

Anthropologists outline techniques for identifying food eaten by early hominins

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A trio of anthropologists from Touro University, the University of Arkansas and Stony Brook University analyzed current methods available to scientists looking to identify the food that a particular early

hominin had eaten shortly before dying. In their Perspective piece published in *Proceedings of the National Academy of Sciences*, Mark Teaford, Peter Ungar and Frederick Grine outline what they found and how they see such research impacting the study of early hominin development moving forward.

When studying a recovered fossil, the traditional means for attempting to determine what a given [hominin](#) ate is to focus on the [teeth](#), if present. By noting their condition, coloration and how they were worn down from chewing, scientists can infer what the individual might have eaten. But identifying the exact food has remained difficult—at least until recently. New tools now allow researchers to study the calculus that forms on teeth.

Calculus on the teeth forms due to calcification of bacteria in the plaque that adheres to [teeth](#). Study of calculus can reveal [food particles](#), which can be analyzed to isolate the plant or animal eaten by a given individual. In this new effort, the researchers outline recent work by other teams using calculus found on early hominins to determine their diet.

One such study they highlight involved studying the type and features of scratches in the calculus, noting that such work is generally subject to the "last supper effect," whereby evidence is representative of only the last few days of a subject's life. Another study involved comparing isotopes found in the calculus, allowing for broadly determining which class of plants a given individual had been eating over a period of time prior to death.

Teaford, Ungar and Grine conclude their review by noting that as technology improves, techniques used by paleoanthropologists will evolve, allowing for a more clear picture of the environment in which early hominins lived—and that may help clear up their [evolutionary history](#).

More information: Mark F. Teaford et al, Changing perspectives on early hominin diets, *Proceedings of the National Academy of Sciences* (2023). [DOI: 10.1073/pnas.2201421120](https://doi.org/10.1073/pnas.2201421120)

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