How to Destroy Species, Including Us

Verlyn Klinkenborg

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Issue

The Sixth Extinction: An Unnatural History
by Elizabeth Kolbert
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Lynn Johnson/National Geographic Creative

Eden, Wyoming, 2005

The better we understand the earth's natural systems, the more dynamic they appear to be. (The same could be said of the universe itself.) Two and a half centuries ago earth looked like a planet of remarkable fixity and a short time scale. Since then, of course, the past has deepened or widened or lengthened enormously, depending on how you think of it. The planetary time scale has expanded from several thousand years to some 4.5 billion years, and now we know that this one earth is really a seemingly endless succession of earths. Continents roam, climate changes, oceans warm and cool, species come and go.

The old idea of an earth with relatively static natural systems fit more than just the biblical evidence. It also fit the common sense of

most observers. In a way, it still does. As Elizabeth Kolbert makes clear in her excellent new book, *The Sixth Extinction: An Unnatural History*, nothing about who we are or how we've evolved as a species makes it easy for us to perceive the depth of geological time, to feel it in our bones the way we feel the passing of the seasons. Common sense fails us often enough in the hours and days of ordinary life. It fails us completely on any time scale much longer than that. The extraordinary, deep-yawning present concealed in the earth's past—the day-by-dayness of all those billions of years—constantly puts the lie to what our senses, common or otherwise, tell us. Historically speaking, we have walked around on one earth—the earth we believe we perceive—while unaware of another earth—shaped in geological time—beneath our feet. For billions of earthlings, "historically speaking" happens, unfortunately, to contain the present.

Nothing we do will ever change the speed at which tectonic plates shift and continents wander. But everything we do now shifts the speed at which other natural processes occur—natural processes that once shifted at roughly geological speed. The amount of carbon dioxide in the atmosphere (and the oceans) has changed again and again in earth's history, but almost always at a rate imperceptible to humans. The same is true of the mix of species on this planet. Catastrophes apart, species haven't become extinct very often. They disappear at a roughly measurable, roughly steady background rate.

The way we live now—and have lived for the past couple of centuries—has accelerated climate change and the extinction of species into a wholly different temporal dimension. The lifespan of a human being used to be an indiscernible increment in geological time—an immeasurably infinitesimal instant. Now, a human lifespan—measured by the accumulation of atmospheric carbon dioxide and the demise of species—takes place during genuinely geological changes. One way to talk about the Anthropocene—the geological age that begins with direct human influence over the earth's natural systems—is to say that at last, tragically …