

SCIENTIFIC AMERICAN™

Early Meat-Eating Human Ancestors Thrived While Vegetarian Hominin Died Out

By Katherine Harmon | August 8, 2012



Early Homo molar; image courtesy of Jose Braga/Didier Descouens

There has been fierce debate recently over whether the original “caveman” diet was one of heaps of bloody meat or fields of greens. New findings suggest that some of our early ancestors were actually quite omnivorous. But subsequently, our line and an ill-fated group of hominins developed very different dietary strategies. One chose meat while the other moved toward more plants.

The hominin *Australopithecus*, which lived from about 4 million to 2 million years ago, is presumed to be a common ancestor of both the *Homo* lineage, which emerged some 2.3 million years ago and gave rise to us, and to the *Paranthropus* genus, which is first documented about 2.7 million years ago and died out about 1 million years ago. Some have attributed the extinction of *Paranthropus* to an inflexible diet or limited territory, especially in the face of climactic changes.

A team of researchers led by Vincent Balter, of École Normale Supérieure de Lyon, decided to probe into some of these debates. They used lasers to analyze the enamel from fossilized teeth belonging to *Australopithecus africanus*, *Paranthropus robustus* and early *Homo* specimens, which were all from southern Africa. By assessing ratios of calcium, barium and strontium as well as the number of strontium isotopes, the team was able to deduce both diet and the size of the area that these individuals ranged over. The

findings were published online August 8 in *Nature* (*Scientific American* is part of Nature Publishing Group).

The **ancestral *Australopithecus* consumed a wide range of foods**, including, meat, leaves and fruits. This varied diet might have been flexible to shift with food availability in different seasons, ensuring that they almost always had something to eat. ***Paranthropus*, according to the elemental analysis, was largely a plant eater**, which matches up with previous studies of tooth morphology and wear patterns. It also helps to explain the massive jaw structure they possessed, which could have come in handy for tough food stuffs and earned one specimen the nickname “nutcracker man.” **Early *Homo*, on the other hand, went in for a meat-heavy diet**—possibly enabled by the use of tools for hunting and butchering.

However, just because a meatier diet was good for our early *Homo* forbearers does not necessarily it will keep each of us contemporary humans alive longer. Now that we no longer have to fend for ourselves in quite the same way, increased red meat consumption has actually been linked to shorter individual life spans. So next time you're flummoxed by food choices, don't be afraid to go a little *Paranthropus* and hit the salad bar.



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