa Cruz

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