

Pasatiempo

Elizabeth Kolbert's "The Sixth Extinction"



by Michael Abatemarco Sep 27, 2019

At the end of the Ordovician period, approximately 444 million years ago, the world lost an estimated 86 percent of all living species. This staggering loss of life was the second of five extinction events in geological history. The largest recorded mass extinction occurred during the Permian-Triassic transition, approximately 250 million years ago. Known as "the great dying," it decimated as much as 96 percent of all species on Earth. The so-called sixth extinction is now at hand.

Elizabeth Kolbert's *The Sixth Extinction: An Unnatural History*, which was published in 2014 and won a Pulitzer Prize for general nonfiction the following year, lays out the evidence that this great mass extinction event is being driven by human activity. This is the Anthropocene, an epoch dominated by humankind's impact on climate and the environment. In her book, Kolbert presents evidence for a projected die-off of as much as 50 percent of all living species by the end of the 21st century. That's a lot of death to lay at the feet of humanity.

"These aren't my estimates," she says. "It's relying on printed literature."

At 7 p.m. on Thursday, Oct. 3, Kolbert joins New Mexico environmental journalist Laura Paskus for a discussion about *The Sixth Extinction* at KiMo Theatre (423 Central Ave. NW) in Albuquerque. The talk is co-sponsored by 516 Arts and the Lannan Foundation. It's in conjunction with the opening of the exhibition *Species in Peril Along the Rio Grande* (Sunday, Sept. 28 to Dec. 28) at 516 Arts (516 Central Ave. SW, Albuquerque).

After the talk, ticket holders are invited to visit the gallery for a reception where Kolbert will be signing copies of her book.

The book arose from a three-part series of articles published in *The New Yorker* called "Field Notes from a Catastrophe: Man, Nature, and Climate Change." Kolbert's research, which involved interviews with leading scientists, is at once a field report and a history that draws alarming parallels between the past and present regarding rising carbon dioxide levels in the atmosphere and acidification of the oceans. The sixth extinction shouldn't be thought of as a future event, she says, because we're already laying the groundwork through our present reliance on fossil fuels, the burden of overpopulation, and our inaction on climate change.

"When it comes to a lot of environmental damage, the future really is now," she says. "For example, in the case of climate change, which is expected to become a big driver of extinction, you don't see the full effects of what you put up into the atmosphere for decades. We are determining climate, already, for the middle of the century. Every year that goes on, that we continue to spew CO₂ into the air, we're guaranteeing that much more warming for the next generation. There's no getting around that."

Without some understanding of the symbiotic relationships between flora and fauna, it's difficult to gauge how the die-off of one species impacts other species. One of the examples Kolbert discusses in her book is coral, which is severely impacted by ocean pollutants. Coral reefs sustain thousands of other life forms. If they die, those species face unmitigated threats. "From the perspective of other species, one of the great fears about what we're doing — in the many ways that we are changing the planet very dramatically — is it's very, very fast. I think that's a key point," she says.

It can't be assumed that species other than humans (the most adaptable species on Earth) will be able to recover, because they occupy much narrower ecological niches and lack the ability to invent technologies that can help them deal with dramatic changes to their environment. "When you cut down a rain forest or jerk up the temperature of the planet, these are phenomena that, if organisms had thousands or maybe even hundreds of thousands of years to evolve in response to them, maybe they could adapt," she says. "But if you do it from one day to the next, essentially, what are they going to do?"

One of the reasons that life on Earth did survive previous mass extinction events is the fact that, in some cases, the events took place over millennia, and life-forms that survived had time to evolve and adapt. It was a short time in terms of the planet's geologic age, but a long time from a human viewpoint. "One thing that should really give people pause," Kolbert says, is the evidence about "the worst mass extinction in the history of multi-cellular life, which was the End-Permian extinction — it occurred about 250 million years ago. People are fairly convinced it was caused by a massive release of CO₂ over a long, long time." How long? Some estimates say up to 100,000 years; others say as much as several million years. But the End-Permian didn't have human beings driving extinction forward. "When they [scientists] tried to look back at the rate at which CO₂ was being released during that event, they found that it was less than what we're doing right now."

So what can we do? Increase awareness, and support organizations intent on protect-

ing threatened and endangered species and reintroducing them to the wild, among other things. We can reduce our carbon footprints. We can support policies and politicians committed to combating climate change and ending our reliance on fossil fuels. There's a lot we can do, but there are caveats. In the case of protecting endangered species, for instance, we are in the unique position of deciding who lives and who dies.

"We're doing a lot of things on a really ad hoc basis," she says. "There are lots of admirable, and even important efforts to try to restore species, to save them even when they're down to the last few individuals, and one has to really applaud the people who are doing that. We're all at work on this world-altering project, whether we want to acknowledge it or not. That is really, to be honest, the message of the book."

Kolbert believes that a real solution has to be on the same scale as the problem if we want to avoid a sixth extinction, and the problem is worldwide. "It's very, very daunting," she says. "That doesn't let us off the hook, but it is daunting. I'm not going to sugarcoat that." □