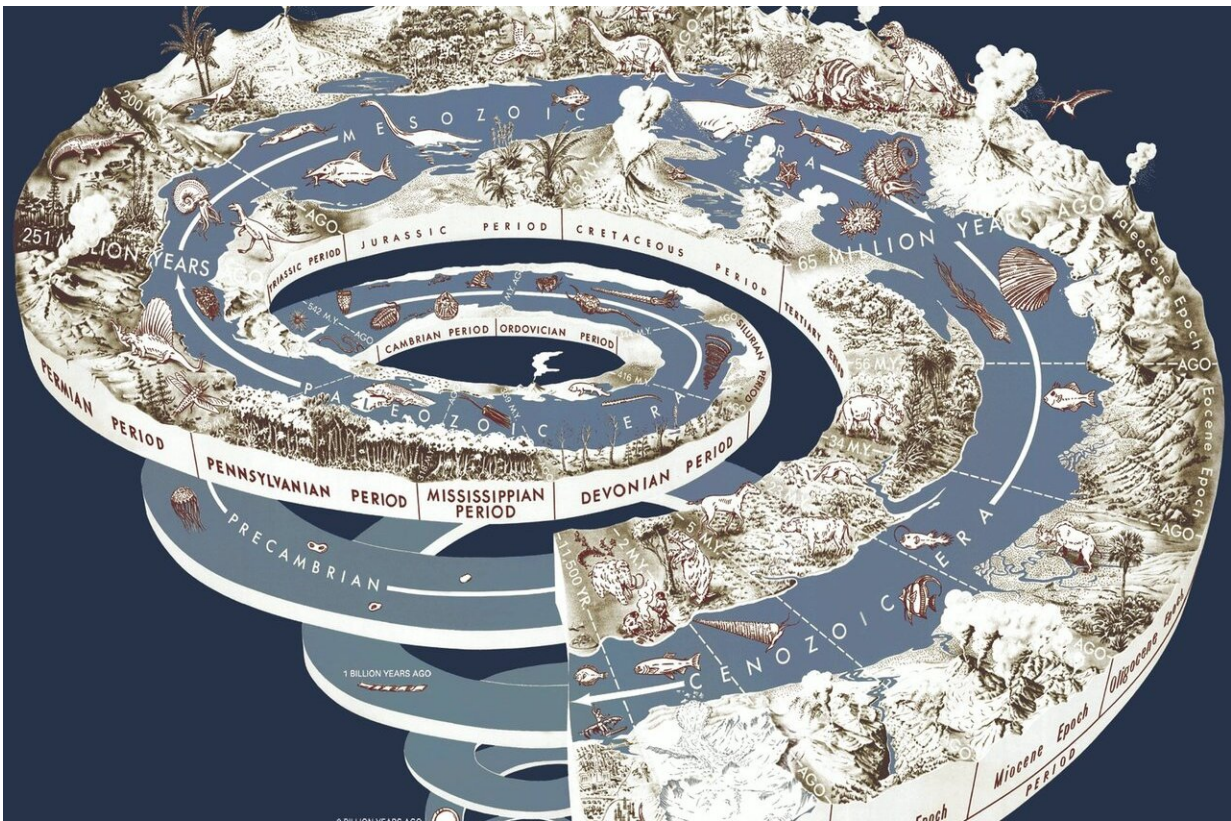


Zoologist outlines how humans have altered evolution over past century

November 14 2018, by Bob Yirka



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Zoologist Sarah Otto, with the University of British Columbia, has published a report in the journal *Proceedings of the Royal Society B* regarding human influence on evolution over the past century. She notes

that the number of changes that have occurred over such a short span of time is unprecedented.

The [evolutionary development](#) of humans has led to massive changes to planet Earth. Humans have cut down forests, polluted the air, rivers, streams, and even the ocean. We have warmed the planet, increased [ocean acidity](#) and have altered the course of [evolutionary history](#) for an untold number of species. In her report, Otto focuses on adaptation, speciation and extinction over just the past hundred years.

She points out that history is filled with extinctions—approximately 90 percent of all animals that have ever lived on Earth are now extinct. But most such extinctions, she notes, have been gradual. What is new is the speed at which species have gone extinct over the past century and the fact that just one species is responsible. She further notes that diversity has changed both between species and within them, and it has come about through intentional efforts such as cross-breeding and through inadvertent reactions to human activities. As an example, she cites swallows, which have quickly evolved to have shorter wingspans near roadways to avoid being struck by cars. She writes that humans have also greatly impacted the places where animals live, and have transported them to far-flung locales, and notes the [human](#) tendency to hunt some species and kill those deemed pests.

Otto's main message is that we have altered the evolutionary paths of plants and animals to such an extent we have no way of measuring it. And that leads to questions of whether there is a new equilibrium ahead or if a time is coming when all of the other [species](#) will follow those that have already disappeared. She pointedly acknowledges that no one really knows, which suggests perhaps we humans should be working a little harder to find out.

More information: Adaptation, speciation and extinction in the

Anthropocene, *Proceedings of the Royal Society B* (2018).
[rspb.royalsocietypublishing.org1098/rspb.2018.2047](https://rspb.royalsocietypublishing.org/doi/10.1098/rspb.2018.2047)

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