

# Cannibalism was profitable for Homo antecessor

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Cannibals. Credit: J.Rodríguez

Jesús Rodríguez, Ana Mateos and Guillermo Zorrilla, scientists at the Centro Nacional de Investigación sobre la Evolución Humana (CENIEH), have just published a study in the *Journal of Human Evolution* in which they analyze the cannibalistic behavior of populations at Atapuerca 1 million years ago. The results make it clear that anthropophagy was a profitable strategy for Homo antecessor.

Many studies have demonstrated that animals adapt their feeding strategies to optimize the cost-benefit balance, and starting with this principle, these CENIEH researchers studied the cannibalistic [behavior](#) of Homo antecessor, reexamining the data of earlier work.

They estimated the amount of food which could have been obtained from each of the animals consumed by Homo antecessor (the benefit) and the effort that obtaining and processing one of these animals would have entailed (the cost), but they have also calculated the cost and the benefit of consuming other humans when compared with data for other [prey](#).

"Our analyses show that Homo antecessor, like any predator, selected its prey following the principle of optimizing the cost-benefit balance, and they also show that, considering only this balance, humans were a 'high-ranked' prey type. This means that when compared with other prey, a lot of food could be obtained from humans at low cost," explains Rodríguez.

One of the most surprising results of this study was that humans were consumed in a much greater proportion than would be expected from their abundance relative to other animals. This might be explained by a high encounter rate between humans. Mateos explains, "For Homo antecessors, it was easier to encounter a [human](#) than another animal. One of the possible explanations for this high encounter rate between humans could be that the cannibalized cadavers were those of members of the

group who had died from different causes."

## Behavioral ecology

This paper, titled "Does optimal foraging theory explain the behavior of the oldest human cannibals?," was undertaken from the perspective of human behavioral ecology (HBE).

HBE endeavors to explain the behavior of [animals](#) by applying the principle that the actions of any individual are ultimately directed at ensuring their survival and that of their descendants, which amounts to seeking the greatest possible benefit at the minimum cost.

**More information:** Jesús Rodríguez et al. Does optimal foraging theory explain the behavior of the oldest human cannibals?, *Journal of Human Evolution* (2019). [DOI: 10.1016/j.jhevol.2019.03.010](https://doi.org/10.1016/j.jhevol.2019.03.010)

Provided by CENIEH

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