

The Evolution of Human Diet

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A University of Arkansas professor's most recent work addresses the question of how human eating habits have evolved over millions of years.

Peter Ungar, professor of anthropology in the J. William Fulbright College of Arts and Sciences, has edited a book, *The Evolution of Human Diet: The Known, the Unknown, and the Unknowable*, in which scholars from various disciplines address the knowledge and limitations of the field. The book offers an assessment of the current science, the limits of knowledge and possible directions for future research.

The idea for the book evolved from a 2003 workshop organized by Ungar and sponsored by the Alfred P. Sloan Foundation, which brought together researchers from different fields who were examining the same issues in the evolution of human diet from different perspectives. The book builds on the workshop, examining the evolution of human diet through the hominin fossil record, the archeological record, paleoecology and modeling.

"Evidences of early hominin diets can be divided into evidence that comes from the fossils themselves and that derived from context and models," Ungar writes in the conclusion of the book. Tooth chemistry and dental microwear reveal evidence of past diets, as do the shape and position of teeth and jaws. Cuts on animal bones point to possible past "menus" of animals eaten by early hominins. Stone tools associated with the bones suggest methods of processing the meat.



Reconstructions of past environments help researchers determine what resources would have been available for early hominins to eat, and comparisons with current-day environments and consumption patterns of recent foraging people and of nonhuman primates can help flesh out these models.

Book chapters among the 21 include the biomechanics of mandibles, what stone tools can tell us, the introduction of meat eating, the influence of cooking on human diet, energetic models of human nutritional evolution and the implications of Plio-Pleistocene hominin diets for modern humans.

In the last chapter, Ungar explores the limits of knowledge on the evolution of human diet. These include data-related limits related to gaps in the fossil record and methodological limits related to how researchers use the present to interpret the past. The limits of knowledge in the field may be unknowable.

"We can, however, identify the current boundaries to our knowledge, and in doing so, begin to nudge them," Ungar writes. By doing so, scientists can determine directions for future research.

Source: University of Arkansas, Fayetteville

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