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You are what you eat, or are you?

Humans, in many varieties, evolved and were forged during the Pleistocene. Between the ice of oscillating glacial and non-glacial intervals, and the fire of many biological challenges, humans evolved in response to their environments. Generally, it's assumed we know much of the biophysical environment of the past, pointing to old ideas of what the world was like during the Pleistocene Ice Age. However, these stereotypes, that are based on either modern analogues, or commonly-seen reconstructions create an impression that falls vastly short of reality. Here, we'll attempt a more comprehensive reconstruction of the past using an array of biophysical evidence to illustrate the world that formed our early ancestors, and help us assess humans' place in the world through time.

We use the truism that "you are what you eat", but will hopefully convince you that in fact "you are what eats you". People were not necessarily at the top of the food chain, a fact that might be supported by revealing what surprising numbers and diversity species that existed during the Pleistocene. From there, we can engaged in speculation about how humans fit in, and perhaps conclude that we weren't on top of the food chain, but were more likely "on the menu" for many Pleistocene superpredators.

We note that human population numbers, in all the several species or subspecies that survived until the end of the Pleistocene, didn't grow to any great degree until after the Pleistocene extinctions. That extinction event saw the end of the majority of superpredators, and also a range of large herbivores that would have both presented enormous challenges to hunt and were dangerous to live with. As an analogy, we note that mammals lived with dinosaurs for $\frac{2}{3}$ of their existence, but were marginal in size and diversity until the dinosaurs went extinct. Many of the mammalian survivors could be judged to be rather "rat-like" (multituberculates) in stature and habit. Our ancestors certainly were larger, but would have been generalists that could exploit a range of opportunities by behavioral alterations, which can take place much more quickly than physical evolution. We speculate that what humans were likely lacking the opportunity for people to get established and diversify during the Pleistocene, and grow their numbers in the absence of constant predation and challenges posed by Pleistocene megafauna. This talk won't lead to any sweeping conclusions, except to suggest that, overall, we're in a real downturn in biodiversity, and that that downturn began about 10,000 years ago, but that downturn created opportunities for our species.